

DEUTSCHE TELEKOM AG
ANNUAL FINANCIAL
STATEMENTS AND COMBINED
MANAGEMENT REPORT
AS OF DECEMBER 31, 2018



LIFE IS FOR SHARING.

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COMBINED MANAGEMENT REPORT

– Excerpt from the annual report 2018 of Deutsche Telekom –

A combined management report has been produced for Deutsche Telekom AG and the Deutsche Telekom Group and is also published in our 2018 Annual Report.

Deutsche Telekom AG's single-entity financial statements and the combined management report for the 2018 financial year are published in the electronic Federal Gazette (elektronischer Bundesanzeiger) and can also be accessed on the website of the register of companies.

ANNUAL FINANCIAL STATEMENTS OF DEUTSCHE TELEKOM AG

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BALANCE SHEET

millions of €

	Note	Dec. 31, 2018	Dec. 31, 2017
ASSETS			
NONCURRENT ASSETS			
Intangible assets	1	186	195
Property, plant and equipment		2,376	2,698
Financial assets		94,431	93,807
		96,993	96,700
CURRENT ASSETS			
Inventories	2	1	1
Receivables	3	22,325	22,073
Other assets	4	1,630	1,659
Cash and cash equivalents	5	680	157
		24,636	23,890
PREPAID EXPENSES AND DEFERRED CHARGES			
	6	522	676
DIFFERENCE BETWEEN PLAN ASSETS AND CORRESPONDING LIABILITIES			
	7	7	51
TOTAL ASSETS			
		122,158	121,317
SHAREHOLDERS' EQUITY AND LIABILITIES			
SHAREHOLDERS' EQUITY			
Capital stock	8	12,189	12,189
Less the imputed value of treasury shares	9	(48)	(49)
Issued capital		12,141	12,140
Contingent capital of € 1,200 million			
Additional paid-in capital	10	31,333	31,333
Retained earnings	11	9,541	9,538
Unappropriated net income		7,031	5,928
		60,046	58,939
ACCRUALS			
Pensions and similar obligations	13	3,747	3,164
Tax accruals	14	238	238
Other accruals	15	2,377	2,321
		6,362	5,723
LIABILITIES			
Debt	16	6,705	6,398
Other liabilities		48,904	50,101
		55,609	56,499
DEFERRED INCOME			
	17	141	156
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES			
		122,158	121,317

STATEMENT OF INCOME

millions of €

	Note	2018	2017
Net revenue	19	3,546	3,603
Other own capitalized costs	20	7	4
TOTAL OPERATING PERFORMANCE		3,553	3,607
Other operating income	21	2,672	2,769
Goods and services purchased	22	(1,024)	(1,060)
Personnel costs	23	(2,537)	(2,732)
Depreciation, amortization and write-downs	24	(289)	(341)
Other operating expenses	25	(4,521)	(4,251)
Financial income (expense), net	26	6,488	7,151
Income taxes	27	(143)	(198)
INCOME AFTER INCOME TAXES		4,199	4,945
Other taxes	28	(13)	(18)
INCOME AFTER TAXES		4,186	4,927
Unappropriated net income carried forward from previous year		2,845	1,001
UNAPPROPRIATED NET INCOME	29	7,031	5,928

NOTES TO THE FINANCIAL STATEMENTS

SUMMARY OF ACCOUNTING POLICIES

DESCRIPTION OF BUSINESS ACTIVITIES

Deutsche Telekom AG¹, Bonn, (hereinafter referred to as Deutsche Telekom or the Company) operates as a provider of telecommunications services, information technology (IT), multimedia, information and entertainment, security services, as well as sales and agency services via its subsidiaries. Deutsche Telekom performs its activities both in and outside Germany.

As the Headquarters of the Deutsche Telekom Group, Deutsche Telekom performs strategic and cross-segment management functions and provides services for other Group companies. These principally comprise services rendered by the Group Supply Services unit, whose activities include the management of the Company's real estate portfolio, the Technology and Innovation unit, which is responsible for the Group's technology, innovation and IT areas, the Group Development unit with the Group functions of mergers & acquisitions and strategic portfolio management as well as Telekom Placement Services for providing employees with new employment opportunities as part of the staff restructuring program. The Company also encompasses the International Carrier Sales and Solutions unit, which primarily provides wholesale telecommunications services to Deutsche Telekom's subsidiaries.

Part of the Company's workforce is employed in its subsidiaries. Most of these are civil servants who have been assigned jobs in compliance with the statutory provisions.

DESCRIPTION OF THE RELATIONSHIP WITH THE FEDERAL REPUBLIC OF GERMANY

The Federal Republic's total shareholding in Deutsche Telekom amounted to 31.89 percent at the end of the reporting period, of which 17.41 percent of the shares were held by KfW Bankengruppe (KfW) and attributable to the Federal Republic in accordance with § 16 (4) of the German Stock Corporation Act (Aktengesetz – AktG). The Federal Ministry of Finance is responsible for administering the Federal Republic's shareholding and exercising its rights as a shareholder.

In accordance with legal regulations, the Deutsche Bundespost Federal Posts and Telecommunications Agency, Bonn (Federal Agency) assumes coordination and administrative tasks that affect cross-company issues at Deutsche Telekom, Deutsche Post AG, Bonn, and Deutsche Postbank AG, Bonn. These are performed on the basis of agency agreements for the Civil Service Health Insurance Fund (Postbeamtenkrankenkasse – PBeaKK), the Recreation Service (Erholungswerk), the Supplementary Retirement Pensions Institution (Versorgungsanstalt der Deutschen Bundespost – VAP), the Welfare Service (Betreuungswerk), and the Civil Service Pension Fund (Postbeamtenversorgungskasse), among others.

The Federal Republic purchases services from the Company as a customer of Deutsche Telekom. In the course of business, Deutsche Telekom deals directly with individual authorities and other government agencies as mutually independent individual customers. Services pro-

vided to any one department or agency do not represent a significant component of Deutsche Telekom's net revenue.

The Federal Network Agency for Electricity, Gas, Telecommunications, Posts, and Railways is a separate higher federal authority within the scope of business of the Federal Ministry of Economics and Energy. One of its tasks is to supervise the telecommunications sector in Germany. In this capacity it regulates the business activities of Deutsche Telekom.

BASIS OF PREPARATION

The annual financial statements and the management report of Deutsche Telekom, which is combined with the Group management report in accordance with § 315 (5) of the German Commercial Code (Handelsgesetzbuch – HGB) in conjunction with § 298 (2) HGB, are prepared in accordance with German GAAP and the German Stock Corporation Act.

The balance sheet and the statement of income are prepared in accordance with the classification requirements of § 266 and § 275 HGB. The statement of income is prepared using the total cost method in accordance with § 275 (2) HGB. Unless otherwise stated, all amounts shown are in millions of euros (millions of €/EUR). The financial year corresponds to the calendar year. Certain items have been aggregated for presentation purposes in the balance sheet and the statement of income in order to make the financial statements clearer. These items are disclosed separately in the notes. Other required disclosures for individual items of the balance sheet and the statement of income are also made in the notes.

The disclosures on the compensation of the Board of Management and the Supervisory Board are aggregated in a "Compensation report" in the combined management report of Deutsche Telekom. This is supplemented with certain information that continues to be required to be shown in the notes to the Company's financial statements.

ACCOUNTING POLICIES

Purchased **intangible assets** are carried at acquisition cost and are amortized on a straight-line basis over their estimated useful lives. Write-downs to the lower of cost or market value are charged if an impairment of assets is assumed to be permanent.

Deutsche Telekom does not exercise its option to recognize internally generated intangible assets in accordance with § 248 (2) HGB.

As permitted by Postreform II, **property, plant and equipment** transferred to Deutsche Telekom on January 1, 1995 was recorded in the opening balance sheet of Deutsche Telekom at fair market values at that date. However, due to the short period of time that had elapsed since the measurement date for property, plant and equipment acquired since January 1, 1993, their carrying amount as of December 31, 1994 was recognized on a historical cost basis. The remaining useful lives and the depreciation methods applicable to these assets were not changed. The fair market values shown in the opening balance sheet have been carried forward as the acquisition costs.

¹ Deutsche Telekom was entered into the commercial register of the Bonn District Court (Amtsgericht – HRB 6794) under the name Deutsche Telekom AG on January 2, 1995.

Other items of property, plant, and equipment are carried at acquisition or production cost, less scheduled depreciation. Production cost includes directly attributable costs and an appropriate allocation of indirect material and labor cost. Borrowing costs are not capitalized. Write-downs to the lower of cost or market value are charged if an impairment of assets is assumed to be permanent.

Depreciation is generally charged using the straight-line method. The standard useful lives used for the calculation are based on a company-specific estimate that takes both technical and commercial devaluation factors into account.

If the reasons for write-downs no longer exist in subsequent years, either in whole or in part, a write-up is made in the amount of the increase in value occurred; this may not, however, exceed the value that would have been recognized if the write-down had not been carried out.

Since BilMoG entered into force, write-downs that are only permissible under tax law are generally no longer permitted in the annual financial statements. Deutsche Telekom exercises the option to retain the existing carrying amounts in accordance with Art. 67 (4) sentence 1 of the Introductory Act to the German Commercial Code (Einführungsgesetz zum Handelsgesetzbuch – EGHGB). Since January 1, 2010, residual value as of December 31, 2009 has been written down over the remaining useful life using the straight-line method. This method makes it possible to give a picture that more truly reflects the Company's actual financial position and results of operations.

Assets are depreciated/amortized over the following useful lives:

	Years
Acquired software	3 to 4
Other rights of use and licenses	As contractually agreed
Buildings	25 to 50
Switching, transmission, IP, and radio transmission equipment	3 to 10
International cable systems	3 to 15
Other equipment, plant and office equipment	3 to 23

Additions to real estate and movable items of property, plant and equipment are depreciated ratably from the year of acquisition.

Since January 1, 2018, assets with an acquisition or production cost of EUR 800 or less have been written off in full in the year of acquisition and are presented as disposals in the statement of noncurrent assets. The amended regulation in § 6 (2) sentence 1 of the German Income Tax Act (Einkommensteuergesetz – EStG) for corresponding additions in the financial accounts is being adopted for reasons of simplicity. Until December 31, 2017, assets whose acquisition or production cost exceeded EUR 150, but was less than EUR 1,000, were capitalized in annual omnibus items of immaterial significance overall and depreciated/amortized over five years. These assets are presented as disposals in the statement of noncurrent assets when they are written off in full.

Noncurrent assets sold or otherwise disposed of are derecognized at their relevant carrying amount (cost less accumulated depreciation). A gain or loss is recognized in the statement of income in the amount of

the difference between the proceeds from the sale and the carrying amount of the asset concerned.

Financial assets are reported at the lower of cost or market value. In the case of financial assets acquired in a foreign currency, the exchange rate at the transaction date is used to determine the acquisition cost; in the case of hedges, the hedging rate for the purchased foreign currency is used, provided an effective hedge was recognized. Loan receivables correspond to the loan amounts less repayments and – if applicable – less any write-downs to the lower fair value. Nonscheduled write-downs are charged only if the impairment of financial assets is assumed to be permanent. The accounting for structured financial instruments is in accordance with standard IDW RS HFA 22 issued by the Institute of Public Auditors in Germany.

As a consequence of the application of IDW ERS HFA 13 note 94 as amended, in the event of the shareholder drawing assets, the reduction in the net carrying amount of the investment is calculated and recognized on the basis “of the ratio of the fair value of the asset drawn to the fair value of the investment”. The difference between the reduction in the net carrying amount and the amount of the assets drawn is hence recognized in the statement of income.

Merchandise is recognized at acquisition cost and reduced to the lower of cost or market value at the balance sheet date. Adequate write-downs are charged for inventory risks resulting from obsolescence or impaired marketability.

In accordance with § 240 (4) HGB, items of inventory of a similar nature are aggregated into groups and carried at their moving weighted average value.

Receivables, other assets and cash and cash equivalents are carried at their nominal value. Identified individual risks are accounted for through appropriate individual valuation adjustments, and general credit risks through general valuation adjustments of receivables. Low-interest and non-interest-bearing items with more than one year remaining to maturity are discounted.

Receivables and other assets denominated in foreign currencies are translated at the middle spot rate at the balance sheet date in accordance with § 256a HGB and measured at acquisition or production cost (§ 253 (1) sentence 1 HGB) applying the realization principle (§ 252 (1) no. 4 half-sentence 2 HGB). Current items with maturities of one year or less are measured at the middle spot rate at the balance sheet date in accordance with § 256a HGB.

Prepaid expenses and deferred charges are recognized as a separate item in accordance with § 266 (2) letter C HGB and recalculated at each balance sheet date. The discount included under prepaid expenses and deferred charges results from the difference between the settlement amount of a financial liability and the lower principal amount. The discount is amortized over the terms of the financial liabilities by systematic annual charges (§ 250 (3) sentence 2 HGB). Deutsche Telekom does not make use of the option to immediately recognize the difference as an expense.

The **performance-based compensation plans** comprise the Variable I, the Share Matching Plan, the Variable II, and the Long-Term Incentive Plan.

Under the short-term performance-related salary component, Variable I, the Board of Management and the business leader team are contractually obliged, and other executives are entitled on a voluntary basis, to invest a portion of their annual variable remuneration – determined according to the level of achievement of fixed targets set for each individual for the financial year – in shares in Deutsche Telekom, which must be held for at least four years. Deutsche Telekom will grant additional shares for the shares acquired by the beneficiaries (Share Matching Plan), which will be allotted to the beneficiaries of this plan from Deutsche Telekom's holding of treasury shares on expiration of the four-year lock-up period. In addition, performance-based compensation is awarded based on the level of achievement of long-term targets. For the Board of Management this component is called Variable II, whereas for the business leader team and other executives it is known as the Long-Term Incentive Plan.

The Share Matching Plan and the Long-Term Incentive Plan are share-based compensation instruments measured at fair value. For the Share Matching Plan, the fair value equates to the Deutsche Telekom share price at grant date less an expected dividend markdown. In the case of the Long-Term Incentive Plan, the virtual share package allocated to employees at the inception of the plan is multiplied by Deutsche Telekom's share price at the grant date and discounted to the reporting date. Over the term of the plan, the value changes in line with Deutsche Telekom share price development. The number of virtual shares will change on achievement of the targets for four equally weighted performance indicators. In addition, each beneficiary receives a dividend during the term of the plan. This dividend is reinvested in virtual shares, increasing the number of virtual shares held by each plan participant.

Accruals are recognized for the expected costs arising from performance-based compensation. The personnel costs for the Share Matching Plan, Variable II, and the Long-Term Incentive Plan are recognized over the respective term.

Accruals for pensions and similar obligations are based on obligations to non-civil servants. These accruals are calculated on the basis of actuarial principles, applying the projected unit credit method and using the 2018 G life expectancy tables published by Prof. Klaus Heubeck (until December 31, 2017: 2005 G life expectancy tables), which also take expected future salary and benefit increases into account. The interest rate used to determine the present value of the pension obligations corresponds to the average market interest rate published by the Deutsche Bundesbank that results from an assumed remaining maturity of 15 years (§ 253 (2) sentence 2 HGB). In accordance with the Act on the Implementation of the Mortgage Credit Directive and Amending Commercial Regulations (Gesetz zur Umsetzung der Wohnimmobilienkreditrichtlinie und zur Änderung handelsrechtlicher Vorschriften) that entered into force on March 21, 2016, the average market interest rate for discounting pension accruals is calculated over the past ten financial years (until the 2015 financial year: seven financial years) in accordance with § 253 (2) sentence 1 HGB. The difference between the carrying amount of the pension accruals using the average market interest rate over the past ten financial years and the carrying amount of the accruals using the average market interest rate over the past seven financial years is subject to the restriction on distribution (§ 253 (6) sentence 2 HGB). Where an addition to pension accruals is required on account of the change in measurement following the entry into force of BilMoG, the amount must aggregate to at least one 15th in each financial year up to December 31, 2024 at the latest (Art. 67 (1) sentence 1 EGHGB). The Company exercised the option

in such a way that the annual addition corresponds to one 15th of the total amount being added. This amount is presented separately under other operating expenses.

In the past, Deutsche Telekom entered into **phased retirement arrangements** with varying terms and conditions largely based on what is known as the block model. Two types of obligations, both measured at their present value in accordance with actuarial principles using the 2018 G life expectancy tables published by Prof. Klaus Heubeck (until December 31, 2017: 2005 G life expectancy tables), arise and are accounted for separately. These two obligations are outstanding settlement amounts and top-up payments. Top-up payments are often hybrid in nature, i.e., although the agreement is often considered a form of compensation for terminating the employment relationship at an earlier date, payments to be made at a later date are subject to the performance of work in the future. To the extent that phased retirement programs are mainly to be considered severance instruments, top-up payments are recognized in full as soon as the obligation arises. If, by contrast, the focus of the phased retirement arrangements is on the future performance of work, the top-up payments are recognized over their vesting period.

Obligations arising from **long-term accounts** are measured at the present value using actuarial principles. Obligations relating to **lifetime work accounts** are measured at the fair value of the reinsurance arranged for this purpose.

To hedge claims from phased retirement, lifetime work accounts, long-term accounts and pension obligations, assets have been transferred to a trustee under a contractual trust arrangement (CTA). Where these assets are plan assets pursuant to § 246 (2) sentence 2 HGB, the accruals for lifetime work accounts, long-term accounts and pension obligations, as well as accruals for outstanding settlement amounts relating to obligations from phased retirement, are offset against the corresponding plan assets. The plan assets offset are measured at their fair value in accordance with § 253 (1) sentence 4 HGB. Any resulting excess in plan assets is recognized as an asset and presented under a separate item (§ 266 (2) letter E HGB). In accordance with § 246 (2) sentence 2 HGB, income and expenses from discounting and from the assets to be offset are also offset under financial income/expense. If the fair value of the plan assets exceeds the historical cost, this part is subject to the restriction on distribution in accordance with § 268 (8) HGB.

Tax and other accruals, including those for contingent losses and environmental liabilities, are carried at the settlement amount considered necessary in accordance with prudent commercial practice. Sufficient allowance is made for all identifiable risks when measuring these accruals. Expected increases in prices and costs in the meantime are taken into account.

Accruals with a remaining term of more than one year are discounted at the balance sheet date at the interest rate published by the Deutsche Bundesbank, which is the average market interest rate for the past seven financial years corresponding to their remaining maturity.

Where reversals of accruals became necessary in the 2010 financial year due to the introduction of BilMoG and the resulting changes in measurement, Deutsche Telekom exercised the option to retain the higher carrying amount if the amount being reversed has to be added back before December 31, 2024 (Art. 67 (1) sentence 2 EGHGB).

Liabilities are recognized at the settlement amount. In instances where the settlement amount of a liability is greater than the principal amount,

the difference is recorded under prepaid expenses and deferred charges, and distributed over the term of the liability. In accordance with § 256a HGB, liabilities denominated in foreign currencies are translated at the middle spot rate at the balance sheet date and measured using the historical cost convention (§ 253 (1) sentence 1 HGB) and applying the realization principle (§ 252 (1) no. 4 half-sentence 2 HGB). Current items with maturities of one year or less are measured at the middle spot rate at the balance sheet date in accordance with § 256a HGB.

In line with the imparity principle, unrealized losses relating to non-derivative and derivative financial instruments are expensed when incurred. This principle is also applied to derivatives that are embedded in structured financial instruments and that have to be accounted for separately. If financial instruments can be qualified as a valuation unit – hedged item and hedge transaction – the unrealized losses from the hedged risks are not recognized in accordance with § 254 HGB provided there are also unrealized gains in the same amount offsetting the losses (net hedge presentation method). If the offset (netting) of the change in values of the hedged item and the hedge instrument results in a net loss, it is recognized in net income or loss through an accrual for contingent losses in accordance with IDW RS HFA 35, whereas unrealized gains are not recognized until realized.

Financial liabilities denominated in foreign currencies that are part of a hedge are recognized at the middle spot rate at the transaction date.

Unrealized settlement gains and losses from expired hedge transactions for revolving hedging (roll-over gains or losses) and other settlement gains and losses for which the hedged item has not yet been recognized in the statement of income are reported separately as other assets or other liabilities.

All proceeds from the sale and the renting and leasing out of products, as well as the provision of services are presented as **revenue**. This primarily relates to revenue from the International Carrier Sales & Solutions as well as Technology and Innovation units plus revenue from hiring out employees, renting and leasing out property, and offering training services.

Revenue is recorded net of sales-related reductions and value-added tax as well as other taxes directly linked to revenue. In accordance with the realization principle, revenue is recognized in the accounting period when earned.

Research and development costs are expensed as incurred.

Pension costs include expenditures in connection with the appropriation of accruals for current employees as well as expenditures for ongoing payments to the Federal Agency on behalf of employed civil servants.

Income tax expense includes current payable taxes on income. Deutsche Telekom has not exercised its option to recognize deferred tax assets in accordance with § 274 (1) HGB.

SCOPE OF DISCRETION

The preparation of the annual financial statements requires the Company to make estimates and assumptions that affect the reported carrying amounts of assets and liabilities, the disclosure of risks and uncertainties with regard to the assets and liabilities recognized at the closing date and the amounts of income and expenses recognized during the reporting period. Actual results may differ from those estimates.

NOTES TO THE BALANCE SHEET

1 NONCURRENT ASSETS

As of December 31, 2018, **intangible assets** amounted to EUR 186 million (December 31, 2017: EUR 195 million) and primarily include advance payments, licenses, and rights to use software. Additions to intangible assets of EUR 67 million relate in particular to advance payments and purchased software.

Property, plant and equipment decreased by EUR 322 million to EUR 2.4 billion in the reporting period, mainly due to depreciation in the reporting year amounting to EUR 221 million, of which EUR 168 million relates to depreciation on real estate. Investments in property, plant and equipment in the reporting year totaled EUR 59 million (2017: EUR 78 million), of which EUR 26 million related to other equipment, plant and office equipment and EUR 21 million to advance payments and construction in progress. External disposals of property, plant and equipment at net carrying amounts related almost exclusively to real estate, which accounted for EUR 158 million.

As of the balance sheet date, **financial assets** increased by EUR 624 million compared with December 31, 2017.

The increase of EUR 498 million in **investments in subsidiaries** was mainly attributable to capital increases at Deutsche Telekom Europe Holding GmbH, Bonn, (EUR 1.8 billion) and Telekom Innovation Pool GmbH, Bonn, (EUR 84 million) and to the purchase of shares in Hellenic Telecommunications Organization S.A. (OTE), Athens, (EUR 285 million) and in Sireo Immobilienfonds No. 1 GmbH & Co. KG, Bonn, (EUR 21 million), as well as to write-ups at Deutsche Telekom Europe Holding GmbH, Bonn, (EUR 382 million) and T-Mobile Global Zwischenholding GmbH, Bonn, (EUR 93 million). The equity repayment by CTA Holding GmbH, Bonn, (EUR 1.3 billion) and the sale and assignment of shares in CTA Holding GmbH, Bonn, to T-Systems International GmbH, Frankfurt/Main (hereinafter referred to as T-Systems), (EUR 705 million) and to Telekom Deutschland GmbH, Bonn (hereinafter referred to as Telekom Deutschland), (EUR 290 million) had an offsetting effect.

Loans to subsidiaries with a carrying amount of EUR 16.7 billion at December 31, 2018 mainly consisted of loans to T-Mobile USA, Inc., Bellevue, (EUR 13.1 billion), Telekom Deutschland (EUR 2.2 billion), T-Mobile Polska S.A., Warsaw, (EUR 678 million), Magyar Telekom Telecommunications Public Limited Company, Budapest, (EUR 451 million), and Sireo Immobilienfonds No. 1 GmbH & Co. KG, Bonn, (EUR 111 million). The increase of EUR 239 million is mainly attributable to the increase in the loan to T-Mobile USA, Inc., Bellevue.

Write-downs on financial assets in the previous year related mainly to T-Systems (EUR 1.0 billion) and were recorded in net financial income/expense.

For the statement of investment holdings in accordance with § 285 HGB, please refer to Note 40.

Statement of noncurrent assets

millions of €

	Acquisition costs							Balance at Dec. 31, 2018
	Balance at Jan. 1, 2018	Additions	Additions from transfers from Group companies	Disposals	Disposals from transfers to Group companies	Disposals from conversions and similar transactions	Reclassifica- tions	
I. INTANGIBLE ASSETS								
1. Purchased concessions, industrial property and similar rights and assets, and licenses in such rights and assets	317	36	2	(62)	(4)	-	29	318
2. Advance payments	34	31	0	(3)	(2)	-	(29)	31
	351	67	2	(65)	(6)	-	-	349
II. PROPERTY, PLANT AND EQUIPMENT								
1. Land and equivalent rights and buildings including buildings on land owned by third parties	8,943	9	1	(621)	0	-	7	8,339
2. Technical equipment and machinery	395	3	0	(10)	(2)	-	13	399
3. Other equipment, plant and office equipment	648	26	4	(41)	(3)	-	2	636
4. Advance payments and construction in progress	40	21	-	(1)	(2)	-	(22)	36
	10,026	59	5	(673)	(7)	-	-	9,410
III. FINANCIAL ASSETS								
1. Investments in subsidiaries	82,178	2,315	-	(1,297)	(995)	0	-	82,201
2. Loans to subsidiaries	16,467	2,247	-	(2,009)	-	-	-	16,705
3. Investments in associated and related companies	561	-	-	(108)	-	-	-	453
4. Other long-term loans	10	-	-	(5)	-	-	-	5
	99,216	4,562	-	(3,419)	(995)	0	-	99,364
NONCURRENT ASSETS	109,593	4,688	7	(4,157)	(1,008)	0	-	109,123

Depreciation, amortization and write-downs						Net carrying amounts		
Balance at Jan. 1, 2018	Additions	Additions from transfers from Group companies	Write-ups	Disposals	Disposals from transfers to Group companies	Balance at Dec. 31, 2018	Balance at Dec. 31, 2018	Balance at Dec. 31, 2017
(156)	(68)	(2)	-	62	1	(163)	155	161
-	-	-	-	-	-	-	31	34
(156)	(68)	(2)	-	62	1	(163)	186	195
(6,438)	(168)	(1)	2	463	0	(6,142)	2,197	2,505
(354)	(12)	0	-	10	1	(355)	44	41
(536)	(41)	(3)	-	40	3	(537)	99	112
-	-	-	-	-	-	-	36	40
(7,328)	(221)	(4)	2	513	4	(7,034)	2,376	2,698
(5,241)	-	-	475	-	-	(4,766)	77,435	76,937
(2)	0	-	-	1	-	(1)	16,704	16,465
(166)	-	-	-	-	-	(166)	287	395
-	-	-	-	-	-	-	5	10
(5,409)	0	-	475	1	-	(4,933)	94,431	93,807
(12,893)	(289)	(6)	477	576	5	(12,130)	96,993	96,700

2 INVENTORIES

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Merchandise	1	1
	1	1

3 RECEIVABLES

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Trade accounts receivable	28	39
of which: with a remaining maturity of more than one year € 0 million (Dec. 31, 2017: € 0 million)		
Receivables from subsidiaries	22,292	22,030
of which: with a remaining maturity of more than one year € 0 million (Dec. 31, 2017: € 5 million)		
Receivables from associated and related companies	5	4
of which: with a remaining maturity of more than one year € 0 million (Dec. 31, 2017: € 0 million)		
	22,325	22,073

Trade accounts receivable relate in particular to receivables at the International Carrier Sales & Solutions business unit regarding wholesale telecommunications services for international carriers.

Receivables from subsidiaries consist of receivables related to intercompany cash management amounting to EUR 21,086 million (December 31, 2017: EUR 20,294 million), financial receivables amounting to EUR 212 million (December 31, 2017: EUR 736 million), and other receivables of EUR 575 million (December 31, 2017: EUR 556 million), and intercompany trade accounts receivable amounting to EUR 419 million (December 31, 2017: EUR 444 million).

Receivables from associated and related companies included EUR 5 million in trade accounts receivable in the reporting year (December 31, 2017: EUR 453 thousand).

4 OTHER ASSETS

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
TAX RECEIVABLES		
Income tax receivables		
Corporate income tax	232	33
Trade income tax	135	74
	367	107
Other tax receivables	1	0
	368	107
Accrued interest	374	346
Receivables from collateral	299	504
Receivables from derivatives	263	423
Receivables from reimbursements	210	215
Receivables from employees	6	6
Miscellaneous other assets	110	58
	1,262	1,552
	1,630	1,659

Income tax receivables relate to corporate and trade income tax receivables for the 2018 financial year as well as prior years from overpayments to the tax authorities and municipalities.

Accrued interest was almost exclusively from interest rate derivatives.

Collateral is used to hedge the credit risk from derivative financial instruments. In this case, Deutsche Telekom transfers collateral in the form of cash to its contracting parties. The decrease in **receivables from collateral** is attributable to regular fluctuation in market values resulting from changes in exchange rates, interest rates, and maturities of derivative financial instruments.

Receivables from derivatives mainly relate to unrealized settlement gains and losses from expired U.S.-dollar hedge transactions for revolving hedging (roll-over gains or losses).

Receivables from reimbursements mainly consist of interoperator discount services in connection with roaming agreements with foreign mobile communications providers. Deutsche Telekom's subsidiaries are entitled to, and will be credited with, the reimbursements received, which are initially bundled by Deutsche Telekom.

Miscellaneous other assets mainly include receivables from Deutsche Telekom Trust e. V., Bonn, in the amount of the credit on the trust account of EUR 47 million. This item also includes receivables from the Federal Agency and from the hiring out of employees.

Of the receivables reported under other assets, EUR 480 million (December 31, 2017: EUR 454 million) have a remaining maturity of more than one year.

5 CASH AND CASH EQUIVALENTS

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Cash in hand and cash in banks	680	157
	680	157

The total time to maturity of **cash and cash equivalents** is less than three months.

6 PREPAID EXPENSES AND DEFERRED CHARGES

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Personnel costs	187	322
Loan premium	160	208
Loan discounts	144	135
Other prepaid expenses	31	11
	522	676

Deferred personnel costs in the reporting period mainly comprise prepaid expenses to the Federal Agency for 2019 and prepaid remuneration.

The **loan premium** primarily results from the granting of an early repayment option for loans issued to T-Mobile USA, Inc., Bellevue.

Prepaid expenses and deferred charges for **loan discounts** mainly relate to loan liabilities to Deutsche Telekom International Finance B.V., Maastricht.

7 DIFFERENCE BETWEEN PLAN ASSETS AND CORRESPONDING LIABILITIES

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Settlement amount of the netted liabilities from phased retirement agreements, lifetime work accounts, and long-term accounts	55	60
Fair value of the CTA assets	62	111
Acquisition costs of the CTA assets	61	107
Netted expenses	8	4
Netted income	0	1
Excess of plan assets above obligations from outstanding settlement amounts from phased retirement agreements and long-term accounts	7	51

The **difference between plan assets and corresponding liabilities** amounting to EUR 7 million relates exclusively to the netting of marketable securities, cash in banks, and reinsurance in the amount of EUR 62 million with the outstanding settlement amounts for accruals for phased retirement and obligations relating to lifetime work and long-term accounts amounting to EUR 55 million. The marketable securities, cash in banks, and reinsurance that were transferred to a trustee serve as security for employees' entitlements from phased retirement agreements, lifetime work accounts and long-term accounts under the CTA. The fair value of the CTA assets covers Deutsche Telekom's discounted outstanding settlement amounts relating

to obligations from phased retirement, lifetime work and long-term accounts at December 31, 2018 in the amount required by law. In addition, the CTA assets covered on a voluntary basis parts of Deutsche Telekom's discounted outstanding settlement amounts relating to obligations from phased retirement for civil servants concluded by June 30, 2014. The amortized cost of the CTA assets for lifetime work accounts corresponds to the fair value. The acquisition cost of the CTA assets for long-term accounts is lower than the fair value. The resulting difference of EUR 1 million (fair value of EUR 1.2 million, cost of acquisition EUR 0.2 million) is subject to a restriction on distribution.

The netted expenses and income are reported in net interest income/expense.

The CTA assets are valued as of the respective balance sheet date taking into account current prices.

8 SHAREHOLDERS' EQUITY

millions of €		
	Dec. 31, 2018	Dec. 31, 2017
Capital stock	12,189	12,189
Less the imputed value of treasury shares	(48)	(49)
Issued capital	12,141	12,140
Additional paid-in capital	31,333	31,333
	31,333	31,333
Retained earnings		
other retained earnings	9,541	9,538
	9,541	9,538
Unappropriated net income	7,031	5,928
	60,046	58,939

Shareholders' equity increased by EUR 1,107 million year-on-year. The changes are described in detail in the following sections.

9 CAPITAL STOCK

	Authorized and issued capital		Authorized capital (not issued)		Contingent capital (not issued)	
	thousands of shares	thousands of €	thousands of shares	thousands of €	thousands of shares	thousands of €
As of Dec. 31, 2017	4,761,459	12,189,334	1,406,250	3,600,000	429,688	1,100,000
Discontinuation of 2014 contingent capital	-	-	-	-	(429,688)	(1,100,000)
Issue of 2018 contingent capital	-	-	-	-	468,750	1,200,000
AS OF DEC. 31, 2018	4,761,459	12,189,334	1,406,250	3,600,000	468,750	1,200,000

As of December 31, 2018, Deutsche Telekom's **capital stock** totaled approximately EUR 12.2 billion. The capital stock is divided into 4,761,458,596 no par value registered shares with a notional value of EUR 2.56 per share. Each share entitles the holder to one vote.

As of December 31, 2018, the shareholders listed in the following table had shareholdings in Deutsche Telekom subject to reporting requirements in accordance with § 33 (1) of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG). The remaining shares were in free float.

	Dec. 31, 2018	
	thousands of shares	in %
Federal Republic of Germany	689,601	14.48
KfW Bankengruppe, Frankfurt/Main, Germany	829,179	17.41
BlackRock, Inc., Wilmington, DE, United States*	234,194	4.92

* As of the latest voting rights notification, published on September 22, 2017

Authorized capital

As of December 31, 2018, Deutsche Telekom had the following authorized capital:

	thousands of €	thousands of shares	Purpose	Authorization until
2017 Authorized capital	3,600,000	1,406,250	Capital increase against cash contribution/ contribution in kind	May 30, 2022

2017 Authorized capital

The shareholders' meeting on May 31, 2017 authorized the Board of Management to increase the capital stock with the approval of the Supervisory Board by up to EUR 3,600,000,000 by issuing up to 1,406,250,000 no par value registered shares against cash and/or non-cash contributions in the period ending May 30, 2022. This authorization may be exercised in full or on one or more occasions in partial amounts. The Board of Management is authorized, subject to the approval of the Supervisory Board, to exclude residual amounts from shareholders' subscription rights. Furthermore, the Board of Management is authorized, subject to the approval of the Supervisory Board, to disapply shareholders' subscription rights in the event of capital increases against non-cash contributions when issuing new shares for business combinations or acquisitions of companies, parts thereof or interests in companies, including increasing existing investment holdings, or other assets eligible for contribution for such acquisitions, including receivables from the Company. However, the value of the new shares for which shareholders' subscription rights have been disappplied on the basis of this authorization – together with

the value of the shares or conversion and/or option rights or obligations under bonds issued or sold since May 31, 2017 subject to the disapplication of subscription rights – must not exceed 20 percent of the total share capital; the latter is defined as the amount existant as of May 31, 2017, upon entry of the authorization, or upon the issue of the new shares, whichever amount is lowest. If the issue or sale is carried out in analogous or mutatis mutandis application of § 186 (3) sentence 4 AktG, this shall also constitute the disapplication of subscription rights. The Board of Management is also authorized, subject to the approval of the Supervisory Board, to determine the rights accruing to the shares in the future and the conditions for issuing shares.

The 2017 authorized capital was entered into the commercial register on July 11, 2017.

Contingent capital

As of December 31, 2018, Deutsche Telekom had the following contingent capital:

	thousands of €	thousands of shares	Purpose
2018 contingent capital	1,200,000	468,750	Servicing convertible bonds and/or bonds with warrants issued on or before May 16, 2023

2018 contingent capital

The Company's capital stock was contingently increased by up to EUR 1,200,000,000 as of December 31, 2018, comprising up to 468,750,000 no par value shares. The contingent capital increase will be implemented only to the extent that

- the holders or creditors of bonds with warrants, convertible bonds, profit participation rights and/or participating bonds (or combinations of these instruments) with options or conversion rights, which are issued or guaranteed by Deutsche Telekom or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, make use of their option and/or conversion rights or
- those obligated as a result of bonds with warrants, convertible bonds, profit participation rights, and/or participating bonds (or combinations of these instruments), which are issued or guaranteed by Deutsche Telekom or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, fulfill their option or conversion obligations (including in the event that, in exercising a repayment option when the final due date of the bond is reached, Deutsche Telekom grants shares in Deutsche Telekom completely or partially in lieu of cash payment of the amount due)

and other forms of fulfillment are not used. The new shares shall participate in profits starting at the beginning of the financial year in which they are issued as the result of the exercise of any option or conversion rights or the fulfillment of any option or conversion obligations. The Supervisory Board is authorized to amend § 5 (3) of the Articles of Incorporation in accordance with the particular usage of the contingent capital and after the expiry of all the option or conversion periods.

Treasury shares

The amount of capital stock assigned to treasury shares was approximately EUR 48 million at December 31, 2018. This equates to 0.4 percent of the capital stock. At 18,973,107 shares, the holding of treasury shares breaks down as follows:

	Number
Share Matching Plan	456,296
Shares formerly deposited with a trustee	18,516,811
	18,973,107

The year-on-year decrease in treasury shares was due exclusively to the transfer of a total of 312 thousand treasury shares to the custody accounts of eligible participants in the Share Matching Plan.

Authorization to acquire and use treasury shares

The shareholders' meeting resolved on May 25, 2016 to authorize the Board of Management to purchase shares in the Company by May 24, 2021, with the amount of capital stock accounted for by these shares totaling up to EUR 1,179,302,878.72, provided the shares to be purchased on the basis of this authorization in conjunction with the other shares of the Company which the Company has already purchased and still possesses or are to be assigned to it under § 71d and § 71e AktG do not at any time account for more than 10 percent of the Company's capital stock. Moreover, the requirements under § 71 (2) sentences 2 and 3 AktG must be complied with. Shares shall not be purchased for the purpose of trading in treasury shares. This authorization may be exercised in full or in part. The purchase can be carried out in partial tranches spread over various purchase dates within the authorization period until the maximum purchase volume is reached. Dependent Group companies of Deutsche Telekom within the meaning of § 17 AktG or third parties acting for the account of Deutsche Telekom or for the account of dependent Group companies of Deutsche Telekom within the meaning of § 17 AktG are also entitled to purchase the shares. The shares are purchased through the stock exchange in adherence to the principle of equal treatment (§ 53a AktG). Shares can instead also be purchased by means of a public purchase or share exchange offer addressed to all shareholders, which, subject to a subsequently approved exclusion of the right to offer shares, must also comply with the principle of equal treatment.

The shares may be used for one or several of the purposes permitted by the authorization granted by the shareholders' meeting on May 25, 2016 under item 6 on the agenda. The shares may also be used for purposes involving an exclusion of subscription rights. They may also be sold on the stock market or by way of an offer to all shareholders, or withdrawn. The shares may also be used to fulfill the rights of Board of Management members to receive shares in Deutsche Telekom, which the Supervisory Board has granted to these members as part of the arrangements governing the compensation of the Board of Management, on the basis of a decision by the Supervisory Board to this effect.

Under the resolution of the shareholders' meeting on May 25, 2016, the Board of Management is also authorized to acquire the shares through the use of equity derivatives.

On the basis of the authorization by the shareholders' meeting on May 25, 2016 described above and corresponding authorizations by the shareholders' meetings on May 12, 2011 and May 24, 2012, 110 thousand shares were acquired in June 2011, 206 thousand shares in September 2011, and 268 thousand shares in January 2013. The total acquisition volumes amounted to EUR 2,762 thousand in the 2011 financial year, and EUR 2,394 thousand in the 2013 financial year (excluding transaction costs). This increased the number of treasury shares by 316 thousand and 268 thousand, respectively. Further, 90 thousand shares and 860 thousand shares were acquired in September and October 2015, respectively, for an aggregate amount of EUR 14,787 thousand (excluding transaction costs); these acquisitions increased the number of treasury shares by 950 thousand.

No treasury shares were acquired in the reporting period.

As part of the Share Matching Plan, a total of 2 thousand shares were transferred free of charge to the custody accounts of eligible participants in each of the 2012 and 2013 financial years. A further 90 thousand treasury shares were transferred free of charge in the 2014 financial year. Additional 140 thousand treasury shares were transferred in the 2015 financial year. In the 2016 financial year, 232 thousand treasury shares were transferred. In the 2017 financial year, 300 thousand treasury shares were transferred. Transfers of treasury shares to the custody accounts of employees of Deutsche Telekom are free of charge. In cases where treasury shares are transferred to the custody accounts of employees of other Group companies, the costs have been transferred at fair value to the respective Group company since the 2016 financial year.

A total of 312 thousand treasury shares were reallocated in all months of the reporting period and transferred to the custody accounts of eligible participants in the Share Matching Plan.

As of December 31, 2018, disposals of treasury shares resulting from the transfers in the reporting period accounted for less than 0.01 percent, or EUR 798 thousand, of capital stock. Gains on disposal arising from transfers of treasury shares amounted to EUR 3,036 thousand. In the reporting year, 81 thousand treasury shares with a fair value of EUR 1,157 thousand were billed to other Group companies. Transfers of treasury shares increased retained earnings by EUR 2,162 thousand and additional paid-in capital by EUR 20 thousand.

As part of the acquisition of VoiceStream Wireless Corp., Bellevue, and Powertel Inc., Bellevue, in 2001 Deutsche Telekom issued new shares from authorized capital to a trustee, for the benefit of holders of warrants, options and conversion rights, among others. These options and conversion rights fully expired in the 2013 financial year. As a result, the trustee no longer had any obligation to fulfill any claims in accordance with the purpose of the deposit. The trust relationship was terminated at the start of 2016 and the deposited shares were transferred free of charge to a custody account of Deutsche Telekom. The 18,517 thousand previously deposited shares are accounted for in the same way as treasury shares in accordance with § 272 (1a) HGB. This equates to 0.4 percent, or EUR 48 million, of Deutsche Telekom's capital stock. On the basis of authorization by the shareholders' meeting on May 25, 2016, the treasury shares acquired free of charge may be used for the same purposes as the treasury shares acquired for a consideration.

10 ADDITIONAL PAID-IN CAPITAL

Additional paid-in capital increased by EUR 20 thousand in the 2018 financial year. This resulted from transfers of the treasury shares held by Deutsche Telekom to custody accounts of participants in the Share Matching Plan.

11 RETAINED EARNINGS

Retained earnings include the transfers from income after taxes from prior years to other retained earnings. The increase in retained earnings in the reporting year was exclusively attributable to transfers of the treasury shares held by Deutsche Telekom to custody accounts of participants in the Share Matching Plan.

Restriction on distribution

The amount that is subject to a restriction on distribution in accordance with § 268 (8) sentence 3 HGB is attributable to the measurement of the CTA assets for accruals for pensions and similar obligations at fair value amounting to EUR 205 million and to the measurement of the CTA asset for long-term accounts amounting to EUR 1 million. Deferred tax liabilities account for EUR 35 million of the difference of EUR 206 million, resulting in a net amount of EUR 171 million. After accounting for deferred tax assets, also of EUR 35 million, which are offset against the deferred tax liabilities, the amount that is subject to a restriction on distribution in accordance with § 268 (8) HGB is EUR 206 million.

The amount that is subject to a restriction on distribution in accordance with § 253 (6) sentence 2 HGB is attributable to the difference in the amount of EUR 555 million resulting from changed measurement principles for pension accruals pursuant to § 253 (6) sentence 1 HGB.

Unappropriated net income can be distributed in full as the amount of EUR 761 million that is subject to a restriction on distribution pursuant to § 268 (8) sentence 3 HGB and § 253 (6) sentence 2 HGB is covered entirely by freely available reserves.

12 STOCK-BASED COMPENSATION PLANS

Share Matching Plan

Since the 2011 financial year, specific executives have been contractually obligated to invest a minimum of 10 percent and a maximum of 33.3 percent of their variable short-term remuneration component, which is based on the achievement of targets set for each person for the financial year (Variable I), in Deutsche Telekom shares. Deutsche Telekom will award one additional share for every share acquired as part of this executive's aforementioned personal investment (Share Matching Plan). These shares will be allotted to the beneficiaries of this plan on expiration of the four-year lock-up period.

Since the 2015 financial year, executives who are not contractually obligated to participate in the Share Matching Plan have been given the opportunity to participate on a voluntary basis. To participate, the executives invested a minimum of 10 percent and a maximum of 33.3 percent of their variable short-term remuneration component, which is based on the achievement of targets set for each person for the financial year

(Variable I), in Deutsche Telekom shares. Deutsche Telekom will award additional shares for every share acquired as part of this executive's aforementioned personal investment (Share Matching Plan). Participation in the Share Matching Plan and the number of additional shares granted is contingent on the executive's individual performance. The additional shares will be allotted to the beneficiaries of this plan on expiration of the four-year lock-up period. The offer to executives to participate voluntarily in the Share Matching Plan is only made in the years in which the previous year's free cash flow target was achieved.

For the compensation system of Board of Management members who also participate in the Share Matching Plan, please refer to the "Compensation report" in the combined management report.

Long-Term Incentive Plan (LTI)

In the 2015 financial year, executives who had not made a contractual commitment to participate in the long-term incentive plan were given the first-time opportunity to participate. The participating executives receive a package of virtual shares at the inception of the plan. The number of virtual shares is contingent on the participant's management group assignment, individual performance, and annual target salary. Taking these factors into account, the value of the package of virtual shares at the inception of the plan is between 10 and 43 percent of the participant's annual target salary.

Over the term of the four-year plan, the value of the virtual shares changes in line with Deutsche Telekom share price development. The number of virtual shares will change on achievement of the targets for four equally weighted performance indicators (return on capital employed, adjusted earnings per share, employee satisfaction, and customer satisfaction), to be determined at the end of each year. In addition, each beneficiary receives a dividend during the term of the plan. This dividend is reinvested in virtual shares, increasing the number of virtual shares held by each plan participant. At the end of the four-year plan, the results of each of the four years will be added together and the virtual shares will be converted on the basis of a share price calculated in a reference period and paid out in cash.

13 ACCRUALS FOR PENSIONS AND SIMILAR OBLIGATIONS

millions of €

	Dec. 31, 2018	Dec. 31, 2017
Direct pension obligations	2,404	1,319
of which: parallel obligation € 1.1 billion (Dec. 31, 2017: € 1.1 billion)		
Indirect pension obligations	25	98
	2,429	1,417
Accruals for collateral promise for pensions	1,318	1,747
	3,747	3,164

The carrying amounts of the **pension obligations** were calculated on the basis of the actuarial reports.

The pension obligations to non-civil servant employees are based on indirect and direct pension commitments. The indirect commitments include the obligations of Versorgungsanstalt der Deutschen Bundespost

(VAP) and, in the reporting period for the first time, obligations of Telekom-Pensionsfonds a. G. (TPF), Bonn.

Deutsche Telekom's direct pension commitments comprise direct commitments with and without VAP parallel obligations. The VAP parallel obligations are based on direct legal claims against Deutsche Telekom which were originally attributable to VAP. VAP's obligations are therefore suspended.

The VAP benefits supplement statutory pension benefits up to the level specified in the Articles of Incorporation and generally depend on the level of employee compensation and the eligible periods of service of the eligible employees. As part of the restructuring of the corporate pension plan in 1997, the employer and the trade unions entered into an agreement stipulating measures for the protection of vested VAP benefits.

Pursuant to this agreement, the benefit obligations due to retirees and employees approaching retirement will remain unchanged. For younger employees with vested benefits, the obligations have been converted into an initial amount based on the number of years of coverage to date, which was then credited to a capital account held by the employer (cash balance plan). Deutsche Telekom credits this account on an annual basis; when the insured event occurs, the account balance is paid out in full or in installments, or can be converted into a life-long pension.

The form of implementation changed as a result of the collective agreement on the restructuring of the corporate pension plan at Deutsche Telekom signed on August 17, 2005. According to this agreement, all company pension benefits for active and inactive employees will henceforth be granted directly and with a legal claim.

The obligations of TPF arise from the form of implementation of the company pension plan, which changed by virtue of the amending collective agreement dated November 2, 2018. According to this agreement, some of the company pension benefits that were previously processed through Deutsche Telekom Betriebsrenten-Service (DTBS) e. V., Bonn, will be handled by TPF in the future. Going forward, the remainder of the pension benefits that were processed through DTBS will be granted directly and with a legal claim. As a result, obligations of the special pension fund of Deutsche Telekom Betriebsrenten-Service (DTBS) e. V., Bonn, were no longer presented in the reporting period.

With the exception of Deutsche Telekom, all former sponsoring companies of DTBS announced their exit as sponsors effective December 31, 2018. The existing fund assets of the other sponsoring companies in DTBS in the amount of EUR 32 million were allocated to Deutsche Telekom. Deutsche Telekom refunded the companies concerned the amount outside of the special pension fund.

EUR 142 million of the assets held by Deutsche Telekom in DTBS were contributed to TPF and EUR 12 million was transferred to Deutsche Telekom Trust e. V., Bonn.

The assets allocated to Deutsche Telekom in TPF exceed the share of indirect pension obligations in TPF. Thus, the indirect pension obligations in TPF are not reported in the balance sheet.

Pension accruals are measured using the projected unit credit method since the introduction of BilMoG effective January 1, 2010. The addition

resulting from the change in the measurement of pension accruals is spread over 15 years in accordance with transitional provisions (Art. 67 (1) sentence 1 EGHGB) of BilMoG.

Pension accruals not shown in the balance sheet as a consequence of the transitional provisions of BilMoG amounted to EUR 95 million at December 31, 2018 (December 31, 2017: EUR 95 million) for direct pension obligations and EUR 3 million (December 31, 2017: EUR 20 million) for indirect pension obligations.

Calculations at the balance sheet date were based on the following assumptions:

in %	
	2018
Notional interest rate	3.21
Projected salary increase	2.50
Projected pension increase	
General	1.50
According to Articles of Incorporation	1.00
Fluctuation	4.00

Pension obligations were calculated using the biometrics of the 2018 G tables (until December 31, 2017: 2005 G tables) published by Prof. Klaus Heubeck.

Based on the actuarial reports, an accrual for direct pension obligations amounting to EUR 2,404 million is recognized at the balance sheet date (December 31, 2017: EUR 1,319 million).

This figure is the result of the netting of the settlement amount of direct pension obligations at December 31, 2018 of EUR 3,762 million (December 31, 2017: EUR 2,912 million) with the fair value of the plan assets measured at market values of EUR 1,263 million (December 31, 2017: EUR 1,498 million) and the remaining addition (BilMoG) amounting to EUR 95 million (December 31, 2017: EUR 95 million). The acquisition cost of the plan assets totaled EUR 1,058 million (December 31, 2017: EUR 1,238 million) and were lower than the fair value. The difference of EUR 205 million by which the fair value exceeds the acquisition cost of the asset is subject to a restriction on distribution. In the reporting year, expenses in the amount of EUR 285 million (2017: EUR 208 million) were recognized together with the expenses from the netted assets in the amount of EUR 48 million (2017: income of EUR 76 million) in net interest income/expense.

In accordance with spin-off and transfer agreements dated June 27, 2018, Deutsche Telekom Außendienst GmbH, Bonn, Deutsche Telekom Technik GmbH, Bonn, Deutsche Telekom Service GmbH, Bonn, and T-Systems GEI GmbH, Aachen, transferred obligations to active beneficiaries from company pension plans and ad valorem assets as a unit to ZODIAC Telekommunikationsdienste GmbH, Bonn, by way of transformation through spin-off with economic effect from January 1, 2018. ZODIAC Telekommunikationsdienste GmbH, Bonn, was then merged into Deutsche Telekom, also with economic effect from January 1, 2018. The assumption of the obligations, for which there was previously a collateral promise with an internal performance obligation by Deutsche Telekom, led to an increase in direct pension obligations and a corresponding decrease in accruals for collateral promise for pensions.

The **accruals for collateral promise for pensions** comprise the economic obligations assumed by Deutsche Telekom with respect to the liabilities for pension claims of the companies Deutsche Telekom Außendienst GmbH, Bonn, Deutsche Telekom Technik GmbH, Bonn, and Deutsche Telekom Service GmbH, Bonn.

In accordance with the Act on the Implementation of the Mortgage Credit Directive and Amending Commercial Rules (Gesetz zur Umsetzung der Wohnimmobilienkreditrichtlinie und zur Änderung handelsrechtlicher Vorschriften), which entered into force on March 21, 2016, the average market interest rate for discounting pension accruals is calculated over the past ten financial years (until the 2015 financial year: seven financial years). The difference between the carrying amount of the pension accruals and accruals for the collateral promise for pensions using the average market interest rate over the past ten financial years and the carrying amount of the accruals using the average market interest rate over the past seven financial years amounted to EUR 555 million as of December 31, 2018 (December 31, 2017: EUR 512 million). The difference is subject to a restriction on distribution.

The increase in accruals for pensions and similar obligations is mainly attributable to a lower notional interest rate for the calculation of pension accruals compared with the prior year, and to the refund of plan assets.

14 TAX ACCRUALS

millions of €

	Dec. 31, 2018	Dec. 31, 2017
Income taxes	201	192
Other taxes	37	46
	238	238

Income tax accruals relate to corporate income tax and trade income tax from prior years.

The majority of **other taxes** related to value-added tax from prior years.

15 OTHER ACCRUALS

millions of €

	Dec. 31, 2018	Dec. 31, 2017
EMPLOYEE BENEFITS		
Civil Service Health Insurance Fund	690	554
Early retirement (Civil Service Pension Fund)	330	489
Phased retirement arrangement	323	233
Miscellaneous obligations	242	184
OTHER OBLIGATIONS		
Litigation risks	194	266
Outstanding invoices	188	154
Loss contingencies from pending transactions	141	138
Loss contingencies from derivatives	66	98
Miscellaneous other accruals	203	205
	2,377	2,321

The **accrual for the Civil Service Health Insurance Fund** (Postbeamtenkrankenkasse – PBeaKK) covers the risk of having to make compensation payments to the PBeaKK. The risk of utilization arises if a deficit were to remain after scheduled withdrawal from the fund's assets.

Civil servants working at Deutsche Telekom who have reached the age of 55 and fulfill all the criteria set out in the Act on the Staff Structure at the Residual Special Asset of the Federal Railways and the Successor Companies of the Former Deutsche Bundespost (BEDBPStruktG) enacted in 1993 as amended on June 27, 2017 can apply for early retirement. Deutsche Telekom is required to offset the additional costs from early retirement arising for the Civil Service Pension Fund at the Federal Agency in accordance with the BEDBPStruktG by making corresponding payments to the Civil Service Pension Fund. On October 30, 2018, the Board of Management resolved to apply the statutory regulations again in 2019 within the limits of the budget agreed for this. **Accruals arising from the arrangement for early retirement** for civil servants were recognized in the reporting year in the amount of expected utilization.

The **accrual for phased retirement** relates to both the top-up payments and outstanding settlement amounts for obligations to civil servants, to the extent not covered by the CTA assets. The increase in the accrual is mainly attributable to the new phased retirement arrangements made in the current financial year.

The **accruals for litigation risks** mainly comprised risk accruals for ongoing legal disputes.

Accruals for outstanding invoices were recognized for expenses including consulting, legal, and IT costs.

As in the prior year, **accruals for loss contingencies arising from pending transactions** relate primarily to agreements concluded with partners outside the Deutsche Telekom Group with the intention of generating a contribution margin for the expenses resulting from the staff surplus.

Accruals for loss contingencies from derivatives were recognized in the reporting year principally for external currency derivatives. The decrease in the accrual for loss contingencies as of December 31, 2018 relates in particular to the decrease in accruals for loss contingencies for embedded derivatives vis-à-vis T-Mobile USA, Inc., Bellevue, and external currency derivatives.

Miscellaneous other accruals included accruals for transfer premiums in connection with staff restructuring, accruals for environmental clean-up expenses, accruals for asset retirement obligations, accruals for archiving expenses, and accruals for interest claims by third parties.

Deutsche Telekom made use of the option to retain the higher carrying amount of accruals under the transitional provisions of BilMoG. Retaining the higher carrying amount resulted in an excess of miscellaneous other accruals of EUR 28 thousand as of December 31, 2018.

16 LIABILITIES

millions of €

	Dec. 31, 2018				Dec. 31, 2017			
	Total	of which			Total	of which		
		Due within 1 year	Due > 1 year	of which: due > 5 years		Due within 1 year	Due > 1 year	of which: due > 5 years
DEBT								
Bonds and debentures	2,029	1,315	714	243	1,701	-	1,701	108
Liabilities to banks	4,676	1,514	3,162	857	4,697	1,464	3,233	785
	6,705	2,829	3,876	1,100	6,398	1,464	4,934	893
OTHER LIABILITIES								
Advances received	0	0	-	-	0	0	-	-
Trade accounts payable	220	220	-	-	230	230	-	-
Payables to subsidiaries	44,101	11,091	33,010	19,076	45,528	15,612	29,916	17,950
Liabilities to associated and related companies	368	218	150	-	18	18	-	-
Other liabilities	4,215	2,077	2,138	975	4,325	2,001	2,324	932
of which: from taxes	165	165	-	-	166	166	-	-
of which: from social security	15	3	12	2	13	3	10	2
	48,904	13,606	35,298	20,051	50,101	17,861	32,240	18,882
TOTAL LIABILITIES	55,609	16,435	39,174	21,151	56,499	19,325	37,174	19,775

Bonds and debentures amounting to EUR 2,029 million are comprised of zero coupon treasury bills of EUR 1,708 million and fixed-rate bonds of EUR 321 million.

The structure of bonds and debentures is as shown below:

millions of €

Due by December 31	up to 3%	up to 4%	up to 5%	up to 7%	up to 8%	Total
2019	-	-	-	-	1,315	1,315
2020	-	-	-	-	393	393
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023 to 2033	238	32	51	-	-	321
	238	32	51	-	1,708	2,029

Liabilities to banks mainly relate to long-term loans and promissory notes in addition to short-term borrowings and commercial paper.

Trade accounts payable include among others liabilities at the International Carrier Sales & Solutions business unit regarding wholesale telecommunications services for international carriers.

Payables to subsidiaries consisted primarily of financial liabilities of EUR 35.9 billion (December 31, 2017: EUR 37.6 billion) and liabilities arising from cash management of EUR 7.5 billion (December 31, 2017: EUR 7.3 billion). In addition, payables to subsidiaries in the reporting year related to other liabilities of EUR 425 million (December 31, 2017: EUR 341 million) and trade accounts payable of EUR 272 million (December 31, 2017: EUR 326 million). EUR 35.5 billion (December 31, 2017: EUR 31.6 billion) of payables to subsidiaries related to liabilities to

Deutsche Telekom International Finance B.V., Maastricht. Financial liabilities to subsidiaries decreased by EUR 5.4 billion, due in particular to loan repayments to CTA Holding GmbH, Bonn. Loans of EUR 4.0 billion taken out from Deutsche Telekom International Finance B.V., Maastricht, had an offsetting effect.

Deutsche Telekom International Finance B.V., Maastricht, issues bonds that it passes on to Group companies. The resulting liabilities of Deutsche Telekom to Deutsche Telekom International Finance B.V., Maastricht, are as shown below. In individual cases, the year in which Deutsche Telekom International Finance B.V., Maastricht, issues financial liabilities outside the Group is not the same as the year in which they are passed on to Deutsche Telekom. The interest rate of variable-interest liabilities as depicted are based on the most recent interest rate fixing valid at December 31, 2018.

	Nominal amount in currency	Interest rate in %	Term
2003 tranche			
EUR	500,000,000	7.580	2033

	Nominal amount in currency	Interest rate in %	Term
2008 tranche			
EUR	200,000,000	5.926	2023

	Nominal amount in currency	Interest rate in %	Term
2009 tranche			
EUR	220,000,000	5.450	2021
GBP	700,000,000	6.575	2022

	Nominal amount in currency	Interest rate in %	Term
2010 tranche			
GBP	250,000,000	7.455	2019
EUR	462,246,714	4.375	2020
GBP	300,000,000	7.715	2030
EUR	300,000,000	4.625	2030

	Nominal amount in currency	Interest rate in %	Term
2012 tranche			
EUR	370,000,000	2.125	2019
EUR	650,000,000	2.875	2024
USD	1,000,000,000	5.000	2042

	Nominal amount in currency	Interest rate in %	Term
2013 tranche			
USD	750,000,000	6.075	2019
EUR	1,120,000,000	2.255	2021
EUR	1,250,000,000	4.375	2022
EUR	500,000,000	5.000	2025
EUR	750,000,000	3.380	2028
USD	1,815,000,000	8.023	2030
USD	1,685,000,000	6.800	2030
USD	500,000,000	9.330	2032

	Nominal amount in currency	Interest rate in %	Term
2016 tranche			
USD	250,000,000	3.384*	2019
USD	750,000,000	1.630	2019
EUR	1,250,000,000	0.171*	2020
EUR	500,000,000	0.380	2021
USD	1,000,000,000	2.080	2021
EUR	1,750,000,000	0.755	2023
USD	750,000,000	2.615	2023
GBP	300,000,000	1.380	2023
EUR	1,500,000,000	1.630	2028

*Variable interest rate

2017 tranche	Nominal amount in currency	Interest rate in %	Term
USD	400,000,000	3.180*	2020
USD	850,000,000	2.376	2020
EUR	1,000,000,000	0.526	2021
USD	1,000,000,000	2.971	2022
EUR	1,250,000,000	1.026	2024
EUR	750,000,000	0.776	2024
EUR	750,000,000	1.276	2026
USD	1,250,000,000	3.751	2027
EUR	1,250,000,000	1.526	2027
HKD	1,300,000,000	3.101	2027
GBP	250,000,000	2.401	2029

2018 tranche	Nominal amount in currency	Interest rate in %	Term
EUR	200,000,000	0.234*	2020
EUR	400,000,000	0.185*	2022
EUR	500,000,000	0.776	2022
GBP	300,000,000	2.651	2025
EUR	1,000,000,000	1.526	2025
USD	1,200,000,000	4.526	2028
EUR	1,000,000,000	2.151	2029
EUR	250,000,000	2.351	2033
USD	550,000,000	4.901	2038

*Variable interest rate

Liabilities to associated and related companies include trade accounts payable amounting to EUR 11 million (December 31, 2017: EUR 14 million) as well as liabilities of EUR 350 million from the settlement reached with the Federal Republic of Germany to cease the Toll Collect arbitration proceedings.

The following table shows the composition of other liabilities:

millions of €

	Dec. 31, 2018	Dec. 31, 2017
Liabilities from early retirement arrangements	1,229	1,282
Liabilities from interest	728	728
Liabilities from derivatives	632	645
Liabilities from promissory notes	507	505
Liabilities from collateral	404	569
Liabilities from interoperator discount services	252	223
Tax liabilities	165	166
Liabilities to employees	68	66
Miscellaneous other liabilities	230	141
	4,215	4,325

Liabilities from early retirement arrangements for civil servants exist vis-à-vis the Civil Service Pension Fund and arise from payment obligations under agreements that have already been concluded. The obligations are payable in up to seven annual installments following retirement.

Liabilities from interest almost exclusively relate to deferred interest and unrealized settlement gains and losses from the close out of interest rate hedging derivatives.

Liabilities from derivatives mainly relate to unrealized settlement gains and losses from expired and terminated hedge transactions as well as to embedded derivatives vis-à-vis T-Mobile USA, Inc., Bellevue.

Liabilities from promissory notes relate to insurance companies and other institutional investors. Liabilities of EUR 26 million had been secured by the Federal Republic of Germany in the previous year and were repaid in full during the reporting period.

Collateral is used to hedge the credit risk from derivative financial instruments. In this case, Deutsche Telekom receives collateral in the form of cash from its contracting parties. The decrease in **liabilities from collateral** is attributable to regular fluctuation in market values resulting from changes in exchange rates, interest rates, and maturities of derivative financial instruments.

Liabilities from interoperator discount services mainly relate to roaming discount business in connection with roaming agreements with foreign mobile communications providers. The obligations are initially bundled by Deutsche Telekom and then passed on to Deutsche Telekom's subsidiaries.

Tax liabilities comprised income tax liabilities amounting to EUR 2 million (December 31, 2017: EUR 4 million) and liabilities from other taxes amounting to EUR 163 million (December 31, 2017: EUR 162 million). The liabilities from other taxes consisted primarily of value-added tax still to be paid relating to the fiscal entity parent company amounting to EUR 160 million and wage tax liabilities of EUR 11 million resulting from the December payroll that will not fall due until the following month. A claim for reimbursement from the tax office in the amount of EUR 8 million had an offsetting effect. This mainly relates to value-added tax for previous years.

Liabilities to employees resulted mainly from severance agreements and short-term payment obligations arising from the company pension plan.

Miscellaneous other liabilities consisted mainly of liabilities from the staff restructuring (e.g., transfer premiums for civil servants) and a short-term loan from Deutsche Telekom Betriebsrenten-Service (DTBS) e. V., Bonn.

17 DEFERRED INCOME

The year-on-year decline in **deferred income** of EUR 15 million was primarily a result of the amortization of agio on loans from Deutsche Telekom International Finance B.V., Maastricht.

18 DEFERRED TAXES

Deferred tax assets exceeded deferred tax liabilities in the reporting year. Deutsche Telekom does not exercise the option according to § 274 (1) HGB of recognizing the resulting tax relief as deferred tax assets. Deferred tax assets and liabilities mainly related to differences between carrying amounts for tax purposes and carrying amounts under German GAAP in the balance sheet items property, technical equipment and machinery, as well as accruals. When determining deferred taxes, an effective tax rate which covers corporate income tax, the solidarity surcharge, and trade taxes totaling 31.4 percent was used.

NOTES TO THE STATEMENT OF INCOME

19 NET REVENUE

Revenue by area of activity

millions of €

	2018	2017
Revenue from hiring out employees	1,072	1,047
Revenue from renting and leasing out property	943	980
Revenue from fixed network	673	720
Revenue from training services	163	185
Other revenue	695	671
	3,546	3,603

Revenue from hiring out employees amounted to EUR 1.1 billion (2017: EUR 1.0 billion) and resulted from hiring employees out to other companies. Employees were placed with internal and external employers on loan and temporary work contracts. Civil servants were placed with internal employers by means of temporary leave or assignment and with external employers by means of secondments.

Revenue from renting and leasing out property totaled EUR 0.9 billion (2017: EUR 1.0 billion) and was generated under the rent-including-utilities model. Deutsche Telekom leased real estate centrally from GMG Generalmietgesellschaft mbH, Cologne, and then rented it out to its German subsidiaries together with facility management services in the form of standardized facility products.

Fixed-network revenues amounting to EUR 0.7 billion (2017: EUR 0.7 billion) were mainly generated through wholesale services for international carriers, to which Deutsche Telekom made available, for instance, international voice and data connections.

Revenue from training services mainly consisted of training services for junior staff in Germany.

Income that was attributable to HR Business Services, Group Legal Services, and Technology and Innovation, among others, is reported under **other revenue**.

Revenue by geographic area

millions of €

	2018	2017
Domestic	2,985	3,020
International	561	583
	3,546	3,603

20 OTHER OWN CAPITALIZED COSTS

millions of €		
	2018	2017
Other own capitalized costs	7	4
	7	4

21 OTHER OPERATING INCOME

millions of €		
	2018	2017
Foreign currency transaction gains	712	953
Income from write-ups of noncurrent assets	477	8
Cost transfers/reimbursements	457	554
Income from derivatives	412	531
Income from the reversal of accruals	214	128
Income from the disposal of noncurrent assets	210	455
Other income	190	140
	2,672	2,769

Foreign currency transaction gains included exchange rate effects of EUR 360 million realized upon the maturity of loans granted/taken out in foreign currency. The item also includes exchange rate effects from cross-currency interest rate hedges in the amount of EUR 248 million, mostly in U.S. dollars.

Income from write-ups of noncurrent assets results almost exclusively from write-ups on the carrying amount of the investment in Deutsche Telekom Europe Holding GmbH, Bonn, of EUR 382 million and on the carrying amount of the investment in T-Mobile Global Zwischenholding GmbH, Bonn, of EUR 93 million.

Income from cost transfers/reimbursements includes in particular income from the consolidation of the real estate portfolio at GMG Generalmietgesellschaft mbH, Cologne. The properties are leased centrally under the rent-including-utilities model by Deutsche Telekom and provided to tenants within the Group as managed space.

Income from derivatives primarily relates to income from U.S. dollar currency derivatives falling due.

Income from the reversal of accruals of EUR 214 million (2017: EUR 128 million) related in particular to income from the reversal of accruals for litigation risks, accruals for outstanding invoices, accruals for employee expenses, and accruals for Federal Agency services.

Income from the disposal of noncurrent assets of EUR 204 million was attributable to sales of land and buildings.

Pursuant to § 285 no. 32 HGB, EUR 898 million (2017: EUR 300 million) of income relating to another period is included in other operating income in the reporting year. This relates almost exclusively to income from write-ups of noncurrent assets, income from the disposal of property, plant and equipment as well as income from the reversal of accruals.

22 GOODS AND SERVICES PURCHASED

millions of €		
	2018	2017
GOODS PURCHASED		
Raw materials and supplies	0	0
Goods purchased	2	19
	2	19
SERVICES PURCHASED		
Interconnection rates	469	502
Other services	553	539
	1,022	1,041
	1,024	1,060

The year-on-year decrease in **expenses for goods purchased** is due almost exclusively to the discontinuation of the purchase of Tolino products for the Tolino business area that was sold in 2017.

Expenses for **interconnection rates** as a wholesale upstream service for international carriers were incurred in the reporting period in the amount of EUR 469 million.

Other services primarily include EUR 405 million of expenses for upstream services related to renting and leasing out property incurred under the rent-including-utilities model. Other services also include expenses related to telecommunications services for IT infrastructure operations (e.g., for operating data centers) and expenses for upstream services related to energy and training.

23 PERSONNEL COSTS/AVERAGE NUMBER OF EMPLOYEES

millions of €		
	2018	2017
WAGES AND SALARIES	1,849	2,012
SOCIAL SECURITY CONTRIBUTIONS AND EXPENSES FOR PENSION PLANS AND BENEFITS		
Expenses for pension plans for civil servants	466	466
Social security contributions	89	90
Expenses for pension plans for non-civil servants	64	23
Support allowances	50	51
Expenses arising from the collateral promise for pensions	19	90
	688	720
	2,537	2,732

Personnel costs declined by a total of EUR 195 million compared with the previous year. This decrease was mainly attributable to a EUR 163 million year-on-year decline in expenses for wages and salaries and a EUR 71 million decrease in expenses for the collateral promise for pensions. Higher expenses for pension plans for employees, which were up EUR 41 million, had an offsetting effect on personnel costs.

The decrease in **expenses for wages and salaries** is mainly due to lower expenses for early retirement arrangements for civil servants. These amounted to EUR 330 million in the reporting year.

The Civil Service Pension Fund at the Federal Agency performs the functions described in §§ 14 to 16 of the Act concerning the Legal Provisions for the Former Deutsche Bundespost Staff (Postpersonalrechtsgesetz – PostPersRG) for **pension plans for civil servants** at Deutsche Bundespost and its successor companies. It carries out all transactions for pension and allowance payments in respect of civil servants for Deutsche Post AG, Bonn, Deutsche Postbank AG, Bonn, and Deutsche Telekom. In accordance with the provisions of the German Posts and Telecommunications Reorganization Act (Postneuordnungsgesetz – PTNeuOG), the Civil Service Pension Fund makes pension and allowance payments to retired employees and their surviving dependents who are entitled to pension payments as a result of civil-servant status.

Under PTNeuOG, the Federal Republic compensates the Civil Service Pension Fund for differences between the ongoing payment obligations of the fund and the amounts received from the successor companies of the former Deutsche Bundespost, or between said payment obligations and returns on assets, and guarantees that the special pension fund is always in a position to fulfill the obligations it has assumed. The Federal Republic cannot demand reimbursement from Deutsche Telekom of any amounts it pays to the Civil Service Pension Fund in accordance with this provision.

Pursuant to § 16 PostPersRG, Deutsche Telekom is required to make contributions to the federal government, represented by the Civil Service Pension Fund, equal to 33 percent, respectively, of the gross emoluments of active civil servants and the notional pensionable gross emoluments of civil servants on temporary leave from civil servant status; these contributions are recognized as ongoing expenses in the respective year. The announcement by the Federal Ministry of Finance on December 6, 2017 stipulated an advance payment in connection with civil service pensions of EUR 459 million for the contribution for 2018. Deutsche Telekom has already made the payment in full. Only EUR 441 million (2017: EUR 458 million) of the advance payment was recognized as an expense due to the lower number of active civil servants and civil servants on leave of absence in the reporting year. The year-on-year decline in costs was primarily due to the reduction in the number of active civil servants (departures as a result of reaching retirement age, take-up of early retirement options, and transfer to other authorities).

The average number of employees (full-time equivalents) developed as follows:

Number	2018	2017
Civil servants	14,213	15,731
Non-civil servants	5,842	6,077
	20,055	21,808
Trainees and student interns	5,687	6,523

The decrease in the number of employees is mainly attributable to the use of early retirement arrangements for civil servants and to further staff restructuring measures.

24 DEPRECIATION, AMORTIZATION AND WRITE-DOWNS

millions of €

	2018	2017
DEPRECIATION AND AMORTIZATION		
Amortization of intangible assets	68	74
Depreciation of property, plant and equipment	205	221
	273	295
WRITE-DOWNS		
in accordance with § 253 (3) sentence 5 HGB	16	46
	289	341

Amortization of intangible assets mainly related to the amortization of rights to use software in the amount of EUR 62 million (2017: EUR 68 million).

EUR 152 million of the **depreciation of property, plant and equipment** in the reporting year related to buildings in particular (2017: EUR 174 million).

In the reporting year, **write-downs** consisted entirely of write-downs of real estate to the lower of cost or market value, amounting to EUR 16 million (2017: EUR 46 million).

Write-downs on financial assets are recorded in net financial income/expense (please refer to Note 26).

25 OTHER OPERATING EXPENSES

millions of €

	2018	2017
Rental and leasing expenses	837	905
Expenses arising from derivatives	726	661
Foreign currency transaction losses	399	1,002
Other employee-related costs	368	335
Legal and consulting fees	135	131
Marketing expenses	131	161
IT support	119	122
Cleaning, transport and surveillance	105	104
Research and development	85	86
Maintenance and repair	66	81
Additions to accruals for contingent losses	53	41
Expenses arising from reimbursements	28	50
Expenses according to Art. 67 (1) and (2) EGHGB	17	17
Other expenses	1,452	555
	4,521	4,251

Rental and leasing expenses were incurred in particular under the rent-including-utilities model and comprise almost entirely the portion of internal use by Deutsche Telekom.

Expenses arising from derivatives primarily relate to expenses from U.S. dollar currency derivatives falling due.

Foreign currency transaction losses included exchange rate effects of EUR 283 million realized upon the maturity of loans granted/taken out primarily in U.S. dollars.

Other employee-related costs mainly include expenses of EUR 145 million arising from the allocation of administration costs payable to the Federal Agency, compensation payments of EUR 74 million related to the placement of civil servants with various federal authorities, EUR 56 million for the Civil Service Health Insurance Fund, EUR 26 million in expenses for human resources (e.g., recruitment), EUR 23 million in staff development costs, and EUR 9 million for conferences.

Legal and consulting fees encompass expenses for technical and business consulting, expenses for legal counseling, as well as expenses for the preparation and audit of annual financial statements.

Marketing expenses in the reporting year relate among other things to expenses for sponsoring, advertising, trade fairs, and other agency fees.

Expenses for IT support relate to the provision of computing and network services as well as services for workstation systems.

Cleaning, transport and surveillance expenses were incurred under the rent-including-utilities model and comprise almost entirely the portion of internal use by Deutsche Telekom.

Expenses for research and development mainly comprise expenses for the development of software and expenses for university partnership programs.

Expenses for maintenance and repair principally relate to expenses arising under maintenance and servicing contracts.

Additions to accruals for contingent losses are mainly the result of agreements concluded with partners outside the Deutsche Telekom Group with the intention of generating a contribution margin for the expenses resulting from the staff surplus.

Expenses arising from reimbursements largely comprise expenses relating to the cross-charging of services rendered by subsidiaries.

Expenses according to Art. 67 (1) and (2) EGHGB relate to expenses in the amount of EUR 17 million (2017: EUR 17 million) from the adjustment of the carrying amount of pension accruals due to BilMoG. The Company has exercised the option to spread the addition pursuant to Art. 67 (1) sentence 1 EGHGB such that the annual addition equals one 15th of the total amount being added.

Other expenses in the reporting year consist, among other things, of expenses of EUR 550 million from the settlement reached with the Federal Republic of Germany to end the Toll Collect arbitration proceedings as well as travel expenses, insurance policies, administrative expenses, and ad-hoc temporary employment.

Pursuant to § 285 no. 32 HGB, EUR 15 million (2017: EUR 15 million) of expenses relating to another period were included in other operating expenses in the reporting year. This relates mainly to expenses from the disposal of noncurrent assets.

26 FINANCIAL INCOME/EXPENSE, NET

millions of €	2018	2017
Income related to subsidiaries, associated and related companies of which: from subsidiaries € 197 million (2017: € 53 million)	320	64
Income from profit transfer agreements	8,040	9,650
Expenses arising from loss transfers	(1,105)	(983)
INCOME (LOSS) RELATED TO SUBSIDIARIES, ASSOCIATED AND RELATED COMPANIES	7,255	8,731
Income from long-term loans from noncurrent financial assets of which: from subsidiaries € 916 million (2017: € 870 million)	916	870
Other interest and similar income of which: from subsidiaries € 122 million (2017: € 100 million) of which: from the discounting of accruals € 1 million (2017: € 1 million)	474	462
Interest and similar expenses of which: to subsidiaries € 1.2 billion (2017: € 1.1 billion) of which: from interest added back to accruals € 585 million (2017: € 347 million)	(2,157)	(1,875)
NET INTEREST EXPENSE	(767)	(543)
WRITE-DOWNS OF FINANCIAL ASSETS AND MARKETABLE SECURITIES	0	(1,037)
	6,488	7,151

Income related to subsidiaries, associated and related companies mainly comprised the dividends from CTA Holding GmbH, Bonn (EUR 109 million), Hellenic Telecommunications Organization S.A. (OTE), Athens (EUR 78 million), Toll Collect GmbH, Berlin (EUR 75 million), and Scout Lux Management Equity Co S.à.r.l., Luxembourg (EUR 40 million).

Income from profit transfer agreements recognized in the reporting period related primarily to profits transferred by Telekom Deutschland (EUR 3.7 billion), DFMG Holding GmbH, Bonn (EUR 2.5 billion), and T-Mobile Global Zwischenholding GmbH, Bonn (EUR 1.6 billion).

In addition to the operating business of the consolidated subsidiaries, income from profit transfer agreements resulted from effects arising from reorganization measures as well as from an equity repayment, calculated at fair value, by T-Mobile Global Holding GmbH, Bonn. The loss arising from the intragroup sale, based on a valuation report, of the indirectly held interests in the BT Group plc, London, had a negative effect.

Expenses arising from loss transfers related primarily to Deutsche Telekom IT GmbH, Bonn (EUR 656 million), T-Systems (EUR 260 million), Telekom Innovation Pool GmbH, Bonn (EUR 52 million), Vivento Customer Services GmbH, Bonn (EUR 50 million), Deutsche Telekom Europe Holding GmbH, Bonn (EUR 41 million), and Deutsche Telekom Services Europe AG, Bonn (until September 18, 2018: Deutsche Telekom Services Europe GmbH, Bonn) (EUR 41 million).

Income from long-term loans from noncurrent financial assets and other interest and similar income from subsidiaries largely related to interest from loans issued to T-Mobile USA, Inc., Bellevue, and interest from loans to Telekom Deutschland.

Interest expenses to subsidiaries primarily resulted from loan relationships with Deutsche Telekom International Finance B.V., Maastricht.

In the reporting year, expenses from interest added back to pension accruals as well as accruals for outstanding settlement amounts from phased retirement agreements, long-term accounts, and lifetime work accounts totaling EUR 317 million (2017: EUR 235 million) as well as expenses related to the corresponding CTA assets of EUR 50 million were netted with income from the corresponding CTA assets of EUR 0.1 million (2017: income of EUR 85 million). These aggregate amounts were reported in interest and similar expenses.

Write-downs of financial assets in the previous year related mainly to the write-down of the investment in T-Systems (EUR 1.0 billion).

27 INCOME TAXES

millions of €

	2018	2017
Income taxes	143	198
	143	198

Income taxes in the 2018 financial year include around EUR 161 million for trade income tax and EUR 4 million for corporate income tax and the solidarity surcharge.

Income tax expense includes an amount of EUR 22 million (2017: EUR 192 million) of income relating to another period in accordance with § 285 no. 32 HGB that results from items from previous years.

28 OTHER TAXES

millions of €

	2018	2017
Other taxes	13	18
	13	18

Other taxes mainly comprised real estate tax expenses of EUR 18 million and VAT refunds of EUR 5 million.

29 RECONCILIATION OF INCOME AFTER TAXES TO UNAPPROPRIATED NET INCOME

Income after taxes generated in the 2018 financial year amounted to EUR 4.2 billion. Together with unappropriated net income carried forward from 2017 of EUR 2.8 billion after dividend payments (unappropriated net income from the prior year of EUR 5.9 billion less dividend payments totaling EUR 3.1 billion), this resulted in **unappropriated net income** of EUR 7.0 billion.

OTHER DISCLOSURES

30 GUARANTEES AND COMMITMENTS AND TRANSACTIONS NOT INCLUDED IN THE BALANCE SHEET IN ACCORDANCE WITH § 285 NO. 3 HGB, AND REASONS UNDERLYING THE EVALUATION OF THE RISK OF UTILIZATION OF GUARANTEES AND COMMITMENTS IN ACCORDANCE WITH § 285 NO. 27 HGB

millions of €

	Dec. 31, 2018	Dec. 31, 2017
Liabilities from guarantees	1,383	981
Liabilities arising from warranty agreements	3,775	5,602
of which: to subsidiaries € 0 million (Dec. 31, 2017: € 0 million)		
of which: to associates € 0 million (Dec. 31, 2017: € 0 million)		
	5,158	6,583

Guarantees include litigation and security deposit guarantees as well as warranties. Liabilities arising from warranty agreements relate to third parties and in most cases were incurred for subsidiaries.

Liabilities arising from **warranty agreements** include guarantees and comfort letters and relate primarily to Telekom Deutschland (EUR 2.2 billion) and T-Systems (EUR 138 million). Guarantees relate to loan collateral guarantees in particular. Deutsche Telekom guarantees the liabilities of Deutsche Telekom International Finance B.V., Maastricht, to external third parties – mostly originating from bonds. In cases where the funds are not passed on to Deutsche Telekom and therefore recognized as a liability, an obligation arising from warranty agreements has to be reported; such an obligation to Deutsche Telekom International Finance B.V., Maastricht, was reported as of December 31, 2018 in the amount of EUR 708 million.

On May 16, 2018, Daimler Financial Services AG, Stuttgart, Deutsche Telekom, and the Federal Republic of Germany reached an agreement to cease the Toll Collect arbitration proceedings. The settlement was notarized in early July 2018 and confirmed by arbitral tribunal, bringing the arbitration proceedings to an end. The agreed settlement amount of around EUR 3.2 billion includes services previously provided to the Federal Republic of Germany. Daimler Financial Services AG, Stuttgart, and Deutsche Telekom have agreed to make final payments of EUR 550 million each, for which both companies have joint and several liability. These payments to the Federal Republic of Germany will be made on behalf of Toll Collect GbR, Berlin, in three tranches over the period until 2020; the first tranche was paid in the reporting period. Deutsche Telekom believes that a claim arising from the joint and several liability is unlikely to be made in excess of Deutsche Telekom's share of the risk.

Bank loans guarantee. The bank guarantees for third parties for a maximum amount of EUR 100 million that were issued during the term of the operating agreement expired as scheduled on October 15, 2018.

Equity maintenance undertaking. The equity maintenance undertaking entered into by the consortium members Deutsche Telekom, Daimler Financial Services AG, Stuttgart, and Compagnie Financière et Industrielle des Autoroutes S.A. (Cofiroute), Rueil-Malmaison, under the operating agreement remained in place until the Federal Republic of Germany assumed full control of Toll Collect GmbH, Berlin, and was replaced as of August 31, 2018 by a

guaranteed equity base of at least EUR 50 million for Toll Collect GmbH, Berlin, depending on the date of transfer.

Guarantees to the benefit of subsidiaries and contingent liabilities arising from warranty agreements entered into with third parties are not recognized as liabilities as the underlying obligations can be fulfilled by the Company's subsidiaries, meaning utilization is unlikely.

Transactions not included in the balance sheet

The aforementioned guarantees and commitments are among the transactions not included in the balance sheet.

31 OTHER FINANCIAL OBLIGATIONS

millions of €

	Dec. 31, 2018			Dec. 31, 2017		
	Total	of which due		Total	of which due	
		in the following financial year	from the second financial year after the balance sheet date		in the following financial year	from the second financial year after the balance sheet date
Present value of the payments to the Civil Service Pension Fund for the civil service pension scheme	2,310	354	1,956	2,793	404	2,389
Obligations under rental and lease agreements	8,049	1,354	6,695	8,099	1,368	6,731
of which: to subsidiaries € 7.9 billion (Dec. 31, 2017: € 7.9 billion)						
of which: to associates € 0 billion (Dec. 31, 2017: € 0 billion)						
Purchase commitments arising from future expenditure and investments	596	400	196	605	398	207
of which: to subsidiaries € 376 million (Dec. 31, 2017: € 411 million)						
of which: to associates € 0 million (Dec. 31, 2017: € 0 million)						
Commitments arising from unpaid contributions and from pending transactions	1,357	1,317	40	975	975	-
of which: to subsidiaries € 1.3 billion (Dec. 31, 2017: € 854 million)						
of which: to associates € 0 million (Dec. 31, 2017: € 0 million)						
	12,312	3,425	8,887	12,472	3,145	9,327

The **present value** of payments that Deutsche Telekom is required to make in accordance with PTNeuOG to the Civil Service Pension Fund on the basis of the 2018 G tables published by Prof. Klaus Heubeck (until December 31, 2017: 2005 G tables) amounted to EUR 2.3 billion as of December 31, 2018. The year-on-year decrease is attributable to the reduction in the number of active civil servants, in particular as a result of early retirement.

Obligations under rental and lease agreements include obligations to subsidiaries in the amount of EUR 7,907 million, which are almost exclusively to GMG Generalmietgesellschaft mbH, Cologne.

Purchase commitments arising from future expenditure and investments were largely composed of commitments for non-capital expenditure of EUR 547 million.

Unpaid and uncalled contributions mostly relate to Vivento Customer Services GmbH, Bonn (EUR 96 million). In addition there are obligations to make contributions, especially to Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg (EUR 184 million), Deutsche

Telekom Capital Partners Portfolio Fund GmbH & Co. KG, Hamburg (EUR 87 million), and Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg (EUR 10 million). The largest share of the increase in obligations to make contributions amounting to EUR 220 million is attributable to Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg, in the amount of EUR 184 million.

Commitments arising from pending transactions with subsidiaries relate mainly to existing obligations from profit and loss transfers from T-Systems (EUR 432 million), Deutsche Telekom IT GmbH, Bonn (EUR 374 million), Vivento Customer Services GmbH, Bonn (EUR 42 million), Deutsche Telekom Services Europe AG, Bonn (until September 18, 2018: Deutsche Telekom Services Europe GmbH, Bonn) (EUR 34 million), and Deutsche Telekom Europe Holding GmbH, Bonn (EUR 32 million).

Deutsche Telekom is a party to a number of lawsuits and other proceedings and issues arising from the general conduct of its business. Fees for legal counseling and – where appropriate - forecast costs in connection with a negative outcome of proceedings were included in the accruals for litigation risks and/or in miscellaneous other operating expenses.

32 DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments not included under valuation units as of the reporting date were as follows:

	Nominal amount ²	Fair values
	Dec. 31, 2018	Dec. 31, 2018
INTEREST-RELATED INSTRUMENTS		
Interest rate swaps	1,351	16
Embedded derivatives ¹	8,383	(36)
	9,734	(20)
CURRENCY INSTRUMENTS		
Future exchange transactions	658	2
	658	2
OTHER INSTRUMENTS		
Diesel derivatives	40	0
	40	0
	10,432	(18)

¹ Repricing element that is not closely related to the economic characteristics and risks of the host contract.

² The figures shown are absolute amounts.

The fair values shown above were determined using discounted cash flow models and option pricing models, which use the relevant market data as input parameters for calculation as of December 31, 2018.

Receivables, liabilities and accruals for derivatives were reported under the following balance sheet items:

	Dec. 31, 2018
Receivables from subsidiaries	21
Other assets	367
Other accruals	(66)
Payables to subsidiaries	(187)
Other liabilities	(451)
	(316)

The Company uses derivatives for the purpose of hedging exposures to currency, interest rate, and raw material price risks. The top priority in all cases in which derivatives are used is to limit the risk of the underlyings. Derivative financial instruments may therefore only be used to eliminate risk exposures, and may never be used to enter into new risks for speculative reasons.

Derivatives are designed to offset changes in the fair values and cash flow risks associated with the financial assets and liabilities to which they are allocated. Such derivatives are reviewed regularly for their effectiveness as hedge instruments. Derivative financial instruments are subject to internal controls.

As a rule, the nominal amounts of the derivative financial instruments are merely the basis for determining the interest payment (nominal amounts only represent a receivable or liability in the case of interest rate and cross currency swaps). The nominal amounts are generally not material to the value of a derivative. By contrast, the main material influences on the market value of derivatives are changes in interest rates, exchange rates and other conditions.

Interest rate swaps are entered into to transform the coupons on bonds and the interest rates on loans in accordance with a mix of fixed and floating rate interest instruments determined in the course of interest rate management.

The Company uses foreign currency forward contracts and non-deliverable forwards to hedge exchange rates, and cross-currency and interest rate swaps to eliminate currency and, if relevant, interest rate risks related to financing and service.

Foreign currency forward contracts and hedged items are assigned to foreign currency hedge valuation units categorized by foreign currency type and marked to market as of the balance sheet date. Foreign currency forward contracts are valued at the forward exchange rate on the balance sheet date; cross-currency and interest rate swaps are recognized at the present value of future payments. Measurement gains and losses are netted valuation unit for valuation unit. An accrual for loss contingencies from pending transactions is established for each valuation unit for the amount of the excess loss. Net gains are not recognized.

The cross-currency and interest rate swaps are primarily used to transform the original currencies of bonds and promissory notes into Deutsche Telekom's target currencies (mainly euros and U.S. dollars). In addition, various cross-currency and interest rate swaps are used to hedge currency risks in the financing of subsidiaries.

Diesel derivatives are used to hedge the price risk resulting from the purchase of diesel fuel for Deutsche Telekom's vehicle fleet.

Hedging risk through valuation units:

Type of hedged item	Type of hedged risk	Value of the hedged item (carrying amount, expected value)
ASSETS		
	Currency risk	1,983
	Interest rate/currency risk	5,919
	Interest rate risk	1,471
LIABILITIES		
	Interest rate risk	(15,644)
	Interest rate/currency risk	(11,208)
	Currency risk	(7,254)
HIGHLY PROBABLE FORECAST TRANSACTIONS		
	Interest rate risk	-
PENDING TRANSACTIONS		
	Interest rate risk	300
		(24,433)

The valuation units always took the form of micro hedges.

In all cases, the hedging relationships were extremely effective, as the main risk-determining parameters matched for the hedged item and hedge transaction.

The risks hedged with valuation units amounted to (averted need to recognize accrual for contingent losses, write-ups of foreign currency liabilities, and write-downs on foreign currency receivables):

millions of €	
	Dec. 31, 2018
Interest rate risk	817
Interest rate/currency risk	405
Currency risk	1,148
	2,370

The offsetting changes in value and cash flows are expected to largely cancel each other out by March 6, 2042, in terms of both interest rate and currency hedges.

The effectiveness of the hedge relationships in terms of the hedged risk at the balance sheet date was determined using the critical terms match method. In the case of revolving hedges, effectiveness was measured using an analysis of changes in fair value based on spot price components (dollar offset method). In these cases, the ineffective portion of the change in value calculated in this way was recorded directly in the statement of income in line with the imparity principle.

The hedged items with interest rate risk recognized under liabilities and amounting to EUR 26.9 billion are exclusively underlyings for fair value hedges.

33 EXCHANGE RATES

	Annual average rate		Rate at the reporting date	
	2018	2017	31.12.2018	31.12.2017
100 Swiss francs (CHF)	85.67440	89.95720	88.73120	85.46280
100 Czech korunas (CZK)	3.87824	3.79799	3.88538	3.90961
1 Pound sterling (GBP)	1.13049	1.14063	1.11769	1.12664
100 Hong Kong dollars (HKD)	10.80085	11.36159	11.14946	10.66809
100 Croatian kuna (HRK)	13.48050	13.39790	13.48890	13.43590
100 Hungarian forints (HUF)	0.31361	0.32342	0.31135	0.32229
100 Japanese yen (JPY)	0.76671	0.78933	0.79463	0.74071
100 Polish zlotys (PLN)	23.46130	23.48500	23.24910	23.93060
100 Singapore dollars (SGD)	62.78120	64.16220	64.13340	62.40450
1 U.S. dollar (USD)	0.82946	0.88549	0.87321	0.83340

34 AUDITOR'S FEES AND SERVICES

The total fees charged by the external auditor for the reporting period are broken down into auditing services, other assurance services, and other non-audit services in the relevant note in the consolidated financial statements.

For Deutsche Telekom and the companies it controlled, auditing services were provided in particular for the statutory auditing of the annual and consolidated financial statements, the review of the interim financial statements, auditing activities in connection with the implementation of new accounting provisions, and the auditing of information systems and processes as well as other auditing services.

Other assurance services relate primarily to services in connection with regulatory requirements stipulated by the Federal Network Agency and comfort letters.

In addition, professional services were provided in connection with strategic projects.

The total fees charged by the external auditor for the reporting period as defined in § 285 no. 17 HGB are detailed in the relevant note in the consolidated financial statements.

35 MEMBERS OF THE BOARD OF MANAGEMENT OF DEUTSCHE TELEKOM AG IN 2018

Timotheus Höttges

Chairman of the Board of Management since January 1, 2014

Seats on the supervisory boards of other companies:

- FC Bayern München AG, Munich (since 2/2010)
- Henkel AG & Co. KGaA, Düsseldorf (since 4/2016)

Member of comparable supervisory bodies of companies in Germany or abroad:

- BT Group plc, London, United Kingdom,
 Member of the Board of Directors (since 1/2016)

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Telekom Deutschland GmbH, Bonn (since 4/2005),
 Chairman of the Supervisory Board (since 7/2009)
- T-Mobile US, Inc., Bellevue, United States,
 Chairman of the Board of Directors (since 4/2013)

Adel Al-Saleh

Board member responsible for T-Systems since January 1, 2018

– No other seats –

Birgit Bohle

Board member responsible for Human Resources and Labor Director since January 1, 2019

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Telekom Deutschland GmbH, Bonn (since 1/2019)

Srini Gopalan

Board member responsible for Europe since January 1, 2017

Member of the supervisory boards of subsidiaries, associated, and related companies:

- HELLENIC TELECOMMUNICATIONS ORGANIZATION S.A. (OTE S.A.),
 Marousi, Athens, Greece (since 1/2017)
- T-Mobile Polska S.A., Warsaw, Poland (since 1/2017),
 Chairman of the Supervisory Board (since 1/2017)

Dr. Christian P. Illek

Board member responsible for Human Resources and Labor Director from April 1, 2015 to December 31, 2018

Board member responsible for Finance since January 1, 2019

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom Services Europe AG, Bonn,
 Chairman of the Supervisory Board (since 1/2019)
 (formerly Deutsche Telekom Services Europe GmbH, Bonn)
- Telekom Deutschland GmbH, Bonn (from 5/2015 to 12/2018)
- T-Mobile US, Inc., Bellevue, United States,
 Member of the Board of Directors (since 1/2019)
- T-Systems International GmbH, Frankfurt/Main (since 5/2015),
 Chairman of the Supervisory Board (since 11/2016)

Dr. Thomas Kremer

Board member responsible for Data Privacy, Legal Affairs and Compliance since June 1, 2012

Member of the supervisory boards of subsidiaries, associated, and related companies:

- T-Systems International GmbH, Frankfurt/Main (since 5/2015)

Thorsten Langheim

Board member responsible for USA and Group Development since January 1, 2019

Member of the supervisory boards of subsidiaries, associated, and related companies:

- DFMG Deutsche Funkturm GmbH, Münster (since 9/2016)
- Deutsche Telekom Capital Partners Management GmbH, Hamburg,
 Chairman of the Investment Committee (since 6/2015)
- T-Mobile US, Inc., Bellevue, United States,
 Member of the Board of Directors (since 6/2014)

Claudia Nemat

Board member responsible for Technology and Innovation since January 1, 2017

Seats on the supervisory boards of other companies:

- Airbus Group SE, Leiden, Netherlands (since 5/2016)
- Airbus Defence and Space GmbH, Ottobrunn (since 5/2016)

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom IT GmbH, Bonn,
 Chairwoman of the Supervisory Board (since 6/2017)

Dr. Dirk Wössner

Board member responsible for Germany since January 1, 2018

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom Außendienst GmbH, Bonn,
 Chairman of the Supervisory Board (since 1/2018)
- Deutsche Telekom Geschäftskunden-Vertrieb GmbH, Bonn
 (since 1/2018), Chairman of the Supervisory Board (since 2/2018)
- Deutsche Telekom Service GmbH, Bonn,
 Chairman of the Supervisory Board (since 1/2018)
- Deutsche Telekom Technik GmbH, Bonn,
 Chairman of the Supervisory Board (since 1/2018)
- Deutsche Telekom Privatkunden-Vertrieb GmbH, Bonn,
 Chairman of the Supervisory Board (since 1/2018)

Board of Management members who left in 2018:

Thomas Dannenfeldt

Board member responsible for Finance from January 1, 2014 to December 31, 2018

Member of the supervisory boards of subsidiaries, associated, and related companies:

- BUYIN S.A., Brussels, Belgium,
Member of the Board of Directors (from 2/2014 to 12/2018)
- Deutsche Telekom Services Europe AG, Bonn,
Chairman of the Supervisory Board (1/2016 to 11/2018)
(formerly Deutsche Telekom Services Europe GmbH, Bonn)
- T-Mobile US, Inc., Bellevue, United States,
Member of the Board of Directors (11/2013 to 12/2018)

36 MEMBERS OF THE SUPERVISORY BOARD OF DEUTSCHE TELEKOM AG IN 2018

Prof. Dr. Ulrich Lehner

Member of the Supervisory Board since April 17, 2008
Chairman of the Supervisory Board since April 25, 2008
Member of the Shareholders' Committee of Henkel AG & Co. KGaA, Düsseldorf

Seats on the supervisory boards of other companies:

- E.ON SE, Essen (4/2003 to 5/2018)
- Porsche Automobil Holding SE, Stuttgart (since 11/2007)
- thyssenkrupp AG, Duisburg and Essen (1/2008 to 7/2018),
Chairman of the Supervisory Board (3/2013 to 7/2018)

Lothar Schröder

Member of the Supervisory Board since June 22, 2006
Deputy Chairman of the Supervisory Board since June 29, 2006
Member of the ver.di National Executive Board, Berlin

Seats on the supervisory boards of other companies:

- Vereinigte Postversicherung VVaG, Stuttgart (since 6/2008)
- VPV Holding AG, Stuttgart (since 6/2018)
- VPV Lebensversicherungs-AG, Stuttgart (since 10/2015)

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom Services Europe AG, Bonn,
Deputy Chairman of the Supervisory Board (since 9/2016)
(formerly Deutsche Telekom Services Europe GmbH, Bonn)

Josef Bednarski

Member of the Supervisory Board since November 26, 2013
Chairman of the Group Works Council of Deutsche Telekom AG, Bonn
– No other seats –

Dr. Rolf Bösing

Member of the Supervisory Board since June 1, 2018
State Secretary at the Federal Ministry of Finance, Berlin
– No other seats –

Dr. Günther Bräunig

Member of the Supervisory Board since March 21, 2018
CEO of the Executive Board of KfW, Frankfurt/Main

Seats on the supervisory boards of other companies:

- Deutsche Pfandbriefbank AG, Unterschleißheim (since 8/2009),
Chairman of the Supervisory Board (since 8/2014)
- Deutsche Post AG, Bonn (since 3/2018)

Odysseus D. Chatzidis

Member of the Supervisory Board since January 3, 2018
Chairman of the European Works Council of Deutsche Telekom, Bonn
– No other seats –

Constantin Greve

Member of the Supervisory Board since November 20, 2018
Chairman of the Central Works Council of Deutsche Telekom AG, Bonn
– No other seats –

Lars Hinrichs

Member of the Supervisory Board since October 1, 2013
CEO of Cinco Capital GmbH, Hamburg

Seats on the supervisory boards of other companies:

- xbAV AG, Munich,
Chairman of the Supervisory Board (since 1/2016)

Dr. Helga Jung

Member of the Supervisory Board since May 25, 2016
Member of the Board of Management of Allianz SE, Munich

Seats on the supervisory boards of other companies:

- Allianz Deutschland AG, Munich (since 3/2016)*
- Allianz Global Corporate & Specialty SE, Munich,
Deputy Chairwoman of the Supervisory Board (since 5/2013)*
- Allianz Private Krankenversicherungs-AG, Munich (since 3/2018)*
- Allianz Beratungs- und Vertriebs-AG, Munich (since 3/2018)*

Member of comparable supervisory bodies of companies in Germany or abroad:

- Allianz Compañía de Seguros y Reaseguros S.A., Barcelona, Spain,
Member of the Board of Directors (since 5/2012)*
- Companhia de Seguros Allianz Portugal S.A., Lisbon, Portugal,
Member of the Board of Directors (since 3/2012)*

Prof. Dr. Michael Kaschke

Member of the Supervisory Board since April 22, 2015
CEO & President of Carl Zeiss AG, Oberkochen

Seats on the supervisory boards of other companies:

- Carl Zeiss Meditec AG, Jena,
Chairman of the Supervisory Board (since 3/2010)*
- Carl Zeiss Microscopy GmbH, Jena,
Chairman of the Supervisory Board (10/2006 to 2/2018)*
- Carl Zeiss Industrielle Messtechnik GmbH, Oberkochen,
Chairman of the Supervisory Board (since 1/2014)*

*Supervisory board seats in companies that are part of the same group, as defined in § 100 (2) sentence 2 AktG (German Stock Corporation Act).

- Carl Zeiss SMT GmbH, Oberkochen,
Chairman of the Supervisory Board (since 1/2011)*
- Henkel AG & Co. KGaA, Düsseldorf (since 4/2008)
- Robert Bosch GmbH, Stuttgart (since 4/2016)

Member of comparable supervisory bodies of companies in Germany or abroad:

- Carl Zeiss Co., Ltd., Seoul, South Korea,
Chairman of the Board of Directors (since 1/2017)*
- Carl Zeiss Far East Co., Ltd., Hong Kong, China,
Chairman of the Board of Directors (since 4/2002)*
- Carl Zeiss India (Bangalore) Private Ltd., Bangalore, India,
Chairman of the Board of Directors (since 12/2009)*
- Carl Zeiss Pte. Ltd., Singapore, Singapore,
Member of the Board of Directors (since 4/2002)*
- Carl Zeiss (Shanghai) Co., Ltd., Shanghai, China,
Member of the Board of Directors (since 6/2017)*

Nicole Koch

Member of the Supervisory Board since January 1, 2016
 Deputy Chairwoman of the Group Works Council of
 Deutsche Telekom AG, Bonn, until April 26, 2018
 Chairwoman of the Works Council of
 Deutsche Telekom Privatkunden-Vertrieb GmbH, Bonn

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom Privatkunden-Vertrieb GmbH, Bonn (since 6/2004)

Dagmar P. Kollmann

Member of the Supervisory Board since May 24, 2012
 Entrepreneur, member of several supervisory boards and advisory boards
 as well as the Monopolies Commission
 Former CEO of Morgan Stanley Bank, Frankfurt/Main
 Former Member of the Board of Directors of Morgan Stanley Bank
 International Limited, London, United Kingdom

Seats on the supervisory boards of other companies:

- Deutsche Pfandbriefbank AG, Unterschleißheim,
Deputy Chairwoman of the Supervisory Board (since 8/2009)
- KfW IPEX-Bank GmbH, Frankfurt/Main (since 5/2012)

Member of comparable supervisory bodies of companies in Germany or abroad:

- Bank Gutmann Aktiengesellschaft, Vienna, Austria,
Member of the Supervisory Board (since 9/2010)
- Landeskreditbank Baden-Württemberg – Förderbank (L-Bank)
(regional state bank/development bank of Baden-Württemberg),
Karlsruhe, agency under public law (not a commercial enterprise
within the meaning of § 100 (2), sentence 1, no. 1 AktG),
Member of the Advisory Board, purely advisory body (since 7/2004)
- Unibail-Rodamco SE, Paris, France,
Member of the Supervisory Board (since 5/2014)

Petra Steffi Kreusel

Member of the Supervisory Board since January 1, 2013
 Senior Vice President, Customer & Public Relations
 at T-Systems International GmbH, Frankfurt/Main
 Deputy Chairwoman of the Group Executive Staff Representation
 Committee of Deutsche Telekom AG, Bonn
 Chairwoman of the Executive Staff Representation Committee of
 T-Systems International GmbH, Frankfurt/Main

Member of the supervisory boards of subsidiaries, associated, and related companies:

- T-Systems International GmbH, Frankfurt/Main (since 12/2010)

Harald Krüger

Member of the Supervisory Board since May 17, 2018
 Chairman of the Board of Management of
 Bayerische Motoren Werke AG, Munich
 – No other seats –

Frank Sauerland

Member of the Supervisory Board since November 20, 2018
 Head of the Collective Bargaining Policy Committee, TC/IT
 National Committee at the ver.di National Executive Board, Berlin

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Deutsche Telekom Außendienst GmbH, Bonn (10/2007 to 11/2018),
Deputy Chairman of the Supervisory Board (6/2010 to 11/2018)
- Telekom Deutschland GmbH, Bonn (since 12/2016),
Deputy Chairman of the Supervisory Board (since 1/2017)

Nicole Seelemann-Wandtke

Member of the Supervisory Board since July 5, 2018
 Deputy Chairwoman of the Works Council of the Consumers
 unit at Telekom Deutschland GmbH, Bonn

Member of the supervisory boards of subsidiaries, associated, and related companies:

- Telekom Deutschland GmbH, Bonn (1/2018 to 10/2018)

Sibylle Spoo

Member of the Supervisory Board since May 4, 2010
 Lawyer, Trade Union Secretary at the ver.di Federal Administration, Berlin
 – No other seats –

Karl-Heinz Streibich

Member of the Supervisory Board since October 1, 2013
 President of acatech – Deutsche Akademie der Technikwissenschaften
 (National Academy of Science and Engineering), Berlin, since May 8, 2018
 CEO of Software AG, Darmstadt, until July 31, 2018

Seats on the supervisory boards of other companies:

- Deutsche Messe AG, Hanover (1/2013 to 7/2018)
- Dürr AG, Bietigheim-Bissingen (since 5/2011),
Chairman of the Supervisory Board (since 1/2018)
- Siemens Healthineers AG, Erlangen (since 3/2018)
- WITTENSTEIN SE, Igersheim (9/2017 to 3/2019)

*Supervisory board seats in companies that are part of the same group, as defined in § 100 (2) sentence 2 AktG (German Stock Corporation Act).

Margret Suckale

Member of the Supervisory Board since September 28, 2017
Former Member of the Board of Executive Directors of BASF SE,
Ludwigshafen

Seats on the supervisory boards of other companies:

- DWS Group GmbH & Co. KGaA, Frankfurt/Main (since 3/2018)
- HeidelbergCement AG, Heidelberg (since 8/2017)

Karin Topel

Member of the Supervisory Board since July 1, 2017
Chairwoman of the Works Council of Deutsche Telekom Technik GmbH,
Bonn, Technical Branch Office Eastern District
– No other seats –

Supervisory Board members who left in 2018:

Sari Baldauf

Member of the Supervisory Board from November 1, 2012 to May 17, 2018
Non-Executive Director and Chairwoman of the Board of Directors of
Fortum Oyj, Espoo, Finland, until March 27, 2018

Seats on the supervisory boards of other companies:

- Daimler AG, Stuttgart (since 2/2008)

Member of comparable supervisory bodies of companies in Germany or abroad:

- Nokia Oyj, Espoo, Finland (since 5/2018)
- Vexve Holding Oyj, Helsinki, Finland,
Chairwoman of the Board of Directors (since 6/2016)

Monika Brandl

Member of the Supervisory Board from November 6, 2002 to June 30, 2018
Chairwoman of the Central Works Council of Deutsche Telekom AG,
Bonn, until April 16, 2018
Member of the Central Works Council of Deutsche Telekom AG, Bonn,
until June 30, 2018
– No other seats –

Johannes Geismann

Member of the Supervisory Board from February 6, 2014 to May 17, 2018
State Secretary, Federal Ministry of Finance, Berlin, until March 23, 2018
State Secretary, Federal Chancellery, Berlin, since March 23, 2018
– No other seats –

Klaus-Dieter Hanas

Member of the Supervisory Board from June 1, 2012 to November 20, 2018
Deputy Chairman of the Works Council of Deutsche Telekom Service
GmbH, Bonn, Central-Eastern District, until March 27, 2018

Seats on the supervisory boards of other companies:

- PSD-Bank Braunschweig eG, Braunschweig (since 11/1999),
Deputy Chairman of the Supervisory Board (since 7/2011)

Dr. Ulrich Schröder

Member of the Supervisory Board from October 1, 2008 to February 6, 2018
Former CEO of the Executive Board of KfW, Frankfurt/Main

Seats on the supervisory boards of other companies:

- DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH,
Cologne (10/2009 to 1/2018)*
- Deutsche Post AG, Bonn (9/2008 to 2/2018)
- 2020 European Fund for Energy, Climate Change and Infrastructure
(Marguerite Fund), Luxembourg, Luxembourg (11/2009 to 2/2018)

Michael Sommer

Member of the Supervisory Board from April 15, 2000 to November 20, 2018
Trade Union Secretary, former Chairman of the German Confederation of
Trade Unions (DGB), Berlin

Seats on the supervisory boards of other companies:

- ZDF Enterprises GmbH, Mainz (since 10/2017)

Member of comparable supervisory bodies of companies in Germany or abroad:

- Zweites Deutsches Fernsehen, Mainz,
Member of the Administrative Council (since 4/2016)

37 COMPENSATION OF THE BOARD OF MANAGEMENT AND THE SUPERVISORY BOARD

Compensation of the Board of Management

The representation of the compensation system and the mandatory disclosures pursuant to § 285 no. 9 a) sentences 5–8 HGB, with the exception of pension information, are part of the combined management report.

Board of Management compensation for the 2018 financial year

Total compensation of the members of the Board of Management for the 2018 financial year amounted to EUR 24.6 million (2017: EUR 21.3 million). This includes a total of 212,687 entitlements to matching shares with a fair value of EUR 2.3 million on the date granted (2017: EUR 1.6 million).

Development of the pension accrual for each member of the Board of Management

€

	Development of pension accruals for current members of the Board of Management			
	Additions to pension accruals 2018	Present value of the defined benefit obligation Dec. 31, 2018	Additions to pension accruals 2017	Present value of the defined benefit obligation Dec. 31, 2017
Thomas Dannenfeldt	310,711	1,288,859	279,669	978,148
Srini Gopalan	268,729	505,227	236,498	236,498
Timotheus Höttges	3,888,589	11,793,753	1,220,798	7,911,384
Dr. Christian P. Illek	280,762	938,402	257,289	657,640
Dr. Thomas Kremer	301,707	1,767,898	294,469	1,466,191
Claudia Nemat	390,011	2,012,776	329,121	1,622,765
Dr. Dirk Wössner	248,767	248,767	-	-

In accordance with the provisions of the new company pension plan, amounts of EUR 250,000 each were allocated to Thomas Dannenfeldt, Srini Gopalan, Dr. Christian P. Illek, Dr. Thomas Kremer, Claudia Nemat, and Dr. Dirk Wössner for each year of service rendered.

The expensed additions to pension accruals for active members of the Board of Management amounted to EUR 5.7 million in the reporting year (2017: EUR 3.8 million).

Former members of the Board of Management

A total of EUR 8.1 million (2017: EUR 11.3 million) was paid out regarding payments to and entitlements for former members of the Board of Management and their surviving dependents.

Accruals totaling EUR 153.4 million (2017: EUR 139.5 million) were recognized for current pensions and vested rights to pensions for this group of persons and their surviving dependents. Pension accruals not shown in the balance sheet for this group of persons as a consequence of the transitional provisions of BilMoG amounted to EUR 3.7 million at the balance sheet date (2017: EUR 4.3 million).

Several former Board of Management members are entitled to a civil servant pension from the Civil Service Pension Fund. In the reporting year, there was no expense incurred in this regard. The present value of the estimated pensions of these Board of Management members amounts to EUR 3.3 million as of December 31, 2018 (2017: EUR 3.2 million).

Other

The Company has not granted any advances or loans to current or former Board of Management members, nor were any other financial obligations to the benefit of this group of people entered into.

Compensation of the Supervisory Board

The main features of the compensation system and information on the compensation received by the individual members of the Supervisory Board is provided in the combined management report.

The total compensation of the members of the Supervisory Board in 2018 amounted to EUR 2,887,833.37 (plus VAT) and comprises fixed annual compensation and attendance fees.

The Company has not granted any advances or loans to current or former Supervisory Board members, nor were any other financial obligations to the benefit of this group of people entered into.

38 DECLARATION OF CONFORMITY WITH THE GERMAN CORPORATE GOVERNANCE CODE IN ACCORDANCE WITH § 161 AKTG

In accordance with § 161 AktG, the Board of Management and the Supervisory Board of Deutsche Telekom have submitted the mandatory declaration of conformity and made it available to shareholders on Deutsche Telekom's website. The full text of the Declaration of Conformity can be found on the Deutsche Telekom website (www.telekom.com) under Investor Relations in the Management & Corporate Governance section.

39 PROPOSAL FOR THE APPROPRIATION OF NET INCOME

The Board of Management of Deutsche Telekom proposes to the shareholders' meeting that a dividend of EUR 0.70 per no par value share carrying dividend rights be paid to shareholders from the unappropriated net income amounting to EUR 7.0 billion, and that the remaining balance be carried forward.

The final amount of the total dividend payment depends on the number of no par value shares carrying dividend rights as of the date of the resolution on the appropriation of net income as adopted on the day of the shareholders' meeting.

The amount that is subject to a restriction on distribution in accordance with § 268 (8) sentence 3 HGB is attributable to the measurement of the CTA assets for accruals for pensions and similar obligations at fair value amounting to EUR 205 million and to the measurement of the CTA asset for long-term accounts amounting to EUR 1 million. Deferred tax liabilities account for EUR 35 million of the difference of EUR 206 million, resulting in a net amount of EUR 171 million. After accounting for deferred tax assets, also of EUR 35 million, which are offset against the deferred tax liabilities, the amount that is subject to a restriction on distribution in accordance with § 268 (8) HGB is EUR 206 million.

The amount that is subject to a restriction on distribution in accordance with § 253 (6) sentence 2 HGB is attributable to the difference in the amount of EUR 555 million resulting from changed measurement principles for pension accruals pursuant to § 253 (6) sentence 1 HGB.

Unappropriated net income can be distributed in full as the amount of EUR 761 million that is subject to a restriction on distribution pursuant to § 268 (8) sentence 3 HGB and § 253 (6) sentence 2 HGB is covered entirely by freely available reserves.

40 STATEMENT OF INVESTMENT HOLDINGS IN ACCORDANCE WITH § 285 HGB

1. Subsidiaries

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
1.	3. T-Venture Beteiligungsgesellschaft mbH (3. TVB), Bonn	1.110.	100.00		25,000	EUR	6,269	115	EUR	d)
2.	Antel Germany GmbH, Karben	1.122.	100.00		25,000	EUR	176	189	EUR	f)
3.	Arbeitgeberverband community, Arbeitgeberverband für Telekommunikation und IT e.V., Bonn			0.00		EUR	-	-	EUR	
4.	Assessment Point (Proprietary) Limited i. L., Johannesburg	1.142.	100.00		100	ZAR	0	0	ZAR	g)
5.	BENOCS GmbH, Bonn	1.353.	100.00		25,000	EUR	1,267	1,180	EUR	d)
6.	Benocs, Inc., Wilmington, DE	1.5.	100.00		100	USD	-	-	USD	
7.	CA INTERNET d.o.o., Zagreb	1.147.	100.00		20,000	HRK	503	231	HRK	d)
8.	CBS GmbH, Bonn	1.21.	100.00		838,710	EUR	2,055	0	EUR	a) d)
9.	CE Colo Czech, s.r.o., Prague	1.260.	100.00		711,991,857	CZK	822,969	110,977	CZK	d)
10.	COMBIS – IT Usluge d.o.o., Belgrade	1.12.	100.00		49,136	RSD	(135,467)	(8,088)	EUR	d)
11.	COMBIS d.o.o. Sarajevo, Sarajevo	1.12.	100.00		2,000	BAM	7,019	827	BAM	d)
12.	COMBIS, usluge integracija infromatickih tehnologija, d.o.o., Zagreb	1.129.	100.00		64,943,900	HRK	157,069	22,335	HRK	b)
13.	COSMO-ONE HELLAS MARKET SITE SOCIETE ANONYME OF ELECTRONIC COMMERCE SERVICES, Athens	1.130.	30.87		5,391,100	EUR	1,315	122	EUR	b)
13.	COSMO-ONE HELLAS MARKET SITE SOCIETE ANONYME OF ELECTRONIC COMMERCE SERVICES, Athens	1.15.	30.87		5,391,100	EUR	1,315	122	EUR	b)
14.	COSMOTE GLOBAL SOLUTIONS N.V., Diegem	1.30.	1.00		5,700,000	EUR	-	-	EUR	
14.	COSMOTE GLOBAL SOLUTIONS N.V., Diegem	1.15.	99.00		5,700,000	EUR	-	-	EUR	
15.	COSMOTE Mobile Telecommunications S.A., Maroussi, Athens	1.130.	100.00		157,899,931	EUR	2,116,609	(412,095)	EUR	b)
16.	COSMOTE PAYMENTS ELECTRONIC MONEY SERVICES S.A., Athens	1.130.	100.00		425,000	EUR	-	-	EUR	
17.	CTA Holding GmbH, Bonn			76.00	100,000	EUR	5,400,100	(1)	EUR	d)
17.	CTA Holding GmbH, Bonn	1.315.	17.00		100,000	EUR	5,400,100	(1)	EUR	d)
17.	CTA Holding GmbH, Bonn	1.351.	7.00		100,000	EUR	5,400,100	(1)	EUR	d)
18.	CYO Czech, s.r.o., Prague	1.315.	100.00		10,000	CZK	10	0	CZK	d)
19.	Carduelis B.V. (Netherlands), The Hague	1.123.	100.00		18,000	EUR	1,786	(25)	EUR	d)
20.	Click & Buy Services India Private Limited, Hyderabad	1.119.	99.62		1,609,920	INR	(15,285)	0	INR	e)
21.	ClickandBuy Holding GmbH, Bonn			100.00	25,000	EUR	5,025	0	EUR	a) d)
22.	ClickandBuy International Limited, Milton Keynes	1.21.	100.00		1,301,008	GBP	2,336	750	EUR	d)
23.	Combridge S.R.L., Sfântu Gheorghe	1.172.	100.00		29,801,490	RON	30,147	2,116	RON	d)
24.	Comfortcharge GmbH, Bonn	1.353.	100.00		25,000	EUR	28	(1)	EUR	d)
25.	Commander Services s.r.o., Bratislava	1.223.	100.00		5,000	EUR	5	(0)	EUR	d)
26.	Compendo GmbH, Nuremberg	1.48.	100.00		25,000	EUR	-	-	EUR	g)
27.	Consortium 1 S.à r.l., Luxembourg	1.76.	100.00		2,423,526	EUR	(59,833)	(3,327)	EUR	d)
28.	Consortium 2 S.à r.l., Luxembourg	1.27.	100.00		2,395,668	EUR	1,625	131	EUR	d)
29.	Cosmoholding International B.V., Amsterdam	1.15.	99.00		1,600,000	EUR	1,511	(19)	EUR	d)
29.	Cosmoholding International B.V., Amsterdam	1.127.	1.00		1,600,000	EUR	1,511	(19)	EUR	d)
30.	Cosmote E-Value Contact Center Services Societe Anonyme, Agios Stefanos	1.127.	100.00		5,105,062	EUR	18,391	2,435	EUR	b)
31.	Cosmote TV Productions & Services S.A., Maroussi, Athens	1.130.	100.00		3,400,000	EUR	3,725	(13)	EUR	b)
32.	Crnogorski Telekom a.d. Podgorica, Podgorica	1.129.	76.53		123,857,700	EUR	138,437	5,131	EUR	b)
33.	DEUTSCHE TELEKOM CAPITAL PARTNERS STRATEGIC ADVISORY LLC, Dover, DE	1.64.	100.00		1,000	USD	20	1	USD	d)
34.	DFMG Deutsche Funkturm GmbH, Münster	1.351.	16.67		30,000	EUR	7,727	0	EUR	a) d)
34.	DFMG Deutsche Funkturm GmbH, Münster	1.36.	83.33		30,000	EUR	7,727	0	EUR	a) d)
35.	DFMG Holding GmbH, Bonn			100.00	26,000	EUR	54	0	EUR	a) d)
36.	DFMG Zwischenholding GmbH, Bonn	1.35.	100.00		27,000	EUR	128	(1)	EUR	d)
37.	DIGI SLOVAKIA, s.r.o., Bratislava	1.240.	100.00		5,152,230	EUR	20,569	5,024	EUR	d)
38.	DTCP Israel Ltd., Herzliya	1.64.	100.00		415	ILS	114	1	EUR	d)
39.	DTCP NL I B.V., Maastricht	1.67.	100.00		0	EUR	5	1	EUR	d)
40.	DTCP NL II C.V., Maastricht	1.39.	0.01		9,999	EUR	30,739	0	EUR	d)
40.	DTCP NL II C.V., Maastricht	1.67.	99.99		9,999	EUR	30,739	0	EUR	d)
41.	DTCP NL III B.V., Maastricht	1.67.	100.00		0	EUR	-	-	EUR	
42.	DTCP NL IV C.V., Maastricht	1.67.	99.99		9,999	EUR	-	-	EUR	

No.	Name and registered office	Via	Indi- rectly %	Directly %	Total nominal value	Curr- ency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
42.	DTCP NL IV C.V., Maastricht	1.41.	0.01		9,999	EUR	-	-	EUR	
43.	DTCP NL V B.V., Maastricht	1.67.	100.00		0	EUR	-	-	EUR	
44.	DTCP NL VI C.V., Maastricht	1.67.	99.99		9,999	EUR	-	-	EUR	
44.	DTCP NL VI C.V., Maastricht	1.43.	0.01		9,999	EUR	-	-	EUR	
45.	DTCP USA, LLC, San Francisco, CA	1.64.	100.00		1	USD	122	49	USD	d)
46.	DeTeAsia Holding GmbH, Bonn			100.00	50,000	DEM	49	0	EUR	a) d)
47.	DeTeAssekuranz – Deutsche Telekom Assekuranz- Vermittlungsgesellschaft mbH, Cologne	1.48.	100.00		1,000,000	EUR	1,000	0	EUR	a) d)
48.	DeTeAssekuranz Holding GmbH, Bonn			100.00	150,000	EUR	9,426	6,315	EUR	d)
49.	DeTeFleetServices GmbH, Bonn			100.00	5,000,000	EUR	129,263	0	EUR	a) d)
50.	Detecon (Schweiz) AG, Zurich	1.54.	100.00		1,000,000	CHF	11,134	1,118	CHF	d)
51.	Detecon Asia-Pacific Ltd., Bangkok	1.54.	100.00		49,000,000	THB	106,066	(7,404)	THB	d)
52.	Detecon Consulting Austria GmbH, Vienna	1.50.	100.00		72,673	EUR	448	43	EUR	d)
53.	Detecon Consulting FZ-LLC, Dubai	1.54.	100.00		500,000	AED	1,426	(39)	AED	d)
54.	Detecon International GmbH, Cologne	1.315.	100.00		8,700,000	EUR	27,510	8,029	EUR	d)
55.	Detecon Vezetési Tanácsadó Kft., Budapest	1.54.	100.00		4,600,000	HUF	54,321	32,235	HUF	d)
56.	Detecon, Inc., Wilmington, DE	1.54.	100.00		1,872,850	USD	158	152	USD	b)
57.	Deutsche Sportwetten GmbH, Bonn	1.353.	63.92		69,290	EUR	(86)	(26)	EUR	d)
58.	Deutsche TELEKOM Asia Pte. Ltd., Singapore			100.00	137,777,793	SGD	6,171	(190)	SGD	d)
59.	Deutsche Telekom (UK) Limited, Hertfordshire			100.00	30,100,000	GBP	32,518	1,060	GBP	b)
60.	Deutsche Telekom Außendienst GmbH, Bonn	1.351.	100.00		27,000	EUR	56,965	0	EUR	a) d)
61.	Deutsche Telekom Business Development & Venturing Ltd., Herzliya			100.00	10	NIS	1,870	611	NIS	d)
62.	Deutsche Telekom Capital Partners Expert/Advisor Co-Invest GmbH & Co. KG, Hamburg			93.20	800	EUR	2,199	0	EUR	d)
62.	Deutsche Telekom Capital Partners Expert/Advisor Co-Invest GmbH & Co. KG, Hamburg	1.64.	0.00		800	EUR	2,199	0	EUR	d)
63.	Deutsche Telekom Capital Partners Fund GmbH, Hamburg	1.64.	100.00		25,000	EUR	34	5	EUR	d)
64.	Deutsche Telekom Capital Partners Management GmbH, Hamburg			49.00	25,000	EUR	475	299	EUR	d)
65.	Deutsche Telekom Capital Partners Portfolio Fund Carry GmbH & Co. KG, Hamburg			58.00	1,400	EUR	100	0	EUR	d)
65.	Deutsche Telekom Capital Partners Portfolio Fund Carry GmbH & Co. KG, Hamburg	1.64.	0.00		1,400	EUR	100	0	EUR	d)
66.	Deutsche Telekom Capital Partners Portfolio Fund Co-Invest I GmbH & Co. KG, Hamburg	1.68.	96.77		300	EUR	30,198	0	EUR	d)
66.	Deutsche Telekom Capital Partners Portfolio Fund Co-Invest I GmbH & Co. KG, Hamburg	1.65.	0.75		300	EUR	30,198	0	EUR	d)
66.	Deutsche Telekom Capital Partners Portfolio Fund Co-Invest I GmbH & Co. KG, Hamburg	1.62.	2.48		300	EUR	30,198	0	EUR	d)
66.	Deutsche Telekom Capital Partners Portfolio Fund Co-Invest I GmbH & Co. KG, Hamburg	1.63.	0.00		300	EUR	30,198	0	EUR	d)
67.	Deutsche Telekom Capital Partners Portfolio Fund Co-Invest Ia GmbH, Hamburg	1.66.	100.00		25,000	EUR	30,031	(10)	EUR	d)
68.	Deutsche Telekom Capital Partners Portfolio Fund GmbH & Co. KG, Hamburg			100.00	300	EUR	32,883	0	EUR	d)
68.	Deutsche Telekom Capital Partners Portfolio Fund GmbH & Co. KG, Hamburg	1.64.	0.00		300	EUR	32,883	0	EUR	d)
68.	Deutsche Telekom Capital Partners Portfolio Fund GmbH & Co. KG, Hamburg	1.63.	0.00		300	EUR	32,883	0	EUR	d)
68.	Deutsche Telekom Capital Partners Portfolio Fund GmbH & Co. KG, Hamburg	1.65.	0.00		300	EUR	32,883	0	EUR	d)
69.	Deutsche Telekom Capital Partners Venture Fund Carry GmbH & Co. KG, Hamburg			25.00	1,400	EUR	2,876	0	EUR	d)
69.	Deutsche Telekom Capital Partners Venture Fund Carry GmbH & Co. KG, Hamburg	1.64.	0.00		1,400	EUR	2,876	0	EUR	d)
70.	Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg			96.77	400	EUR	55,961	0	EUR	d)
70.	Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg	1.64.	0.00		400	EUR	55,961	0	EUR	d)
70.	Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg	1.63.	0.00		400	EUR	55,961	0	EUR	d)
70.	Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg	1.69.	0.75		400	EUR	55,961	0	EUR	d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
70.	Deutsche Telekom Capital Partners Venture Fund GmbH & Co. KG, Hamburg	1.62.	2.48		400	EUR	55,961	0	EUR	d)
71.	Deutsche Telekom Capital Partners Venture Fund II Carry GmbH & Co. KG, Hamburg			25.50	1,900	EUR	-	-	EUR	
71.	Deutsche Telekom Capital Partners Venture Fund II Carry GmbH & Co. KG, Hamburg	1.64.	0.00		1,900	EUR	-	-	EUR	
72.	Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg			99.25	300	EUR	-	-	EUR	
72.	Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg	1.64.	0.00		300	EUR	-	-	EUR	
72.	Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg	1.63.	0.00		300	EUR	-	-	EUR	
72.	Deutsche Telekom Capital Partners Venture Fund II GmbH & Co. KG, Hamburg	1.71.	0.75		300	EUR	-	-	EUR	
73.	Deutsche Telekom Capital Partners Venture Fund II Parallel GmbH & Co. KG, Hamburg	1.71.	0.75		100	EUR	-	-	EUR	
74.	Deutsche Telekom Clinical Solutions GmbH, Bonn	1.82.	100.00		25,000	EUR	2,029	0	EUR	a) d)
75.	Deutsche Telekom Clinical Solutions India Private Limited, Pune	1.299.	0.00		2,146,070	INR	115,930	39,330	INR	e)
75.	Deutsche Telekom Clinical Solutions India Private Limited, Pune	1.315.	100.00		2,146,070	INR	115,930	39,330	INR	e)
76.	Deutsche Telekom Europe B.V., Maastricht	1.78.	100.00		67,006	EUR	11,710,697	376,798	EUR	d)
77.	Deutsche Telekom Europe Beteiligungsverwaltungsgesellschaft mbH, Bonn			100.00	25,000	EUR	32	(1)	EUR	d)
78.	Deutsche Telekom Europe Holding B.V., Maastricht	1.79.	100.00		25,002	EUR	12,077,669	(37)	EUR	d)
79.	Deutsche Telekom Europe Holding GmbH, Bonn			100.00	30,000	EUR	12,673,083	0	EUR	a) d)
80.	Deutsche Telekom Geschäftskunden-Vertrieb GmbH, Bonn	1.351.	100.00		25,000	EUR	26	(1)	EUR	d)
81.	Deutsche Telekom Healthcare Solutions Netherlands B.V., Bunnik (Utrecht)	1.315.	100.00		18,000	EUR	1,901	104	EUR	d)
82.	Deutsche Telekom Healthcare and Security Solutions GmbH, Bonn	1.315.	100.00		511,300	EUR	2,161	0	EUR	a) d)
83.	Deutsche Telekom Holding B.V., Maastricht	1.263.	100.00		20,500	EUR	8,830,112	(51)	EUR	d)
84.	Deutsche Telekom Hosted Business Services, Inc., Menlo Park, CA	1.163.	100.00		5,306	USD	-	-	USD	
85.	Deutsche Telekom IT GmbH, Bonn			100.00	25,000	EUR	143	0	EUR	a) d)
86.	Deutsche Telekom Individual Solutions & Products GmbH, Bonn	1.351.	100.00		25,000	EUR	1,312	0	EUR	a) d)
87.	Deutsche Telekom International Finance B.V., Maastricht			100.00	500,000	EUR	262,758	(38,820)	EUR	d)
88.	Deutsche Telekom North America, Inc., Wilmington, DE	1.326.	100.00		30	USD	13,164	2,794	USD	b)
89.	Deutsche Telekom Pan-Net Albania Sh.p.k., Tirana	1.79.	100.00		2,600,000	ALL	(2,618)	(85)	ALL	d)
90.	Deutsche Telekom Pan-Net Croatia d.o.o., Zagreb	1.79.	100.00		180,000	HRK	38,475	367	HRK	d)
91.	Deutsche Telekom Pan-Net Czech Republic s.r.o., Prague	1.79.	100.00		13,600,000	CZK	13,689	22	CZK	d)
92.	Deutsche Telekom Pan-Net GmbH, Vienna	1.79.	100.00		600,000	EUR	594	(6)	EUR	d)
93.	Deutsche Telekom Pan-Net Greece EPE, Athens	1.79.	99.88		650,040	EUR	2,901	43	EUR	d)
93.	Deutsche Telekom Pan-Net Greece EPE, Athens	1.77.	0.12		650,040	EUR	2,901	43	EUR	d)
94.	Deutsche Telekom Pan-Net Hungary Kft., Budapest	1.79.	100.00		7,501,000	HUF	1,278,498	10,393	HUF	b)
95.	Deutsche Telekom Pan-Net Macedonia Dooel, Skopje	1.79.	100.00		3,020,000	EUR	23	3	EUR	d)
96.	Deutsche Telekom Pan-Net Montenegro d.o.o., Podgorica	1.79.	100.00		20,000	EUR	22	2	EUR	d)
97.	Deutsche Telekom Pan-Net Poland Spolka z ograniczona odpowiedzialnoscia, Warsaw	1.79.	100.00		100,000	PLN	376	378	PLN	b)
98.	Deutsche Telekom Pan-Net Romania S.R.L., Bucharest	1.79.	100.00		3,000,000	EUR	2,901	43	EUR	d)
99.	Deutsche Telekom Pan-Net s.r.o., Bratislava	1.79.	97.00		25,000	EUR	2,558	1,446	EUR	d)
99.	Deutsche Telekom Pan-Net s.r.o., Bratislava	1.77.	3.00		25,000	EUR	2,558	1,446	EUR	d)
100.	Deutsche Telekom Privatkunden-Vertrieb GmbH, Bonn	1.351.	100.00		10,000,000	EUR	44,258	0	EUR	a) d)
101.	Deutsche Telekom Service GmbH, Bonn	1.351.	100.00		25,000	EUR	19,110	0	EUR	a) d)
102.	Deutsche Telekom Services Europe AG, Bonn			100.00	120,000	EUR	3,000	0	EUR	a) d)
103.	Deutsche Telekom Services Europe Czech Republic s.r.o., Brno	1.102.	100.00		13,500,000	CZK	10,289	(16,711)	CZK	d)
104.	Deutsche Telekom Services Europe Romania S.R.L., Bucharest			3.33	13,198,200	RON	14,742	1,927	RON	d)
104.	Deutsche Telekom Services Europe Romania S.R.L., Bucharest	1.102.	96.67		13,198,200	RON	14,742	1,927	RON	d)
105.	Deutsche Telekom Services Europe Slovakia s.r.o., Bratislava	1.299.	0.01		6,520,000	EUR	2,904	234	EUR	d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
105.	Deutsche Telekom Services Europe Slovakia s.r.o., Bratislava	1.102.	99.99		6,520,000	EUR	2,904	234	EUR	d)
106.	Deutsche Telekom Strategic Investments GmbH, Bonn			100.00	10,225,900	EUR	26,526	689	EUR	d)
107.	Deutsche Telekom Strategic Investments, Inc., San Francisco, CA	1.106.	100.00		100	USD	476	64	USD	d)
108.	Deutsche Telekom Technik GmbH, Bonn	1.351.	100.00		27,000	EUR	29,651	0	EUR	a) d)
109.	Deutsche Telekom Training GmbH, Bonn			100.00	102,300	EUR	125	0	EUR	a) d)
110.	Deutsche Telekom Venture Funds GmbH, Bonn			100.00	25,000	EUR	329,185	0	EUR	a) d)
111.	Deutsche Telekom hub:raum Fund GmbH, Bonn			100.00	25,000	EUR	15,941	0	EUR	a) d)
112.	Deutsche Telekom, Inc., New York, NY			100.00	100	USD	7,414	429	USD	d)
113.	Digital Media Audience Products GmbH, Bonn	1.353.	100.00		25,000	EUR	26	(0)	EUR	d)
114.	E-Tours d.o.o., Zagreb	1.129.	100.00		20,000	HRK	10,380	2,427	HRK	d)
115.	E-Value Collection Ltd., Agios Stefanos	1.30.	100.00		350,010	EUR	3,041	90	EUR	b)
116.	E-Value International S.A., Bucharest	1.30.	0.01		6,700,000	RON	(12,128)	(3,370)	RON	d)
116.	E-Value International S.A., Bucharest	1.29.	99.99		6,700,000	RON	(12,128)	(3,370)	RON	d)
117.	Erste DFMG Deutsche Funkturm Vermögens-GmbH, Bonn			100.00	100,000	EUR	170,273	0	EUR	a) d)
118.	Eutelis Consult GmbH i. L., Ratingen	1.54.	60.00		1,360,000	DEM	-	-	EUR	g)
119.	Firstgate Holding AG, Oberägeri	1.21.	100.00		100,000	CHF	1,009	(11)	CHF	d)
120.	GEMAPPS Gesellschaft für mobile Lösungen mbH, Hamburg	1.315.	100.00		25,000	EUR	207	(0)	EUR	d)
121.	GMG Generalmietgesellschaft mbH, Cologne			100.00	51,130,000	EUR	51,423	0	EUR	a) d)
122.	GTS Central European Holding B.V. (Netherlands), Amsterdam	1.123.	99.46		18,500	EUR	433,252	1,201	EUR	d)
122.	GTS Central European Holding B.V. (Netherlands), Amsterdam	1.19.	0.54		18,500	EUR	433,252	1,201	EUR	d)
123.	GTS Central European Holdings Limited, Luxembourg	1.28.	100.00		171,000	EUR	37,647	39	EUR	d)
124.	GTS Poland Sp. z o.o. (Poland), Warsaw	1.76.	100.00		199,870	PLN	36,321	19,666	PLN	d)
125.	GTS Telecom S.R.L., Bucharest	1.123.	52.56		7,368,415	RON	37,475	10,442	RON	d)
125.	GTS Telecom S.R.L., Bucharest	1.122.	47.44		7,368,415	RON	37,475	10,442	RON	d)
126.	GTS Ukraine L.L.C., Kiev	1.122.	100.00		1,150,000	UAH	(65,440)	(11,635)	UAH	d)
127.	Germanos Industrial and Commercial Company of Electronic Telecommunication materials and supply of Services Societe Anonyme, Agios Stefanos	1.15.	100.00		29,600,892	EUR	211,354	(2,869)	EUR	b)
128.	Goingsoft Software Vertriebs- und Beratungs GmbH, St. Johann	1.351.	100.00		35,000	EUR	-	-	EUR	
129.	HT holding d.o.o., Zagreb	1.132.	100.00		929,965,000	HRK	929,929	(36)	HRK	d)
130.	Hellenic Telecommunications Organization S.A. (OTE), Athens			45.00	1,171,459,430	EUR	2,958,200	226,600	EUR	d)
131.	HfTL Trägergesellschaft mbH, Bonn			100.00	25,000	EUR	756	(119)	EUR	d)
132.	Hrvatski Telekom d.d., Zagreb	1.76.	51.14		9,822,853,500	HRK	12,274,045	841,266	HRK	d)
133.	Huron Merger Sub LLC, Bellevue, WA	1.293.	100.00		1	USD	-	-	USD	
134.	HÄVG Rechenzentrum GmbH, Cologne	1.82.	50.00		100,000	EUR	1,384	545	EUR	d)
135.	I.T.E.N.O.S. International Telecom Network Operation Services GmbH, Bonn	1.315.	100.00		3,000,000	EUR	6,410	0	EUR	a) d)
136.	IBSV LLC, Wilmington, DE	1.294.	100.00		0	USD	-	-	USD	
137.	IT Services Hungary Szolgáltató Kft., Budapest	1.315.	100.00		150,100,000	HUF	11,830,886	2,146,417	HUF	d)
138.	ITgen Informatikai Szolgáltató Korlátolt Felelősségű Társaság, Budapest	1.319.	100.00		3,000,000	HUF	134,224	12	HUF	d)
139.	Immmr GmbH, Bonn	1.353.	100.00		25,000	EUR	3,165	(890)	EUR	d)
140.	ImmoCom Verwaltungs GmbH, Heusenstamm	1.121.	100.00		50,000	DEM	(4,758)	(1)	EUR	d)
141.	Infovan (Proprietary) Limited, Midrand	1.335.	100.00		2,000	ZAR	114,767	775	ZAR	d)
142.	Intervate Holdings (Proprietary) Limited i. L., Johannesburg	1.335.	100.00		2,090	ZAR	2	71	ZAR	g)
143.	Intervate Project Services (Proprietary) Limited i. L., Johannesburg	1.144.	100.00		300	ZAR	0	0	ZAR	g)
144.	Intervate Solutions (Proprietary) Limited, Johannesburg	1.142.	100.00		1,070	ZAR	(25,964)	(13,605)	ZAR	d)
145.	Investel Magyar Távközlési Befektetési ZRt., Budapest	1.172.	100.00		1,113,000,000	HUF	2,707,032	1,389,704	HUF	d)
146.	Iowa Wireless Services Holding Corporation, Bellevue, WA	1.294.	100.00		1	USD	-	-	USD	
147.	Iskon Internet d.d., Zagreb	1.129.	100.00		420,269,100	HRK	196,926	(13,441)	HRK	b)
148.	KIBU Innováció Nonprofit Kft., Budapest	1.172.	96.67		3,000,000	HUF	43,339	114	HUF	d)
148.	KIBU Innováció Nonprofit Kft., Budapest	1.145.	3.33		3,000,000	HUF	43,339	114	HUF	d)
149.	Kabelsko distributivni sustav d.o.o., Cakovec	1.129.	100.00		1,229,600	HRK	2,982	82	HRK	d)
150.	KalászNet Kft., Budapest	1.172.	100.00		225,000,000	HUF	1,322,131	237,095	HUF	d)
151.	Kolga Telekommunikationsdienste GmbH, Bonn	1.351.	100.00		25,000	EUR	27	0	EUR	a) d)
152.	Kumukan GmbH, Bonn	1.353.	100.00		25,000	EUR	37	(4)	EUR	d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
153.	L3TV Chicagoland Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
154.	L3TV Colorado Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
155.	L3TV DC Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
156.	L3TV Dallas Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
157.	L3TV Detroit Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
158.	L3TV Los Angeles Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
159.	L3TV New York Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
160.	L3TV Philadelphia Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
161.	L3TV San Francisco Cable System, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
162.	LEMO INTERNET a.s., Trutnov	1.260.	100.00		2,000,000	CZK	-	-	CZK	
163.	Lambda Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	37	0	EUR	a) d)
164.	Lauderdale Carry GmbH & Co. KG, Hamburg	1.64.	10.00		1,400	EUR	-	-	EUR	
164.	Lauderdale Carry GmbH & Co. KG, Hamburg	1.63.	0.00		1,400	EUR	-	-	EUR	
165.	Layer3 TV, Inc., Bellevue, WA	1.294.	100.00		10	USD	79,078	(646)	USD	d)
166.	LayerG, LLC, Bellevue, WA	1.165.	100.00		1	USD	-	-	USD	
167.	Loki Telekommunikationsdienste GmbH, Bonn	1.351.	100.00		25,000	EUR	27	0	EUR	a) d)
168.	MAGYARCOM SZOLGÁLTATÓ KOMMUNIKÁCIÓS Kft., Budapest			100.00	50,000,000	HUF	1,302,890	144,191	HUF	d)
169.	MFP LeaseCo, LLC, Bellevue, WA	1.294.	51.00		1	USD	2,500	0	USD	d)
170.	Magenta GmbH, Bonn			100.00	25,000	EUR	25	(1)	EUR	d)
171.	Magenta Ventures LLC, Bellevue, WA	1.294.	100.00		1	USD	-	-	USD	
172.	Magyar Telekom Telecommunications Public Limited Company, Budapest	1.76.	59.72		104,274,254,300	HUF	553,824,000	41,857,000	HUF	b)
173.	Makedonski Telekom AD Skopje, Skopje	1.244.	56.67		9,583,887,760	MKD	15,194,511	1,035,942	MKD	b)
174.	MetroPCS California, LLC, Bellevue, WA	1.294.	100.00		1	USD	3,274,564	1,010,453	USD	d)
175.	MetroPCS Florida, LLC, Bellevue, WA	1.290.	100.00		1	USD	3,075,664	802,237	USD	d)
176.	MetroPCS Georgia, LLC, Bellevue, WA	1.290.	100.00		1	USD	881,197	411,792	USD	d)
177.	MetroPCS Massachusetts, LLC, Bellevue, WA	1.284.	100.00		1	USD	32,049	118,673	USD	f)
178.	MetroPCS Michigan, LLC, Bellevue, WA	1.259.	100.00		0	USD	1,058,187	521,645	USD	d)
179.	MetroPCS Networks California, LLC, Bellevue, WA	1.294.	100.00		1	USD	(322,275)	(42,189)	USD	d)
180.	MetroPCS Networks Florida, LLC, Bellevue, WA	1.290.	100.00		1	USD	(75,601)	(7,291)	USD	d)
181.	MetroPCS Nevada, LLC, Bellevue, WA	1.295.	100.00		1	USD	72,135	40,205	USD	d)
182.	MetroPCS New York, LLC, Bellevue, WA	1.284.	100.00		1	USD	834,714	365,646	USD	d)
183.	MetroPCS Pennsylvania, LLC, Bellevue, WA	1.284.	100.00		1	USD	526,002	305,419	USD	d)
184.	MetroPCS Texas, LLC, Bellevue, WA	1.295.	100.00		1	USD	570,942	186,246	USD	d)
185.	Mobilbeep Telecommunications One Person Limited Liability, Maroussi, Athens	1.15.	100.00		620,100	EUR	140	(16)	EUR	d)
186.	MobiledgeX GmbH, Bonn	1.187.	100.00		25,000	EUR	28	(2)	EUR	d)
187.	MobiledgeX, Inc., Menlo Park, CA	1.353.	100.00		10,000	USD	5,866	0	USD	d)
188.	Motionlogic GmbH, Berlin	1.353.	100.00		25,000	EUR	929	(1,563)	EUR	d)
189.	NGENA GmbH, Bonn	1.353.	69.76		109,615	EUR	35,993	(14,911)	EUR	d)
190.	NextGen Communications S.R.L, Bucharest	1.343.	100.00		50,564,200	RON	77,767	3,871	RON	d)
191.	Novatel EOOD, Sofia	1.172.	100.00		11,056,430	BGN	10,783	118	BGN	b)
192.	ORBIT Gesellschaft für Applikations- und Informationssysteme mbH, Bonn	1.54.	100.00		128,000	EUR	6,819	2,266	EUR	d)
193.	OT-Optima Telekom d.d., Zagreb	1.129.	17.41		694,432,640	HRK	18,936	(52,855)	HRK	d)
194.	OT-Optima Telekom d.o.o., Koper	1.193.	100.00		8,763	EUR	239	(116)	EUR	d)
195.	OTE Academy S.A., Maroussi, Athens	1.130.	100.00		1,761,030	EUR	(949)	(694)	EUR	b)
195.	OTE Academy S.A., Maroussi, Athens	1.236.	0.00		1,761,030	EUR	(949)	(694)	EUR	b)
196.	OTE Estate S.A., Athens	1.130.	100.00		335,344,766	EUR	877,772	17,864	EUR	b)
196.	OTE Estate S.A., Athens	1.203.	0.00		335,344,766	EUR	877,772	17,864	EUR	b)
197.	OTE Insurance Agency S.A., Athens	1.130.	99.90		86,000	EUR	476	132	EUR	b)
197.	OTE Insurance Agency S.A., Athens	1.203.	0.10		86,000	EUR	476	132	EUR	b)
198.	OTE International Investments Limited, Limassol	1.130.	100.00		477,366,811	EUR	284,483	(60,237)	EUR	b)
199.	OTE International Solutions S.A., Maroussi, Athens	1.130.	100.00		102,354,799	EUR	190,842	5,514	EUR	b)
199.	OTE International Solutions S.A., Maroussi, Athens	1.236.	0.00		102,354,799	EUR	190,842	5,514	EUR	b)
200.	OTE Plc., London	1.130.	100.00		50,000	GBP	33,153	(342)	EUR	b)
201.	OTE Rural North SPV, Maroussi, Athens	1.130.	100.00		1,775,112	EUR	(413)	(907)	EUR	b)
202.	OTE Rural South SPV, Maroussi, Athens	1.130.	100.00		2,255,520	EUR	(379)	(764)	EUR	b)
203.	OTEplus Technical & Business Solutions S.A., Athens	1.130.	100.00		4,714,408	EUR	10,798	(587)	EUR	b)
204.	OmegaTowers 1 Funkdienste GmbH & Co. KG, Münster	1.34.	100.00		100	EUR	2,030	(1,828)	EUR	a) d)
205.	OmegaTowers 1 Funkdienste Komplementär GmbH, Münster	1.34.	100.00		25,000	EUR	26	1	EUR	d)
206.	OmegaTowers 2 Funkdienste GmbH & Co. KG, Münster	1.34.	100.00		100	EUR	3,927	(2,003)	EUR	a) d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
207.	OmegaTowers 2 Funkdienste Komplementär GmbH, Münster	1.34.	100.00		25.000	EUR	26	1	EUR	d)
208.	OmegaTowers 3 Funkdienste GmbH, Münster	1.34.	100.00		25,000	EUR	5,889	0	EUR	a) d)
209.	One 2 One Limited, Hertfordshire	1.59.	100.00		2	GBP	0	0	GBP	d)
210.	One 2 One Personal Communications Ltd., Hertfordshire	1.59.	100.00		1	GBP	0	0	GBP	d)
211.	Optima Telekom za upravljanje nekretninama i savjetovanje d.o.o., Zagreb	1.193.	100.00		20,000	HRK	10	(1)	HRK	d)
212.	Optima direct d.o.o., Buje	1.193.	100.00		19,216,000	HRK	(2,296)	59	HRK	d)
213.	P & I Travel GmbH, Darmstadt			100.00	4,000,000	EUR	(1,929)	962	EUR	d)
214.	P & I Verwaltungs GmbH, Darmstadt			100.00	25,000	EUR	22	(3)	EUR	d)
215.	PASM Power and Air Condition Solution Management Beteiligungs GmbH, Bonn			100.00	25,000	EUR	36	(0)	EUR	d)
216.	PASM Power and Air Condition Solution Management GmbH, Munich			100.00	10,025,000	EUR	137,787	0	EUR	a) d)
217.	PT T Systems Indonesia, Jakarta	1.299.	0.40		2,500,000,000	IDR	-	-	IDR	
217.	PT T Systems Indonesia, Jakarta	1.315.	99.60		2,500,000,000	IDR	-	-	IDR	
218.	PTI PR TOWERS I, LLC, Bellevue, WA	1.288.	100.00		1	USD	(2,137)	(132)	USD	d)
219.	PTI US TOWERS II, LLC, Bellevue, WA	1.295.	100.00		1	USD	(28,340)	(818)	USD	d)
220.	PTI US Towers I, LLC, Bellevue, WA	1.294.	100.00		1	USD	(16,268)	(1,132)	USD	d)
221.	Pan-Infom Kutatás-Fejlesztési és Innovációs Kft., Balatonfüred	1.319.	100.00		3,000,000	HUF	(150,145)	(151)	HUF	d)
222.	Pelsoft Informatika Kft., Balatonfüred	1.319.	100.00		3,000,000	HUF	(74,137)	(75)	HUF	d)
223.	PosAm spol. s.r.o., Bratislava	1.240.	51.00		170,000	EUR	12,851	1,631	EUR	d)
224.	Powertel Memphis Licenses, Inc., Bellevue, WA	1.225.	100.00		1	USD	197,470	22,176	USD	d)
225.	Powertel/Memphis, Inc., Bellevue, WA	1.294.	100.00		32,262	USD	(698,675)	(115,139)	USD	d)
226.	PreHCM Services GmbH, Miltenberg	1.34.	100.00		25,000	EUR	1,250	152	EUR	d)
227.	Qingdao DETECON Consulting Co., Ltd., Qingdao	1.54.	100.00		2,000,000	USD	8,694	468	CNY	f)
228.	REGICA.NET d.o.o., Zagreb	1.147.	100.00		28,000	HRK	1,017	136	HRK	d)
229.	Regionet Morava a.s., Tranovice	1.260.	100.00		4,000,000	CZK	-	-	CZK	
230.	Residenzpost GmbH & Co. Liegenschafts KG, Heusenstamm			100.00	1	EUR	1	(4)	EUR	d)
231.	SCS Personalberatung GmbH, Frankfurt/Main			100.00	100,000	DEM	51	0	EUR	a) d)
232.	SLMA LLC, Bellevue, WA	1.294.	100.00		1	USD	-	-	USD	
233.	SPV HOLDINGS SP.z o.o., Warsaw	1.76.	100.00		5,000	PLN	3	(16)	PLN	d)
234.	Sallust Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	27	0	EUR	a) d)
235.	Satellitc NV, Machelen	1.315.	76.00		10,000,000	EUR	15,333	9,888	EUR	d)
236.	Satellite and Maritime Telecommunications S.A., Piraeus	1.130.	94.08		5,463,750	EUR	8,697	(146)	EUR	b)
236.	Satellite and Maritime Telecommunications S.A., Piraeus	1.203.	0.01		5,463,750	EUR	8,697	(146)	EUR	b)
237.	Sigma Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	27	0	EUR	a) d)
238.	Sireo Immobilienfonds No. 1 Verwaltungsgesellschaft mbH, Bonn	1.239.	100.00		25,000	EUR	63	10	EUR	d)
239.	Sireo Immobilienfonds No.1 GmbH & Co. KG, Bonn			100.00	6,858,242	EUR	139,373	17,208	EUR	d)
240.	Slovak Telekom, a.s., Bratislava	1.76.	100.00		864,113,000	EUR	1,100,740	66,637	EUR	b)
241.	Software Daten Service Gesellschaft m.b.H., Vienna	1.315.	100.00		290,691	EUR	26,442	6,527	EUR	d)
242.	Soluciones y Proyectos Consulting, S.L., Barcelona	1.312.	100.00		3,006	EUR	154	(3)	EUR	d)
243.	Sophia Invest GmbH, Bonn	1.353.	100.00		25,000	EUR	37,695	(242)	EUR	d)
244.	Stonebridge Communication AD, Skopje	1.172.	100.00		12,065,386,345	MKD	12,865,193	(263)	MKD	b)
245.	SunCom Wireless Holdings Inc., Bellevue, WA	1.294.	100.00		1	USD	(387,058)	0	USD	d)
246.	SunCom Wireless License Company, LLC, Bellevue, WA	1.362.	100.00		1	USD	37,841	10,181	USD	d)
247.	SunCom Wireless Operating Company, LLC, Bellevue, WA	1.362.	100.00		1	USD	-	-	USD	
248.	SunCom Wireless Property Company, LLC, Bellevue, WA	1.362.	100.00		1	USD	-	-	USD	
249.	SunCom Wireless, Inc., Bellevue, WA	1.245.	100.00		1	USD	419,687	0	USD	d)
250.	Superior Merger Sub Corporation, Bellevue, WA	1.133.	100.00		1	USD	-	-	USD	
251.	T SYSTEMS TELEKOMÜNİKASYON LIMITED SIRKETI, Istanbul	1.315.	100.00		4,453,325	TRY	22,569	6,696	TRY	d)
252.	T-Infrastruktur Holding GmbH, Vienna	1.257.	100.00		35,000	EUR	26	(7)	EUR	d)
253.	T-Mobile (UK Properties), Inc., Denver, CO	1.59.	100.00		1	USD	-	-	USD	
254.	T-Mobile (UK) Ltd., Hertfordshire	1.59.	100.00		1	GBP	0	0	GBP	d)
255.	T-Mobile (UK) Retail Limited, Hertfordshire	1.59.	100.00		105	GBP	0	0	GBP	d)
256.	T-Mobile Airtime Funding LLC, Bellevue, WA	1.285.	100.00		1	USD	43,301	200	USD	d)
257.	T-Mobile Austria GmbH, Vienna	1.258.	100.00		60,000,000	EUR	893,943	100,462	EUR	d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
258.	T-Mobile Austria Holding GmbH, Vienna	1.76.	100.00		15,000,000	EUR	1,548,888	(1,306)	EUR	d)
259.	T-Mobile Central LLC, Bellevue, WA	1.294.	100.00		1	USD	9,062,677	137,099	USD	d)
260.	T-Mobile Czech Republic a.s., Prague	1.76.	100.00		520,000,000	CZK	30,523,000	4,389,000	CZK	b)
261.	T-Mobile Financial LLC, Wilmington, DE	1.294.	100.00		100,000	USD	2,419,114	976,515	USD	d)
262.	T-Mobile Global Care Corporation, Bellevue, WA	1.294.	100.00		10	USD	-	-	USD	
263.	T-Mobile Global Holding GmbH, Bonn	1.264.	100.00		50,000	EUR	15,897,725	0	EUR	a) d)
264.	T-Mobile Global Zwischenholding GmbH, Bonn			100.00	26,000	EUR	21,069,848	0	EUR	a) d)
265.	T-Mobile Handset Funding LLC, Bellevue, WA	1.261.	100.00		1	USD	437,884	40,058	USD	d)
266.	T-Mobile Holdings Limited, Milton Keynes	1.17.	100.00		706,540,268	GBP	3,748,315	(1,068,673)	EUR	d)
267.	T-Mobile HotSpot GmbH, Bonn			100.00	26,000	EUR	5,970	0	EUR	a) d)
268.	T-Mobile Infra B.V., The Hague	1.277.	100.00		10,000	EUR	-	-	EUR	
269.	T-Mobile International Austria GmbH, Vienna	1.257.	100.00		37,000	EUR	2,029	267	EUR	d)
270.	T-Mobile International Limited, Hertfordshire	1.59.	100.00		1	GBP	0	0	GBP	d)
271.	T-Mobile International UK Pension Trustee Limited, Welwyn Garden City	1.59.	100.00		1	GBP	0	0	GBP	d)
272.	T-Mobile Leasing LLC, Bellevue, WA	1.294.	100.00		1	USD	158,550	106,496	USD	d)
273.	T-Mobile License LLC, Bellevue, WA	1.294.	100.00		1	USD	11,402,134	226,022	USD	d)
274.	T-Mobile Ltd., Hertfordshire	1.59.	100.00		1	GBP	0	0	GBP	d)
275.	T-Mobile Netherlands B.V., The Hague	1.277.	100.00		1,250,628	EUR	1,459,632	246,367	EUR	d)
276.	T-Mobile Netherlands Finance B.V., The Hague	1.277.	100.00		124,105	EUR	1,702,174	(1,803)	EUR	d)
277.	T-Mobile Netherlands Holding B.V., The Hague	1.76.	100.00		90,756,043	EUR	1,878	157	EUR	b)
278.	T-Mobile Netherlands Klantenservice B.V., The Hague	1.275.	100.00		1,116,950	EUR	(453,141)	(15,643)	EUR	d)
279.	T-Mobile Netherlands Retail B.V., The Hague	1.275.	100.00		18,000	EUR	(829,455)	(48,504)	EUR	d)
280.	T-Mobile Newco Nr. 3 GmbH, Bonn			100.00	25,000	EUR	25	0	EUR	a) d)
281.	T-Mobile Newco Nr. 4 GmbH, Bonn			100.00	25,000	EUR	27	0	EUR	a) d)
282.	T-Mobile No. 1 Limited, London	1.59.	100.00		1	GBP	-	-	GBP	g)
283.	T-Mobile No. 5 Limited, London	1.59.	100.00		1	GBP	-	-	GBP	g)
284.	T-Mobile Northeast LLC, Bellevue, WA	1.294.	100.00		1	USD	7,727,532	37,451	USD	d)
285.	T-Mobile PCS Holdings LLC, Bellevue, WA	1.294.	100.00		1	USD	(13,210,448)	(1,173,323)	USD	d)
286.	T-Mobile Polska S.A., Warsaw	1.76.	100.00		471,000,000	PLN	5,859,562	37,227	PLN	b)
287.	T-Mobile Puerto Rico Holdings LLC, Bellevue, WA	1.362.	100.00		1	USD	-	-	USD	
288.	T-Mobile Puerto Rico LLC, Bellevue, WA	1.287.	100.00		1	USD	384,912	(30,641)	USD	d)
289.	T-Mobile Resources Corporation, Bellevue, WA	1.285.	100.00		1	USD	(25,052)	(4,238)	USD	d)
290.	T-Mobile South LLC, Bellevue, WA	1.294.	100.00		1	USD	3,130,755	(17,956)	USD	d)
291.	T-Mobile Subsidiary IV Corporation, Bellevue, WA	1.294.	100.00		1	USD	1,126	0	USD	d)
292.	T-Mobile Thuis B.V., The Hague	1.277.	100.00		1	EUR	(1,081)	(22,995)	EUR	d)
293.	T-Mobile US, Inc., Bellevue, WA	1.83.	63.34		8,503	USD	22,559,000	4,536,000	USD	d)
294.	T-Mobile USA, Inc., Bellevue, WA	1.293.	100.00		5,353	USD	(20,640,323)	(1,562,728)	USD	d)
295.	T-Mobile West LLC, Bellevue, WA	1.294.	100.00		1,000	USD	14,345,185	777,890	USD	d)
296.	T-Systems Argentina S.A., Buenos Aires	1.299.	2.00		2,425,252	ARS	1,755	(2,444)	ARS	d)
296.	T-Systems Argentina S.A., Buenos Aires	1.315.	98.00		2,425,252	ARS	1,755	(2,444)	ARS	d)
297.	T-Systems Austria GesmbH, Vienna	1.315.	100.00		185,000	EUR	52,614	(1,488)	EUR	d)
298.	T-Systems Belgium NV, Machelen	1.323.	0.65		172,125	EUR	4,788	2,344	EUR	d)
298.	T-Systems Belgium NV, Machelen	1.315.	99.35		172,125	EUR	4,788	2,344	EUR	d)
299.	T-Systems Beteiligungsverwaltungsgesellschaft mbH, Frankfurt/Main	1.315.	100.00		25,600	EUR	439	141	EUR	d)
300.	T-Systems CIS, Moscow	1.315.	100.00		4,630,728	RUB	513,997	85,457	RUB	d)
301.	T-Systems Canada, Inc., Saint John	1.326.	100.00		2,031,554	CAD	13,837	151	CAD	b)
302.	T-Systems China Limited, Hong Kong	1.315.	100.00		24,000,000	HKD	51,982	17,847	HKD	d)
303.	T-Systems Client Services GmbH, Bonn	1.315.	100.00		25,000	EUR	1,199	173	EUR	d)
304.	T-Systems Data Migration Consulting AG, Kreuzlingen	1.331.	100.00		100,000	CHF	7,432	1,419	CHF	d)
305.	T-Systems France SAS, Saint-Denis	1.315.	100.00		2,000,000	EUR	2,946	(4,605)	EUR	d)
306.	T-Systems GEI GmbH, Aachen	1.315.	100.00		11,301,600	EUR	15,004	0	EUR	a) d)
307.	T-Systems ICT Romania S.R.L., Bucharest	1.299.	5.00		200	RON	7,928	2,289	RON	d)
307.	T-Systems ICT Romania S.R.L., Bucharest	1.315.	95.00		200	RON	7,928	2,289	RON	d)
308.	T-Systems IT Epsilon GmbH, Bonn	1.315.	100.00		25,000	EUR	25	0	EUR	a) d)
309.	T-Systems IT Eta GmbH, Bonn	1.315.	100.00		25,000	EUR	25	0	EUR	a) d)
310.	T-Systems IT Gamma GmbH, Bonn	1.315.	100.00		25,000	EUR	25	0	EUR	a) d)
311.	T-Systems IT Zeta GmbH, Bonn	1.315.	100.00		25,000	EUR	25	0	EUR	a) d)
312.	T-Systems ITC Iberia, S.A., Barcelona	1.315.	100.00		1,245,100	EUR	49,115	10,304	EUR	d)
313.	T-Systems Information and Communication Technology E.P.E., Athens	1.299.	1.00		18,000	EUR	749	39	EUR	d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
313.	T-Systems Information and Communication Technology E.P.E., Athens	1.315.	99.00		18,000	EUR	749	39	EUR	d)
314.	T-Systems Information and Communication Technology India Private Limited, Pune	1.299.	0.00		95,500,000	INR	8,217	(41,102)	INR	e)
314.	T-Systems Information and Communication Technology India Private Limited, Pune	1.315.	100.00		95,500,000	INR	8,217	(41,102)	INR	e)
315.	T-Systems International GmbH, Frankfurt/Main			100.00	154,441,900	EUR	1,233,291	0	EUR	a) d)
316.	T-Systems Italia S.r.l., Rozzano	1.315.	100.00		594,000	EUR	6,083	1,018	EUR	d)
317.	T-Systems Limited, London	1.315.	100.00		550,001	GBP	11,033	6,831	GBP	d)
318.	T-Systems Luxembourg S.A., Münsbach	1.299.	0.02		1,500,000	EUR	6,838	950	EUR	d)
318.	T-Systems Luxembourg S.A., Münsbach	1.315.	99.98		1,500,000	EUR	6,838	950	EUR	d)
319.	T-Systems Magyarország ZRt., Budapest	1.172.	100.00		2,002,000,000	HUF	29,587,774	1,553,107	HUF	d)
320.	T-Systems Malaysia Sdn. Bhd., Kuala Lumpur	1.315.	100.00		4,000,000	MYR	42,581	160	MYR	d)
321.	T-Systems Mexico, S.A. de C.V., Puebla	1.315.	100.00		32,000,000	MXN	596,917	184,240	MXN	d)
322.	T-Systems Multimedia Solutions GmbH, Dresden	1.315.	100.00		4,090,400	EUR	4,113	0	EUR	a) d)
323.	T-Systems Nederland B.V., Utrecht	1.315.	100.00		908,000	EUR	76,205	(2,437)	EUR	d)
324.	T-Systems Network Services Japan K.K., Tokyo	1.315.	100.00		10,035,000	JPY	335,230	13,881	JPY	d)
325.	T-Systems Nordic A/S, Ballerup	1.315.	100.00		5,500,000	DKK	28,333	(956)	DKK	d)
326.	T-Systems North America, Inc., Wilmington, DE	1.315.	100.00		34	USD	54,626	6,553	USD	b)
327.	T-Systems P.R. China Ltd., Beijing	1.315.	100.00		31,500,000	EUR	20,954	10,276	CNY	d)
328.	T-Systems Polska Sp. z o.o., Wrocław	1.286.	100.00		8,327,000	PLN	35,018	1,493	PLN	d)
329.	T-Systems Public Network Services GmbH, Berlin	1.315.	100.00		25,000	EUR	26	(0)	EUR	d)
330.	T-Systems RUS OOO, St. Petersburg	1.300.	99.00		10,000	RUB	417,482	192,376	RUB	d)
330.	T-Systems RUS OOO, St. Petersburg	1.315.	1.00		10,000	RUB	417,482	192,376	RUB	d)
331.	T-Systems Schweiz AG, Münchenbuchsee	1.315.	100.00		13,000,000	CHF	23,114	(881)	CHF	d)
332.	T-Systems Singapore Pte. Ltd., Singapore	1.315.	100.00		38,905,000	SGD	39,765	7,120	SGD	d)
333.	T-Systems Slovakia s.r.o., Kosice	1.315.	97.50		258,581	EUR	32,465	5,708	EUR	d)
333.	T-Systems Slovakia s.r.o., Kosice	1.299.	2.50		258,581	EUR	32,465	5,708	EUR	d)
334.	T-Systems Solutions for Research GmbH, Weßling	1.315.	100.00		5,000,000	EUR	5,427	0	EUR	a) d)
335.	T-Systems South Africa (Proprietary) Limited, Midrand	1.336.	70.00		6,000	ZAR	782,535	157,724	ZAR	d)
336.	T-Systems South Africa Holdings (Proprietary) Limited, Midrand	1.315.	100.00		4,100,085	ZAR	893,983	84,435	ZAR	d)
337.	T-Systems TMT Limited, Milton Keynes	1.317.	100.00		500,000	GBP	500	0	GBP	d)
338.	T-Systems Telecomunicações e Serviços Ltda., São Bernardo do Campo	1.339.	100.00		4,182,560	BRL	10,885	4,468	BRL	d)
338.	T-Systems Telecomunicações e Serviços Ltda., São Bernardo do Campo	1.299.	0.00		4,182,560	BRL	10,885	4,468	BRL	d)
339.	T-Systems do Brasil Ltda., Sao Paulo	1.299.	0.00		30,000,000	BRL	167,454	(3,665)	BRL	d)
339.	T-Systems do Brasil Ltda., Sao Paulo	1.315.	100.00		30,000,000	BRL	167,454	(3,665)	BRL	d)
340.	T-Systems on site services GmbH, Berlin	1.315.	100.00		154,000	EUR	154	0	EUR	a) d)
341.	T-Systems, informacijski sistemi, d.o.o., Ljubljana	1.315.	100.00		8,763	EUR	477	4	EUR	d)
342.	TAMBURO Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	49	(0)	EUR	d)
343.	TELEKOM ROMANIA COMMUNICATIONS S.A., Bucharest	1.198.	54.01		5,975,037,351	RON	2,453,099	(440,783)	RON	b)
344.	TELEKOM ROMANIA MOBILE COMMUNICATIONS S.A., Bucharest	1.15.	70.00		1,593,747,510	RON	(1,480,963)	(449,167)	RON	d)
344.	TELEKOM ROMANIA MOBILE COMMUNICATIONS S.A., Bucharest	1.343.	30.00		1,593,747,510	RON	(1,480,963)	(449,167)	RON	d)
345.	TMUS Assurance Corporation, Honolulu, HI	1.294.	100.00		10	USD	83,725	153,140	USD	d)
346.	TOB T-Systems Ukraine i. L., Kiev	1.299.	0.10		35,000	UAH	-	-	UAH	g)
346.	TOB T-Systems Ukraine i. L., Kiev	1.315.	99.90		35,000	UAH	-	-	UAH	g)
347.	Tau Telekommunikationsdienste GmbH, Bonn	1.351.	100.00		25,000	EUR	27	(0)	EUR	d)
348.	Tel-Team Inwestycje Sp. z o.o., Zielonka	1.286.	100.00		15,000,000	PLN	14,432	1,965	PLN	d)
349.	Tele Haus Polska Sp. z o.o. (Poland), Tarnowo Podgórze	1.286.	100.00		5,167,550	PLN	12,403	2,557	PLN	d)
350.	Telekom Albania SH.A, Tirana	1.15.	99.76		813,822,000	ALL	68,744,078	(5,401,081)	ALL	b)
351.	Telekom Deutschland GmbH, Bonn			100.00	1,515,000,000	EUR	2,103,000	0	EUR	a) d)
352.	Telekom Deutschland Multibrand GmbH, Bonn	1.351.	100.00		25,000	EUR	27	0	EUR	a) d)
353.	Telekom Innovation Pool GmbH, Bonn			100.00	26,000	EUR	156,910	0	EUR	a) d)
354.	Telekom New Media Zrt., Budapest	1.172.	100.00		669,930,000	HUF	832,689	115,649	HUF	d)
355.	Telekom Sec. s.r.o., Bratislava	1.240.	100.00		71,639	EUR	58	(2)	EUR	d)
356.	The Digitale GmbH, Bonn	1.353.	100.00		25,000	EUR	803	73	EUR	d)
357.	Theta Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	27	0	EUR	a) d)
358.	Thor Telekommunikationsdienste GmbH, Bonn	1.351.	100.00		25,000	EUR	27	0	EUR	a) d)
359.	Tibull Telekommunikationsdienste GmbH, Bonn			100.00	25,000	EUR	27	0	EUR	a) d)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands	Net income/net loss in thousands	Reporting currency	Note
360.	Toll4Europe GmbH, Berlin	1.315.	55.00		25,000,000	EUR	22,983	(2,017)	EUR	d)
361.	Triton PCS Finance Company, Inc., Bellevue, WA	1.249.	100.00		1	USD	1,693,160	32,244	USD	d)
362.	Triton PCS Holdings Company, LLC, Bellevue, WA	1.249.	100.00		1	USD	(1,430,965)	(117,931)	USD	d)
363.	Trust2Core GmbH, Berlin	1.353.	100.00		25,000	EUR	476	(116)	EUR	d)
364.	UPC Telekabel Wien GmbH, Vienna	1.257.	95.00		24,512,547	EUR	86,921	45,036	EUR	d)
365.	UPC Telekabel-Fernsehnnetz Region Baden Betriebsgesellschaft mbH, Traiskirchen	1.257.	95.00		363,364	EUR	784	411	EUR	d)
366.	VIOLA Kabelgesellschaft (Deutschland) mbH, Bonn	1.35.	100.00		1,000,000	EUR	974	(7)	EUR	d)
367.	Vesta Telekommunikationsdienste GmbH, Bonn	1.353.	100.00		25,000	EUR	25	(0)	EUR	d)
368.	Vidanet Zrt., Győr	1.172.	67.50		2,000,000,000	HUF	4,842,015	1,479,766	HUF	d)
368.	Vidanet Zrt., Győr	1.145.	22.50		2,000,000,000	HUF	4,842,015	1,479,766	HUF	d)
369.	Vivento Customer Services GmbH, Bonn			100.00	100,000	EUR	97,173	0	EUR	a) d)
370.	Vulcanus Telekommunikationsdienste GmbH, Bonn	1.353.	100.00		25,000	EUR	25	(0)	EUR	d)
371.	Zoznam Mobile, s.r.o., Bratislava	1.240.	100.00		6,639	EUR	413	(95)	EUR	d)
372.	Zoznam, s.r.o., Bratislava	1.240.	100.00		6,639	EUR	2,760	263	EUR	d)
373.	Zweite DFMG Deutsche Funkturm Vermögens-GmbH, Bonn	1.351.	100.00		100,000	EUR	37,125	0	EUR	a) d)
374.	bodyconcept GmbH, Bonn	1.353.	100.00		100,001	EUR	262	(7)	EUR	d)
375.	congstar GmbH, Cologne	1.351.	100.00		250,000	EUR	3,900	0	EUR	a) d)
376.	congstar Services GmbH, Cologne	1.375.	100.00		30,000	EUR	4,092	0	EUR	a) d)
377.	emetriq GmbH, Bonn	1.351.	100.00		100,000	EUR	(6,466)	(4,230)	EUR	d)
378.	goingsoft Deutschland GmbH, Schrobenhausen	1.128.	100.00		150,000	EUR	-	-	EUR	
379.	operational services Beteiligungs-GmbH, Frankfurt/Main	1.380.	100.00		25,000	EUR	39	1	EUR	d)
380.	operational services GmbH & Co. KG, Frankfurt/Main	1.315.	50.00		250,000	EUR	35,454	17,968	EUR	d)
380.	operational services GmbH & Co. KG, Frankfurt/Main	1.379.	0.00		250,000	EUR	35,454	17,968	EUR	d)
381.	rola Security Solutions GmbH, Cologne/Germany	1.315.	100.00		800,000	EUR	19,985	8,686	EUR	d)

2. Associated and other related companies

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity in thousands of reporting currency	Net income/net loss in thousands of reporting currency	Reporting currency	Note
1.	Ince GmbH, Cologne	1.353.	25.00		250,000	EUR	13	(152)	EUR	d)
2.	BUYIN S.A., Brussels			50.00	123,000	EUR	142	943	EUR	d)
3.	BT Group plc, London	1.266.	12.00		498,406,384	GBP	10,304,000	2,032,000	GBP	i)
4.	CTDI GmbH, Malsch (Karlsruhe district)	1.351.	15.50		4,016,393	EUR	78,647	2,719	EUR	d)
5.	Callahan Nordrhein-Westfalen GmbH, Cologne	1.366.	45.00		2,595,000	EUR	-	-	EUR	
6.	Cellwize Wireless Technologies Pte. Ltd., Singapore	1.44.	31.01		22,000	USD	-	-	USD	
7.	Central Georgian Communications Co. Ltd., Roustavi	1.203.	25.00		280,000	GEL	10,651	809	GEL	c)
8.	Clipkit GmbH, Berlin	1.110.	35.63		122,641	EUR	-	-	EUR	g)
9.	DETECON AL SAUDIA Co. Ltd., Riyadh	1.54.	46.50		4,000,000	SAR	216,699	41,889	SAR	d)
10.	Deutsche Telekom Capital Partners Executive Pool GmbH & Co. KG, Hamburg	1.63.	0.00		400	EUR	21	0	EUR	f)
11.	Devas Multimedia Private Limited, Bangalore	1.58.	20.73		177,313	INR	1,270,949	(425,898)	INR	e)
12.	Donbass Telecom Ltd., Donetsk	1.203.	49.00		342,700	UAH	-	-	UAH	
13.	E2 Hungary Energiakereskedelmi es Szolgáltató Zrt., Budapest	1.172.	50.00		200,000,000	HUF	3,037,874	1,037,873	HUF	d)
14.	Electrocyling Anlagen GmbH, Goslar	1.351.	25.00		9,000,000	DEM	8,618	432	EUR	d)
15.	Electrocyling GmbH, Goslar	1.351.	25.50		1,500,000	EUR	10,889	2,418	EUR	d)
16.	Enio GmbH, Vienna	1.34.	34.11		45,150	EUR	-	-	EUR	
17.	HMM Deutschland GmbH, Moers			38.46	197,758	EUR	13,951	(327)	EUR	d)
17.	HMM Deutschland GmbH, Moers	1.110.	10.97		197,758	EUR	13,951	(327)	EUR	d)
18.	HWW - Höchstleistungsrechner für Wissenschaft und Wirtschaft GmbH, Stuttgart	1.315.	20.00		50,000	EUR	1,136	92	EUR	d)
18.	HWW - Höchstleistungsrechner für Wissenschaft und Wirtschaft GmbH, Stuttgart	1.334.	20.00		50,000	EUR	1,136	92	EUR	d)
19.	Hrvatska posta d.o.o., Mostar	1.132.	30.29		26,335,069	BAM	21,709	55	BAM	b)
20.	JP Hrvatske telekomunikacije d.d. Mostar, Mostar	1.132.	39.10		315,863,250	BAM	322,575	1,028	BAM	b)

No.	Name and registered office	Via	Indirectly %	Directly %	Total nominal value	Currency	Shareholders' equity thousands of reporting currency	Net income/net loss thousands of reporting currency	Reporting currency	Note
21.	Kepler Data Tech, S.L., Madrid	1.66.	33.33		210,000	EUR	-	-	EUR	
22.	Közbringa Kft., Budapest	1.319.	25.00		20,000,000	HUF	72,078	19,471	HUF	d)
23.	LeanIX GmbH, Bonn	1.70.	21.87		59,573	EUR	6,248	(1,696)	EUR	d)
24.	MGRID B.V., Amsterdam	1.110.	21.05		22,800	EUR	7	(110)	EUR	j)
25.	MNP Deutschland GbR, Düsseldorf	1.351.	33.33		0	EUR	205	102	EUR	d)
26.	Mobile Telephony Companies Association, Maroussi, Athens	1.15.	33.33		5,000,699	EUR	104	(1,080)	EUR	b)
27.	NetWorkSI Sp. z.o.o, Warsaw	1.286.	50.00		30,000,000	PLN	54,567	5,966	PLN	b)
28.	Pie Digital, Inc., Newark, NJ	1.110.	49.99		57	USD	-	-	USD	g)
29.	Portavita B.V., Amsterdam	1.110.	21.05		22,800	EUR	1,743	61	EUR	j)
30.	SL3TV, LLC, Bellevue, WA	1.165.	49.00		200,000	USD	-	-	USD	
31.	SYFIT GmbH, Aalen	1.353.	33.33		37,500	EUR	791	(719)	EUR	d)
32.	Scout Lux Management Equity Co S.à.r.l., Luxembourg			30.00	12,500	EUR	104,683	3,601	EUR	d)
33.	Smarmets Ltd., London	1.110.	24.47		13,318	GBP	16,853	8,506	GBP	d)
34.	Spearhead AG, Zollikon	1.353.	20.00		250,000	CHF	(2,062)	(1,113)	CHF	d)
35.	Ströer SE & Co. KGaA, Cologne			11.42	56,171,871	EUR	825,821	36,317	EUR	d)
36.	T-Mobile USA Tower LLC, Wilmington, DE	1.294.	100.00		1	USD	(980,906)	(43,016)	USD	d)
37.	T-Mobile West Tower LLC, Wilmington, DE	1.295.	100.00		1	USD	(1,169,320)	(53,042)	USD	d)
38.	TELEGNOUS - Provider of solvency Assessment Information in the Telecommunications Sector - Private Company, Athens	1.15.	25.00		4,000	EUR	(2)	(1)	EUR	d)
39.	Tehnoloski centar Split d.o.o., Split	1.132.	29.76		3,900,000	HRK	205	(1,270)	HRK	d)
40.	Toll Collect GbR, Berlin			45.00	0	EUR	684	(27)	EUR	d) h)
41.	Trans Jordan For Communication Services Company Ltd., Amman	1.130.	40.00		3,500,000	JOD	-	-	JOD	
41.	Trans Jordan For Communication Services Company Ltd., Amman	1.203.	10.00		3,500,000	JOD	-	-	JOD	
42.	XCI JV, LLC, Wilmington, DE	1.294.	25.00		5,075,000	USD	-	-	USD	
43.	Yemen Public Payphone Company Ltd., Sanaa	1.130.	10.00		2,960,000	USD	-	-	USD	
43.	Yemen Public Payphone Company Ltd., Sanaa	1.203.	15.00		2,960,000	USD	-	-	USD	
44.	eValue 2nd Fund GmbH, Berlin	1.70.	33.33		25,000	EUR	2,723	(185)	EUR	d)
45.	iesy Holdings GmbH, Oberursel (Taunus)	1.366.	35.00		1,000,000	EUR	-	-	EUR	
46.	tooz technologies Inc., New York	1.353.	50.00		50,000	USD	-	-	USD	
47.	Stratospheric Platforms Limited, Douglas	1.243.	31.04		151	GBP	-	-	GBP	

a) Net income/loss taking into account profit and loss transfer agreements as of Dec. 31, 2017

b) Shareholders' equity and net income/loss (IFRS) as of Dec. 31, 2017

c) Shareholders' equity and net income/loss (IFRS) as of Dec. 31, 2016

d) Shareholders' equity and net income/loss as per annual financial statements prepared in accordance with the respective national accounting standards as of Dec. 31, 2017

e) Shareholders' equity and net income/loss as per annual financial statements prepared in accordance with the respective national accounting standards as of Mar. 31, 2017

f) Shareholders' equity and net income/loss as per annual financial statements prepared in accordance with the respective national accounting standards as of Dec. 31, 2016

g) In liquidation

h) Deutsche Telekom AG is a shareholder with unlimited liability

i) Shareholders' equity/net income/loss based on consolidated IFRS figures as of Mar. 31, 2018

j) Shareholders' equity/net income/loss as per annual financial statements prepared in accordance with the respective national accounting standards as of Dec. 31, 2015

RESPONSIBILITY STATEMENT

INDEPENDENT AUDITOR'S REPORT

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company, and the management report of Deutsche Telekom AG, which is com-

bined with the Group management report, includes a fair review of the development and performance of the business and the position of the Company, together with a description of the principal opportunities and risks associated with the expected development of the Company.

Bonn, February 12, 2019

Deutsche Telekom AG
Board of Management

Timotheus Höttges

Adel Al-Saleh

Birgit Bohle

Srini Gopalan

Dr. Christian P. Illek

Dr. Thomas Kremer

Thorsten Langheim

Claudia Nemat

Dr. Dirk Wössner

INDEPENDENT AUDITOR'S REPORT

To Deutsche Telekom Aktiengesellschaft, Bonn

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND OF THE MANAGEMENT REPORT

Audit Opinions

We have audited the annual financial statements of Deutsche Telekom Aktiengesellschaft, Bonn, which comprise the balance sheet as at December 31, 2018, and the statement of profit and loss for the financial year from January 1 to December 31, 2018, and notes to the financial statements, including the presentation of the recognition and measurement policies presented therein. In addition, we have audited the management report of Deutsche Telekom Aktiengesellschaft, which is combined with the group management report, for the financial year from January 1 to December 31, 2018. In accordance with the German legal requirements, we have not audited the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law and give a true and fair view of the assets, liabilities and financial position of the Company as at December 31, 2018 and of its financial performance for the financial year from January 1 to December 31, 2018 in compliance with German Legally Required Accounting Principles, and
- the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the management report does not cover the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

Pursuant to Article 322 paragraph 3 sentence 1 German Commercial Code, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the Audit Opinions

We conducted our audit of the annual financial statements and of the management report in accordance with Article 317 German Commercial Code and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institute of Public Auditors in Germany (IDW). We performed the audit of the annual financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Com-

pany in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the annual financial statements and on the management report.

Key Audit Matters in the Audit of the Annual Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the financial year from January 1 to December 31, 2018. These matters were addressed in the context of our audit of the annual financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

- 1 | Recoverability of shares in affiliated companies

Our presentation of these key audit matters has been structured in each case as follows:

- 1 | Matter and issue
- 2 | Audit approach and findings
- 3 | Reference to further information

Hereinafter we present the key audit matters:

1 | Recoverability of shares in affiliated companies

- 1 | Shares in affiliated companies amounting to EUR 77.4 billion (63 % of total assets) are reported in the annual financial statements of Deutsche Telekom Aktiengesellschaft as of December 31, 2018. Shares in affiliated companies are measured in accordance with German commercial law at the lower of cost or fair value. As of the balance sheet date, Deutsche Telekom Aktiengesellschaft tested its equity investments for impairment. Expert opinions from accounting firms were obtained for calculating the fair values of investments with carrying amounts of EUR 47.0 billion; Deutsche Telekom Aktiengesellschaft adopted the results of these opinions as its own. For all other material investments, Deutsche Telekom Aktiengesellschaft conducted its own business and equity valuations for the purpose of calculating the fair values. Based on the expert opinions obtained, the Company's valuations, and other documentation, it was necessary to recognize a total reversal of impairment of EUR 0.5 billion on the shares in Deutsche Telekom Europe Holding GmbH and T-Mobile Global Zwischenholding GmbH

for fiscal year 2018. The fair values of the investments in subsidiaries were in each case calculated as the present value of the expected future cash flows using discounted cash flow models on the basis of the budget projections prepared by management. The results of these measurements depend in particular on management's estimates of future cash inflows and the respective discount rates used. The measurements are therefore subject to uncertainties. Against this background and due to its significance for Deutsche Telekom Aktiengesellschaft's financial position and financial performance, this matter was of particular importance during our audit.

2 | As part of our audit, we assessed the usability of the valuations conducted by the external experts as of December 31, 2018. We also gained an understanding of the raw data underlying the expert opinions, the assumptions made, the methods used, and how consistent these were in comparison to prior periods. Our analysis did not lead to any restrictions with regard to the usability of the expert opinions obtained for the annual financial statements.

In terms of the valuations that Deutsche Telekom Aktiengesellschaft conducted itself, we assessed whether the fair values had been properly calculated using discounted cash flow methods in accordance with the relevant professional measurement standards. We reviewed whether the underlying future cash inflows and the costs of capital used form, as a whole, an appropriate basis. We based our assessment, among other things, on a comparison with general and sector-specific market expectations as well as the management's detailed explanations regarding key planning value drivers. With the knowledge that even relatively small changes in the discount rate applied can in some cases have material effects on values, we focused our testing in particular on the parameters used to determine the discount rate applied, and evaluated the measurement model. In our view, the measurement inputs and assumptions used by management were properly derived for conducting impairment tests.

3 | The Company's disclosures pertaining to financial assets and their impairment are contained in the section entitled "Summary of accounting policies" and note 1 "Noncurrent assets" as well as note 26 "financial results" in the notes to the annual financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the management report:

- the statement on corporate governance pursuant to Article 289f German Commercial Code and Article 315d German Commercial Code included in section "Sonstige Angaben – Erklärung zur Unternehmensführung gemäß §§ 289f, 315d HGB" of the management report
- the non-financial statement pursuant to Article 289b paragraph 1 German Commercial Code and Article 315b paragraph 1 German Commercial Code included in section "Corporate Responsibility und nichtfinanzielle Erklärung" of the management report

Our audit opinions on the annual financial statements and on the management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Directors and the Supervisory Board for the Annual Financial Statements and the Management Report

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the executive directors are responsible for assessing the Company's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that as a whole provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the management report.

The supervisory board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the annual financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Article 317 German Commercial Code and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and this management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual financial statements and of the management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- Obtain an understanding of internal control relevant to the audit of the annual financial statements and of arrangements and measures (systems) relevant to the audit of the management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems of the Company.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements and in the management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles.
- Evaluate the consistency of the management report with the annual financial statements, its conformity with German law, and the view of the Company's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on May 17, 2018. We were engaged by the supervisory board on October 1, 2018. We have been the auditor of the Deutsche Telekom Aktiengesellschaft, Bonn, without interruption since the company first has met the requirements as a Public Interest Entity according to Article 319a paragraph 1 German Commercial Code in financial year 1996.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

**GERMAN PUBLIC AUDITOR RESPONSIBLE
FOR THE ENGAGEMENT**

The German Public Auditor responsible for the engagement is
Thomas Tandetzki.

Frankfurt am Main, February 12, 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

sgd. Dr. Peter Bartels
Wirtschaftsprüfer
(German Public Auditor)

sgd. Thomas Tandetzki
Wirtschaftsprüfer
(German Public Auditor)

FURTHER INFORMATION

- 57 List of abbreviations
- 59 Contacts

LIST OF ABBREVIATIONS

AG	Aktiengesellschaft (stock corporation under German law)	i. L.	in liquidation
AktG	Aktiengesetz (German Stock Corporation Act)	IDW ERS HFA	Accounting standard (draft) prepared by the Expert Committee of the Institute of Public Auditors in Germany (IDW)
Art.	Article		
BilMoG	Bilanzrechtsmodernisierungsgesetz (German Accounting Law Modernization Act)	IDW RS HFA	Accounting standard prepared by the Expert Committee of the Institute of Public Auditors in Germany (IDW)
CEO	Chief Executive Officer		
CTA	Contractual Trust Arrangement	IFRS	International Financial Reporting Standard
e.g.	for example	Inc.	Incorporated
e. V.	eingetragener Verein (registered association under German law)	IT	Information technology
eG	eingetragene Genossenschaft (registered cooperative under German law)	KfW	KfW Bankengruppe, Frankfurt/Main
EGHGB	Einführungsgesetz zum Handelsgesetzbuch (Introductory Act of the German Commercial Code)	KG	Kommanditgesellschaft (limited partnership under German law)
EstG	Einkommensteuergesetz (German Income Tax Act)	KGaA	Kommanditgesellschaft auf Aktien (limited partnership under German law)
EUR	Euro	Ltd.	Limited
Federal Agency	Bundesanstalt für Post und Telekommunikation Deutsche Bundespost (Federal Posts and Telecommunications Agency)	mbH	mit beschränkter Haftung (limited liability)
GAAP	Generally accepted accounting principles	No.	Number
GBP	Pound sterling	PBeaKK	Postbeamtenkrankenkasse (Civil Service Health Insurance Fund)
GbR	Gesellschaft bürgerlichen Rechts (non-trading partnership under German law)	PostPersRG	Postpersonalrechtsgesetz (German Act on the Legal Provisions for the Former Deutsche Bundespost Staff)
GmbH	Gesellschaft mit beschränkter Haftung (limited liability company under German law)	PTNeuOG	Postneuordnungsgesetz (German Posts and Telecommunications Reorganization Act)
GmbH & Co. KG	Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft (limited company under German law)	SE	Societas Europea
HGB	Handelsgesetzbuch (German Commercial Code)	T-Systems	T-Systems International GmbH, Frankfurt/Main
HKD	Hong Kong-Dollar	Telekom Deutschland	Telekom Deutschland GmbH, Bonn
HR	Human Resources	USD	U.S. dollar
HRB	Handelsregister, Abteilung B (Commercial register, section B)	VAP	Versorgungsanstalt der Deutschen Bundespost (Supplementary Retirement Pensions Institution)
		ver.di	Vereinte Dienstleistungsgewerkschaft (service industry trade union)
		VVaG	Versicherungsverein auf Gegenseitigkeit (mutual insurance association)
		WpHG	Wertpapierhandelsgesetz (German Securities Trading Act)

CONTACTS

Deutsche Telekom AG
Friedrich-Ebert-Allee 140
53113 Bonn, Germany

Corporate Communications:
Phone +49 (0) 228 181 49494
E-Mail medien@telekom.de

Investor Relations:
Phone +49 (0) 228 181 88880
E-Mail investor.relations@telekom.de

Further information on Deutsche Telekom
is available at: www.telekom.com

The English version of the report is a translation of the German version of the report.
The German version of this report is legally binding.

KNr. 642 100 032 A – German
KNr. 642 100 033 A – English

COMBINED MANAGEMENT REPORT

– Excerpt from the annual report 2018 of Deutsche Telekom –

SUSTAINABLE DEVELOPMENT GOALS

In order to successfully tackle global challenges, the member states of the United Nations adopted the 2030 Agenda for Sustainable Development in 2015. The aim is to enable economic development and prosperity – in line with social justice and taking account of the ecological limits of global growth. The Agenda applies equally to all nations of the world.

The core of the 2030 Agenda comprises 17 goals: the Sustainable Development Goals (SDGs). In particular, it seeks to reduce poverty and hunger, promote healthcare and education, enable equality, protect the environment and climate, and make consumption sustainable. Implementing the ambitious SDGs will require everyone to work together: policy makers, civil society, and business. As such, companies are also called upon to make concrete contributions with respect to their business activities.

We are answering this call. Many of our products, services, and activities already allow us to make such a contribution. Our contribution to the SDGs also has a positive effect on the entire value chain at Deutsche Telekom. To enhance clarity, we divide these value contributions into the five subcategories – Finance, Structure, Relationships, Employees, and Environment.

For example, as a responsible employer, we greatly value employee participation and a working environment that is fair and respectful; we encourage diversity and support our employees on their journey toward the digital working world (Employees). In doing so, we also contribute to meeting SDGs 8 and 5. Our broadband network build-out makes an active contribution to creating and expanding high-quality infrastructure and promoting innovation (SDG 9), and at the same time strengthens our infrastructure (Structure). By consistently improving energy efficiency as we expand our network, and by delivering cloud-based services that enhance energy efficiency for our customers (Environment), we contribute towards SDG 13. Thanks to products and solutions like these, customers can conserve yet further resources and heighten the positive effects on the environment (SDGs 12, 14, 15). The build-out of our broadband network also gives a large number of people access to digital education media (SDG 4), while our e-health services improve medical care (SDG 3). At the same time, we generate revenue with these services (Finance). Smart city solutions promote sustainable living (SDGs 11, 17) and we implement them using new partnerships (Relationships).

To clearly highlight the contribution our products, services, and activities make towards the individual sustainability development goals and our value chain, we have marked the relevant passages of the following pages with the respective SDG and contribution symbols.

Deutsche Telekom's value contributions



FINANCE



STRUCTURE



RELATIONSHIPS



EMPLOYEES



ENVIRONMENT



THE GLOBAL GOALS

COMBINED MANAGEMENT REPORT

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DEUTSCHE TELEKOM AT A GLANCE

NET REVENUE

- We are well on track to meeting our growth forecast, posting an increase in net revenue of 0.9 percent to EUR 75.7 billion. On a comparable basis, i.e., excluding exchange rate effects and effects of changes in the composition of the Group, net revenue increased by as much as EUR 2.3 billion or 3.1 percent.
- Our United States operating segment posted an increase in revenue of 2.2 percent; in U.S. dollars, the continuing success of our U.S. operations was evident in revenue growth of 6.8 percent. Revenue in our Europe operating segment grew by 2.6 percent.
- The business trend was stable in our Germany operating segment, with revenue down 1.1 percent due to the first-time application of the IFRS 15 accounting standard.
- Revenue remained on a par with the prior year in our Systems Solutions operating segment, while in our Group Development operating segment revenue declined.

ADJUSTED EBITDA

- Adjusted EBITDA grew by EUR 1.1 billion to EUR 23.3 billion. Excluding exchange rate effects, adjusted EBITDA rose by EUR 1.6 billion or 7.2 percent and thus exceeded our expectations.
- Due to the ongoing success of T-Mobile US, we generated an increase in adjusted EBITDA of 8.3 percent in the United States operating segment. In U.S. dollars, this growth reached as much as 13.6 percent. Adjusted EBITDA also grew in our Europe operating segment (by 3.5 percent) and in our Germany operating segment (by 2.4 percent). While adjusted EBITDA remained stable in our Group Development operating segment, it declined in our Systems Solutions operating segment (-15.7 percent).
- At 30.8 percent, the Group's adjusted EBITDA margin increased slightly against the prior-year level of 29.7 percent. The EBITDA margin was 39.7 percent in Germany, 32.6 percent in Europe, and 27.6 percent in the United States.

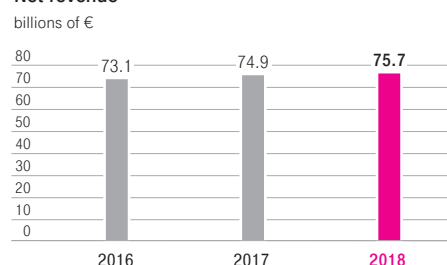
EBIT

- EBIT decreased by EUR 1.4 billion to EUR 8.0 billion.
- EBITDA was negatively affected by special factors of EUR 1.5 billion in contrast to positive net special factors of EUR 1.7 billion in the previous year. Staff-related measures and non-staff-related restructuring accounted for negative special factors of EUR 1.3 billion, an increase of EUR 0.6 billion year-on-year. The prior-year period had also benefited from positive special factors of EUR 1.7 billion from the reversal of impairment losses previously recognized for spectrum licenses at T-Mobile US, the sale of Strato (EUR 0.5 billion) and of further shares in Scout24 AG (EUR 0.2 billion), and a settlement agreement concluded with BT (EUR 0.2 billion).
- At EUR 13.8 billion, depreciation, amortization and impairment losses were down EUR 0.8 billion year-on-year. This was largely attributable to impairment losses of EUR 0.7 billion on goodwill and property, plant and equipment recognized as special factors in the Europe operating segment, whereas, in the prior year, impairment losses of EUR 2.2 billion had been recognized in the Europe and Systems Solutions operating segments. Depreciation and amortization increased by EUR 0.7 billion.

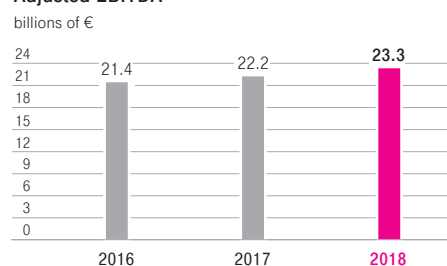
NET PROFIT

- Net profit decreased from EUR 3.5 billion to EUR 2.2 billion.
- At EUR 2.8 billion, the loss from financial activities was EUR 1.5 billion lower than a year earlier, offsetting the effects of the reduction in EBIT. The higher loss in the prior year was attributable to the EUR 1.5 billion impairment of our financial stake in BT recognized in profit or loss, as well as to higher negative effects from the remeasurement of derivatives. While the settlement amount of EUR 0.6 billion agreed in the Toll Collect arbitration proceedings had a negative impact in the reporting year, finance costs improved by EUR 0.4 billion year-on-year.
- The tax expense amounted to EUR 1.8 billion; in the prior year there had been a tax benefit of EUR 0.6 billion, which was mainly attributable to the remeasurement of deferred taxes at T-Mobile US as a result of the U.S. tax reform.
- Profit attributable to non-controlling interests decreased year-on-year by EUR 0.9 billion.
- Adjusted earnings per share declined from EUR 1.28 in the prior year to EUR 0.96 in the reporting year.

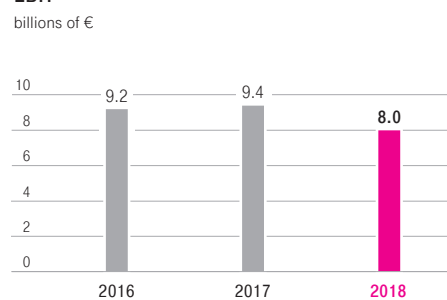
Net revenue



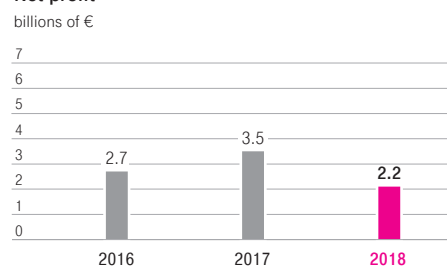
Adjusted EBITDA



EBIT



Net profit

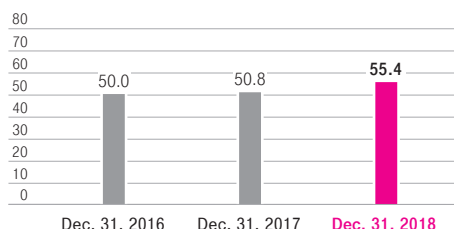


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Net debt

billions of €

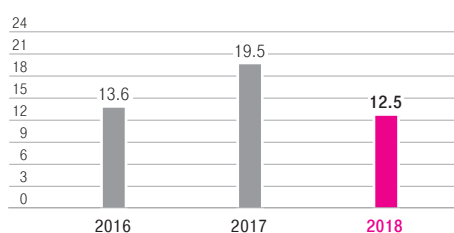


NET DEBT

- Net debt increased from EUR 50.8 billion at the end of 2017 to EUR 55.4 billion.
- Factors in this increase included, in particular, the dividend payment (including to non-controlling interests) of EUR 3.3 billion, the acquisition of UPC Austria (EUR 1.8 billion), additions to liabilities in connection with finance leases (EUR 1.0 billion), exchange rate effects (EUR 1.1 billion), T-Mobile US' share buy-back program (EUR 0.9 billion), payment obligations arising out of the Toll Collect settlement (EUR 0.6 billion), and further acquisitions of shares in T-Mobile US and OTE (EUR 0.4 billion).
- The main factor reducing net debt was free cash flow of EUR 6.2 billion.

Cash capex

billions of €



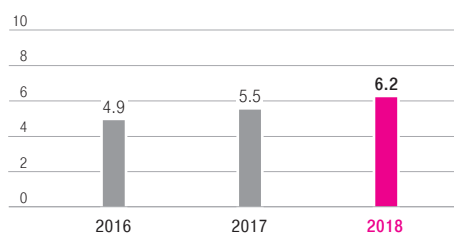
CASH CAPEX

- Cash capex (including spectrum investment) decreased from EUR 19.5 billion to EUR 12.5 billion.
- In the prior year, mobile spectrum licenses had been acquired for EUR 7.4 billion, mainly in the United States operating segment, compared with cash outflows in the reporting year of EUR 0.3 billion, primarily in the United States.
- Adjusted for the effects of spectrum acquisition, cash capex was up by EUR 0.1 billion. Capital expenditures were focused primarily on the United States, Germany, and Europe operating segments and went toward the build-out and upgrade of our networks.

Free cash flow

(before dividend payments and spectrum investment)

billions of €



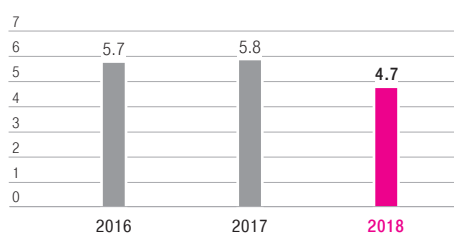
FREE CASH FLOW

(BEFORE DIVIDEND PAYMENTS AND SPECTRUM INVESTMENT)

- Free cash flow was up by EUR 0.7 billion to EUR 6.2 billion. Adjusted for exchange rate effects and changes in the composition of the Group, the value thus exceeded our expectations.
- Net cash from operating activities increased by EUR 0.8 billion year-on-year. Lower net interest payments, which were essentially due to the fact that T-Mobile US has increasingly been financed internally since 2017, and that refinancing terms continue to be favorable, in particular had a positive effect on free cash flow. The positive business development in our United States operating segment was adversely affected by currency translation effects.
- The year-on-year increase of EUR 0.1 billion in cash capex (excluding spectrum investment) had a negative impact on free cash flow.

ROCE

%



ROCE

- Our key performance indicator ROCE (return on capital employed) decreased by 1.1 percentage points in the reporting period to 4.7 percent.
- This was attributable to the decrease in net operating profit after taxes (NOPAT), while the average amount of net operating assets (NOA) increased slightly over the year.
- NOPAT was impacted in 2018 primarily by negative special factors in connection with staff-related measures and impairment losses on goodwill, which even the significant improvement in adjusted EBITDA could not completely offset. In particular, positive special factors in the prior year had had an offsetting effect on NOPAT.
- NOA increased in 2018 as a result of growth in intangible assets and property, plant and equipment, as well as an increase in the present value of unrecognized rental and lease obligations, reflecting Deutsche Telekom's consistently high level of investment.

For further information, please refer to the section "Development of business in the Group," page 49 et seq.



For further information, please refer to the Media section on our website at www.telekom.com/en/media/media-information.

HIGHLIGHTS IN THE 2018 FINANCIAL YEAR

BOARD OF MANAGEMENT

Dr. Dirk Wössner was appointed as the new Board member responsible for Germany effective January 1, 2018. In addition, Adel Al-Saleh was appointed as the new Board member responsible for T-Systems effective January 1, 2018.

The former Board member responsible for Human Resources (CHRO), Dr. Christian P. Illek, became the new CFO as of January 1, 2019. He succeeds Thomas Dannenfeldt, who left the Company for personal reasons when his contract expired at the end of 2018. Birgit Bohle joined the Board of Management as of January 1, 2019 as the Board member responsible for Human Resources as successor to Dr. Illek.

Thorsten Langheim became a member of the Board of Management at Deutsche Telekom AG as of January 1, 2019, taking up the role of head of the newly created Board department responsible for USA and Group Development. The Supervisory Board intends the new Board department to better reflect the importance of U.S. business to the Group, in addition to placing a stronger emphasis on evolving the portfolio. Deutsche Telekom AG thus has had nine Board departments since the start of 2019.

CAPITAL MARKETS DAY 2018

In May 2018, we presented our new medium-term strategy and the financial outlook at our Capital Markets Day in Bonn. Our forecast for growth through to 2021 remains at the same high level we anticipated at our Capital Markets Day in 2015: Revenue is expected to increase by 1 to 2 percent annually, adjusted EBITDA by 2 to 4 percent, and free cash flow by around 10 percent. From 2019 onwards, we expect that all business units will contribute to earnings growth in the Group. The focus of our strategy is on convergent products and services for consumers and business customers. Our capital expenditure is to remain at a high level and will center on the ongoing build-out of broadband networks and upgrading to the LTE and 5G standards. The dividend for the financial years starting 2019 will reflect the development of adjusted earnings per share. We expect this figure to increase to around EUR 1.20 per share by 2021.

CORPORATE TRANSACTIONS

In March 2018, we exercised our right of first refusal as invited by the Greek privatization authority Hellenic Republic Asset Development Fund (HRADF) and acquired a 5 percent stake in our Greek subsidiary OTE. The transaction was completed in May 2018 through the acquisition of additional shares in the amount of EUR 0.3 billion. As a result, we hold around 45 percent in the company's shares.

In December 2017, T-Mobile Austria agreed to acquire Austria's leading cable operator, UPC Austria. The European Commission approved the deal on July 9, 2018 and the transaction was consummated on July 31, 2018. A purchase price of EUR 1.8 billion was paid in cash. The UPC Austria group has been fully included

in our consolidated financial statements since the acquisition date. In line with our strategy, this acquisition will allow us to offer convergent product bundles to our customers on the European market.

Together with their respective majority shareholders Deutsche Telekom AG and Softbank K.K., T-Mobile US and **Sprint Corp.** concluded a binding agreement in April 2018 to combine their companies. The larger T-Mobile US is expected to achieve cost and capital expenditure synergies with a net present value of around USD 43 billion (after integration costs). Around USD 15 billion has been budgeted for integration costs. The business combination is expected to make a positive contribution to adjusted earnings per share at the Deutsche Telekom Group after the first three years. The new company will have a customer base of around 127 million. Under the agreement, T-Mobile US will acquire all of the shares in Sprint. On completion of the transaction, Deutsche Telekom will hold around 42 percent of T-Mobile US' shares and Softbank around 27 percent, while the free float will account for about 31 percent. Due to the voting-rights agreement with Softbank, and to the fact that Deutsche Telekom has the right to appoint the majority of the members of the Board of Directors, T-Mobile US will continue to be included as a fully consolidated subsidiary in the consolidated financial statements. The agreement is subject to approval by the authorities as well as other closing conditions.

On November 27, 2018, the European Commission approved the acquisition of **Tele2 Netherlands** by T-Mobile Netherlands and the transaction was consummated on January 2, 2019. This transaction is part of our long-term strategy and will establish a stronger, more sustainable provider of convergent fixed-network and mobile services on the Dutch market. Tele2 Group receives a purchase price in the form of a 25 percent stake in T-Mobile Netherlands and a cash component of some EUR 190 million taking any retrospective adjustments to the purchase price into account. Tele2 Netherlands has been fully included in our consolidated financial statements since the acquisition date.

SETTLEMENT IN THE TOLL COLLECT ARBITRATION PROCEEDINGS

Together with Daimler Financial Services AG, we reached an agreement with the Federal Republic of Germany in May 2018 to end the toll collection arbitration proceedings. This agreement puts an end to a lengthy legal dispute regarding the implementation of heavy truck road tolls in Germany. The agreed settlement amount of around EUR 3.2 billion includes services previously provided to the Federal Republic of Germany. Daimler Financial Services AG and Deutsche Telekom have both agreed to make final payments of EUR 550 million each. The payments will be made in three tranches by 2020; the first tranche has already been paid.

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T-MOBILE US SHARE BUY-BACK PROGRAM

In April 2018, T-Mobile US' Board of Directors authorized an increase in the total share buy-back program to up to USD 9.0 billion, consisting of the USD 1.5 billion in repurchases already executed and for up to an additional USD 7.5 billion of T-Mobile US common stock until the end of 2020. This Board resolution applies in the event that the business combination of Sprint and T-Mobile US does not materialize. In addition, in the 2018 financial year we purchased shares in T-Mobile US on the capital market totaling USD 0.2 billion, bringing our stake to around 63 percent.

INCREASE IN EXTERNAL CAPITAL FUNDING FOR COMPANY PENSIONS

We place high importance on our company pension plans in the Group. [SDG 8](#) Going forward, pension payments are to be covered to a greater extent by our own assets. To achieve this, in March 2018 the 12 percent financial stake in the BT Group was transferred to the Group's own trust, Deutsche Telekom Trust e.V., roughly doubling the level of external capital funding. This capital may only be used for pension payments. BT continues to be an integral part of our strategic orientation.

INVESTMENTS IN NETWORKS [SDG 9](#)

5G network for Germany. At our Network Day in Berlin in October, we presented an eight-point plan for a fast, successful 5G rollout. By 2025, we plan to cover 99 percent of the population nationwide and 90 percent of the country with 5G. We intend to invest an additional EUR 20 billion in Germany in the four years through 2021. To ensure that business, industry, and the general public get the most powerful 5G network, we will also team up with partners. With over 500,000 kilometers of cable now laid, our fiber-optic network forms the basis for high-performance fixed and mobile infrastructure. It currently serves 26 million households with surfing speeds of up to 100 Mbit/s and more over the fixed network. Following the market launch of supervectoring in August 2018, maximum speeds of up to 250 Mbit/s became available to 6 million households. As of the end of 2018, some 14 million households were benefiting from such transmission rates. Our aim is to offer speeds of up to 250 Mbit/s to 28 million households in 2019.

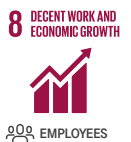
Fiber-optic rollout progresses apace. A host of major fiber-optic projects to bring light speeds to urban and rural areas got under way in 2018, for instance in the German rural districts of Vorpommern-Rügen and Burgenlandkreis, the city of Bautzen, the town of Lüneburg, and at the Port of Hamburg. A large-scale digitalization project for Stuttgart and five neighboring rural districts was also given the go-ahead, under which gigabit connections are to be rolled out to approximately 90 percent of the 1.38 million households in the region as well as to all of the around 140,000 business sites and facilities. The nationwide build-out of FTTH is gathering speed. We also started the fourth wave of our nationwide rollout of optical fiber to business parks. Almost 45,000 businesses located at 106 business parks in over 70 municipalities are already benefiting from bandwidths of up to 100 Gbit/s. The aim is to connect a total of 3,000 business

parks across Germany to the fiber-optic network by the end of 2022. In addition, we are already planning or preparing to implement further large-scale fiber-optic projects at our national companies in Europe, such as FTTH coverage of up to one million households and businesses in Greece and a comprehensive FTTH project in the Czech Republic.

1,300 new cell sites for added capacity and coverage. We installed 1,300 new cell sites in 2018, bringing the total number of sites in Germany to around 29,000. More than 2,000 new sites will be added over the next few years. Our high-speed LTE network covers 97.8 percent of the population. This percentage is set to increase to 98 percent by the end of 2019. The three big network tests – carried out by connect, Chip, and Computer Bild – confirm that we have the best mobile communications network in Germany. More than 80 percent of our cell sites are already connected with optical fiber. They are also equipped with Single RAN technology and thus ready for the fifth-generation mobile standard, 5G.

European Aviation Network (EAN) ready. At the start of 2018, together with Inmarsat and our technology partner Nokia, we set up the first trans-European integrated LTE network consisting of 300 base stations. The network offers seamless connectivity over land and sea: Airline passengers benefit from the high bandwidth with high-speed transmission rates that let them browse social media, share pictures, and even stream broadband content. Airlines using the service do not have to share the network capacities with LTE users on the ground.

German cloud data center continues to grow. The next phase of our expansion activities at the high-performance data center in Biere, near Magdeburg, went live in September 2018. Biere now has a capacity of 150 petabytes for processing and storing cloud data. Since the commissioning of this high-tech Fort Knox in 2014, global demand for cloud services has continued to increase substantially. In response, T-Systems has systematically developed into a multi-cloud provider that collaborates with leading international providers of cloud solutions. The Open Telekom Cloud, our public cloud offering, was the first cloud in Germany to receive the TCDP 1.0 certification promoted by the Federal Ministry for Economic Affairs and Energy. [SDG 16](#)



T-Mobile Polska signs wholesale FTTH agreement with Orange. Under an agreement signed in July 2018, T-Mobile Polska will gain access to Orange's fiber-optic infrastructure and will use it to provide services based on data transmissions in non-regulated areas. The contract will guarantee T-Mobile Polska access to 1.7 million households. Together with the partner's plans to invest in the deregulated area by the end of 2020 and in the fiber-optic network in regulated areas, this will enable T-Mobile Polska to potentially reach over 4 million households. T-Mobile Polska aims to provide initial individual customers, and small and medium-sized enterprises with the full range of fixed-network services based on fiber-optic infrastructure in the first quarter of 2019 at the latest. The agreement is to run for up to 20 years. In addition to the agreement with Orange, T-Mobile Polska signed another wholesale FTTH agreement with network operator Nexera, covering more than 450 thousand further households, which will be connected by the end of 2020.



Internet of Things gets off the ground. We are one of the leading providers in the large-scale technology roll-out of the Internet of Things (IoT) in Germany, Europe, and North America. The new NarrowBand-IoT (NB-IoT) network technology is now available in over 2,000 locations across Germany, and more than 300 businesses from various industries are already utilizing its potential. We also operate NB-IoT infrastructure in eight further European markets and in the United States, with nationwide rollout completed in the Netherlands, Austria, Slovakia, and the United States. Our NB-IoT networks are already up and running in several cities across Poland, the Czech Republic, Hungary, Croatia, and Greece.

First European NB-IoT roaming tests concluded. In June 2018 we announced that, together with the Vodafone Group, we had successfully concluded the first international roaming tests in Europe using NB-IoT technology. This service will deliver seamless coverage and continuity of service for millions of connections over low-power wide-area networks. The success of this test marks an important milestone in the development of a stable roaming environment for mobile IoT networks.



INNOVATION

5G under live conditions. [SDG 9](#) The first 5G antennas in Europe to fully support the fifth-generation communication standard have been transmitting data under real-world conditions via our network in Berlin since May 2018 and via our network in Warsaw since December 2018. In the T-Mobile Austria network in Innsbruck, a preliminary version of the final 5G standard is reaching record speeds of 2 Gbit/s with latency of just three milliseconds. The first live 5G demonstrations were also conducted in Greece and Macedonia. In a world first, the Hamburg Port Authority, Deutsche Telekom, and Nokia are testing new aspects of the 5G standard using various applications in real-world industrial conditions at the Port of Hamburg in Germany. Since January 2018, the testing ground covering around 8,000 hectares has been used to review this innovative technology and its suitability for rollout in an industrial environment.

For further information on our innovations, please refer to the section "Innovation and product development," page 89 et seq.

NOW. NEW. NEXT. This was the motto of our booth at the Mobile World Congress in Barcelona in February 2018, where we showcased innovative solutions and visions for the smart society of today and tomorrow based on the network of the future. The focus was on the new 5G communication standard, which will facilitate the interconnection of billions of devices, and the Internet of Things. In an urban setting, visitors had the opportunity to experience and interact with digital innovations across a range of themed zones, including smart city and Industry 4.0, as well as security topics and future technologies like drones, smart textiles, and augmented reality sports.

Digitalization reaches all areas of healthcare. [SDG 3](#) From hospital beds that transmit their whereabouts automatically to ultrasound scanners that request maintenance work, telemedical patient care, and mobile apps – the digital revolution is radically changing the face of healthcare and poses a complex challenge for everyone affected. Telekom Healthcare Solutions delivers IT solutions designed to help overcome these challenges. conhIT, the world's leading trade fair for healthcare IT, took place in Berlin in April 2018. Under the motto "Set for a digital future" (Digital auf Zukunft programmiert), T-Systems showcased its latest innovations, which include a tracking system to localize medical equipment and a secure platform for digital collaboration.

"Shape the digital now." We presented digital solution modules for industry at Hannover Messe in April 2018. The focus was on practical and concrete implementation options for production planning, manufacturing, and logistics. Visitors were able to see products and services relating to cloud computing, the Internet of Things, connectivity, and security, and experience new trends such as digital twins, blockchains, and artificial intelligence. We also showcased the new PLM Cloud service, a cloud-based product lifecycle management (PLM) solution that was launched at the start of the year. Companies can use the PLM Cloud to transform what is probably their most important process, i.e., the development of new products from initial design through to test simulation, bring that process into the digital age, and thus accelerate their approach to innovation. [SDG 9](#)

"Magenta connects." At our booth at IFA 2018 in Berlin, we brought our entire world of Magenta products to life for trade fair visitors. The main focus was on Magenta Entertainment, "In the best network," Magenta Connected Life, MagentaEINS, and MagentaSERVICE. Selected highlights: An interactive multi-player drone race on a 5G LED big screen demonstrated the capabilities of the network of the future. The booth also featured an e-sport arena where experts from SK Gaming invited visitors to try out e-sport games including League of Legends and FIFA, as well as mobile gaming. In the MagentaSERVICE zone, the new SprachID service took center stage. In the future, customers will not need to remember account numbers and passwords – when they phone up they will be recognized by their voice alone. [SDG 9](#)

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PARTNERSHIPS

Partnerships are key to the success of our Group. We again entered into and expanded a large number of partnerships in the reporting year. We would like to present some of them in detail:

Accession to the Industrial Internet Consortium (IIC). We are now able to contribute our strengths in the field of IoT connectivity, in particular with NB-IoT and 5G, to the IIC to strengthen Europe's standing in the global consortium. The U.S. organization is spearheading the digital transformation of economy and society on an international scale by driving the development, rollout, and expansion of IoT and Industry 4.0 solutions. Our goal is to develop common approaches for the interoperability of systems in dialog with IIC members and their partners. Additionally, the aim is to outline needs and framework conditions in the context of standardization along with security requirements for IoT services and hardware.

Open Telekom Cloud wins European tenders. The European nuclear research center CERN has enlisted T-Systems to operate the proven solution developed in 2017 as a pilot system for the Helix Nebula European research cloud. To this end, T-Systems will provide a high-performance solution and a multi-cloud solution, both based on the Open Telekom Cloud. Research institutions throughout Europe can use these solutions and combine the Open Telekom Cloud with their own IT resources and solutions to create a hybrid model. T-Systems has also designed a cloud platform for the European Space Agency ESA. The Copernicus Data and Information Access Services (DIAS) platform was launched in the first quarter of 2018 and makes earth observation data collected by ESA satellites available to the public via the cloud at no cost for direct processing.

Public cloud – strategic partnerships. T-Systems and Microsoft are entering into a strategic partnership that will focus on promoting public cloud services in four key areas: SAP applications, managed services on Microsoft Azure and Microsoft Office 365, digital solutions using artificial intelligence and mixed reality, and IoT. SAP certified the Open Telekom Cloud in time for Hannover Messe 2018, thus guaranteeing the performance of SAP HANA in the public cloud and enabling the solution to be integrated seamlessly into SAP support processes. The additional service in the public cloud means companies can complement their IT landscape with SAP applications flexibly and easily by self-service and receive appropriate support where needed.

Global initiative for sustainable cities. [SDG 11](#) In September 2018, we announced a far-reaching collaboration with United Smart Cities (USC) to help cities become smarter and more sustainable. The United Smart Cities program is a global initiative established and coordinated by the United Nations Economic Commission for Europe (UNECE) in cooperation with the Organization for International Economic Relations (OiER). As part of the partnership, we have also taken on a board position in USC's Global Industry Advisory Board (GIAB). The GIAB consists of 12 members who provide strategic counsel to

all UN organizations on smart city issues across the globe. In addition, in November 2018 we presented our newest solutions for the smart city ecosystem at the Smart City Expo World Congress in Barcelona. We also invited representatives from five partner cities with whom we have already successfully rolled out various smart city solutions to appear at our booth. Trenčín in Slovakia, Athens in Greece, Kazimierz in Poland, Gijón in Spain, and Krk in Croatia.

5G for connected mobility. In just a few years, cars, traffic signals, and street lights will all share information via the 5G communication standard. And these are just three examples for traffic in the future. The systems involved will have to be secure. Together with DEKRA, we are working to equip the Lausitzring test and race track with 5G technology to create an intelligent mobility test site. Multiple scenarios will be played out at the site: Connected cars and autonomous vehicles will communicate in real time with each other, with road infrastructure, and with cyclists and pedestrians. This creates the perfect environment for car manufacturers, suppliers, and telecommunications component manufacturers to test intelligent mobility in a real-world environment.

Digital Cities and Regions initiative. In July 2018, we joined forces with the German Association of Towns and Municipalities (DStGB) to launch a new initiative called the Executive Program Digital Cities and Regions. The partners develop intelligent, tailor-made solutions with the aim of promoting digitalization in cities and communities and preparing the regions for the digital future. The defined success factors are common platforms, a good digital infrastructure, and courage for cultural change. As a digital partner, we provide the necessary expertise and help the towns and municipalities to launch initial projects. 23 cities from across Germany with very different expectations of the program have now joined the initiative, which will continue in 2019 on the back of the successful launch and strong demand.

Strategic partnership for better road safety. In August 2018, we launched a strategic partnership with the automobile association ADAC, with plans to offer products and attractive benefits to our customers and ADAC members. To this end, we intend to leverage the opportunities of traffic digitalization. For example, we worked together with ADAC to further enhance our CarConnect solution which now lets drivers report breakdowns to ADAC via just a few clicks in the CarConnect app.

Cybersecurity for banks. [SDG 16](#) The number of cyberattacks on banks worldwide is on the rise. Industry regulators are continually tightening up IT security requirements for banks. That is why Fiducia & GAD IT AG (IT service provider for all 900 Volksbank and Raiffeisenbank branches in Germany) and the German DZ Bank group have joined forces with Telekom Security to improve cybersecurity for the credit unions over the long term. In the first phase, the partners established a Security Operation Center (SOC) to handle specific IT security incidents for DZ Bank.



CORPORATE CUSTOMER DEALS

T-Systems wins major contract with the Sparda group. The group of Sparda-Banks has signed a seven-year outsourcing contract with T-Systems with a volume in the mid-three-digit million euro range. We will take over the entire IT infrastructure of Sparda-Datenverarbeitung eG, the Sparda group's central IT service provider, and migrate all mainframe computers and server landscapes to high-security data centers operated by T-Systems.

Brandenburg's government administration to get high-speed network. Brandenburg has placed a major telecommunications order in the high two-digit million euro range with T-Systems. We will provide the infrastructure and components for telephony and the wide-area network of the state's administration. In future, sites will get connection speeds of up to 10 Gbit/s using up to ten times more bandwidth than before. Brandenburg intends to have the network certified by the German Federal Office for Information Security (BSI).

Campus network for OSRAM. Together with Ericsson we are building a customized campus solution for high-tech company OSRAM. With the industry focusing increasingly on the digitalization of processes, the key to this transformation is wireless connectivity across production sites that is adapted to each specific use case. Our campus solution offers the companies their own exclusive network linked to the public network. The technology for the campus networks is being provided by our partner Ericsson. We are also working with OSRAM to develop prototypes for a mobile robot. In the future, driverless transport vehicles will navigate the works site autonomously using the campus network.

NEW PRODUCTS AND RATE PLANS

Of course, we again launched new products, services, and rate plans on the market in the reporting year, some of which are presented below:

MagentaMobil XL: unlimited data. In March 2018, we presented our new mobile rate plan for the German market: MagentaMobil XL includes flat rates and unlimited high-speed data in Germany's best mobile network (as judged by computer magazine Chip 1/2019). Quality-conscious customers with modest data needs can choose the new entry-level rate plan MagentaMobil XS. We also updated our business customer portfolio with the new Business Mobil XL Plus rate plan featuring flat rates and unlimited high-speed data.


Full-service Internet of Things bundles. The Internet of Things is revolutionizing our world, improving corporate processes, and opening up new business models. This transformation calls for products that are not only quick, simple, and safe to use, but also enhance transparency. We offer these kinds of products for a range of usages in virtually all industries. One key tenet for us is our end-to-end approach: connectivity, management of connectivity and hardware, solutions and services – all from a single source. Our product bundles offer solutions for tracking, monitoring and maintenance, identity and access control, connected mobility, and analytics. In May 2018, Hrvatski Telekom became the first provider in Croatia to make NB-IoT services available commercially. A new IoT solution for consumers, Combi Protect, lets users keep track of pets, purses, luggage, and more on their smartphone using a GPS tracker and app. Customers can choose to track movements in real time and set digital boundaries that trigger an alarm on the smartphone if crossed.

Team of Experts. In August 2018, T-Mobile US introduced **Un-carrier Next**, a new initiative that changes the structure of their customer service department and solves several significant pain points for customers: Postpaid customers will get directly through to a human when they call customer support, and that human will be one member of a team of experts devoted to that customer and other customers in their geographic region.

In September 2018, T-Mobile US announced that **MetroPCS is becoming Metro™ by T-Mobile** (Metro) and Metro introduced new unlimited rate plans with tiers that include added benefits. Metro will offer Amazon Prime, expanded cloud storage, and mobile backup through Google One, as well as the latest smartphones.

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AWARDS

We once again won a number of awards in the reporting year, the largest of which can be seen in the following graphic. 



For information on further awards received for our HR activities, please refer to the section "Employees," page 97 et seq.

Major awards in 2018



- New Work Award 2018:** T-Systems is awarded second place with its Magenta Lighthouse project.
- Brand Finance Global 500:** Deutsche Telekom continues to be the most valuable telecommunications brand in Europe.
- AV Test:** Smart home platform Qivicon singled out with the best rating for "excellent protection."
- eLearning Award 2018:** Deutsche Telekom wins with its Digital Learning Booster project.
- Women on Board Award 2018:** FidAR, an association to promote the advancement of women on supervisory boards, honors Deutsche Telekom with an award for its implementation of equal gender participation.
- German Investor Relations Prize 2018:** Deutsche Telekom once again wins the award for investor relations excellence in a DAX 30 ranking.
- German Innovation Award:** Deutsche Telekom and Inmarsat win the innovation award for their European Aviation Network.
- connect hotline test:** Trade journal connect rates service at Deutsche Telekom as "very good" and best among German broadband providers (connect, issue 9/2018).
- SAP Global Platinum Reseller Partner:** T-Systems added as an exclusive partner to resellers of solutions from the global market leader in corporate software.
- Best online shop of the year:** Telekom Magenta SmartHome online shop wins in the "Smart home applications" category.
- Best network 2019:** Winner of Computer-Bild magazine's mobile network test with an overall score of 1.8 (Computer-Bild, issue 25/2018).
- Mobile Excellence Awards 2018:** Cosmote wins three gold awards for innovative applications designed to improve customer service quality.
- Best Corporate Governance company:** Corporate governance at Crnogorski Telekom rated Montenegro's best.
- Tested customer satisfaction:** Deutsche Telekom is again awarded the TÜV quality seal.
- World's most ethical companies 2018:** Deutsche Telekom is one of the most ethical companies worldwide.
- KONSUMENT test winner:** T-Mobile Austria takes the top spot in the mobile communications consultation test (issue 3/2018).
- EMEA/MEE Partner Excellence Award 2018:** T-Systems is the SAP service partner of the year.
- Bloomberg Gender Equality Index:** T-Share listing honors Deutsche Telekom's achievements in terms of equal rights.
- Greece's fastest mobile network 2018:** Cosmote wins the Ookla Speedtest Award for the fastest mobile internet network in Greece.
- Extel Survey 2018:** Investor Relations at Deutsche Telekom are rated the best in Europe and its IR organization the best in the European telecoms sector.
- connect readers' choice 2018:** Deutsche Telekom wins in eight categories and receives awards for its subsidiaries congstar and T-Mobile Austria.
- Dow Jones Sustainability Index:** Deutsche Telekom's commitment to CR, employee, and social issues honored with inclusion in the DJSI.
- Best in test:** P3 communications distinguishes our networks in Croatia, the Czech Republic, Greece, Hungary, Macedonia, the Netherlands, and Slovakia with the "best in test" accolade.
- Investors' Darling 2018:** Double victory for Deutsche Telekom in the categories "Corporate social responsibility" and "Strategy reporting" (manager magazine, issue 10/2018).
- German Mobility Award 2018:** The Connected Drones project run by Deutsche Telekom and Deutsche Flugsicherung is singled out as a flagship project in the field of sustainable mobility.
- Carbon Disclosure Project:** Deutsche Telekom is included in the CDP A List, a climate protection ranking which serves as a basis for the STOXX Global Climate Change Leaders index.
- TÜVIt seal** Testing institute TÜV Informations-technik certifies the responsible treatment of customer data at Deutsche Telekom for the third time.
- CHIP network test 2018:** Deutsche Telekom is the overall winner of the mobile network test for the ninth time in a row (CHIP, issue 1/2019).
- connect mobile network test 2019:** Test winners Deutsche Telekom and T-Mobile Austria score high, including with best results in the categories "Mobile internet" and "Voice and data" (connect, issue 1/2019).

GROUP ORGANIZATION

BUSINESS ACTIVITIES AND ORGANIZATION

Business activities. With 178 million mobile customers, 28 million fixed-network lines, and 20 million broadband customers, we are one of the leading integrated telecommunications companies worldwide. We offer our consumers fixed-network/broadband, mobile, internet, and internet-based TV products and services, as well as ICT solutions for our business and corporate customers. We have an international focus and are represented in more than 50 countries. With a staff of some 215,675 employees (as of December 31, 2018) throughout the world, we generated revenue of EUR 75.7 billion in the 2018 financial year, around 68 percent of it outside Germany.

Fixed-network business includes all voice and data communications activities based on fixed-network and broadband technology. This includes the sale of terminal equipment and other hardware, as well as the sale of services to resellers. Our mobile communications business offers mobile voice and data services to consumers and business customers; in addition, we sell mobile devices and other hardware. We also sell mobile services to resellers and to companies that buy network services and market them to third parties (mobile virtual network operators, or MVNOs). Drawing on a global infrastructure of data centers and networks, our corporate customer arm, T-Systems, operates information and communication technology (ICT) systems for multinational corporations and public-sector institutions.

We believe that economic, social, and ecological aspects can be reconciled; sustainability is the guiding principle behind all our actions. A range of sector-specific and general conditions are crucial to the success of business activities. These include first-rate quality at reasonable costs – in data privacy and security, in customer service, in network build-out, and in materials procurement – as well as qualified staff and good working conditions within our own Group, but also at our suppliers. It is also important to consider the potential consequences of climate change for our business activities: for example, to construct our network infrastructure in such a way that it is protected from severe weather conditions, changes in temperatures, and higher wind speeds. We also help our customers to reduce their carbon footprint with innovative products and services. Furthermore, we want to reduce the Group's CO₂ emissions despite rapid growth in data traffic and the network build-out that this requires. Also beyond our core business, we do everything we can to ensure that our actions are socially acceptable. For us, this means conducting ourselves in a way that is ethical and compliant with the law and informing and involving our stakeholders in a transparent way. [SDG 12](#)

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



FINANCE

Our responsible corporate governance and business success are based on our shared corporate values and our Guiding Principles, which are as follows:

- Customer delight and simplicity drive our action
- Respect and integrity guide our behavior
- Team together – Team apart
- Best place to perform and grow
- I am T – count on me

We want to be a sustainably growing company that delights its customers, creates value for its investors, and in which employees enjoy their work.

Organization. Our financial reporting conforms with our Group strategy and is based on the following organizational structure.

Organizational structure



Our Group is divided into five operating segments plus the Group Headquarters & Group Services segment, each of which we describe in detail below.

Our **Germany** operating segment comprises all fixed-network and mobile activities for consumers and business customers in Germany. It also focuses on the wholesale business to provide telecommunications services for carriers and our Group's other operating segments. Separate sales entities for consumers and business customers allow the operating segment to take a customer-centric sales approach. The bundling of customer service activities places a further focus on customer satisfaction and quality assurance. Build-out of the mobile and fixed networks is managed by the Technology business unit in the Germany operating segment. As a pioneer of digitalization, the Germany operating segment offers its customers an individual service and product portfolio that is innovative while at the same time secure and simple.

Our **United States** operating segment combines all mobile activities in the U.S. market. T-Mobile US is the third largest provider in the United States and its mobile network offers the highest transmission speeds as well as high network coverage. T-Mobile's success on the U.S. mobile market has been built on the back of the various Un-carrier initiatives launched in the last few years. T-Mobile US expects the acquisition of online TV provider Layer3 TV completed on January 22, 2018 to further strengthen its TV and video portfolio. Layer3 TV has been included in Deutsche Telekom's consolidated financial statements as a fully consolidated subsidiary since the acquisition date. On April 29, 2018, T-Mobile announced that it had entered into a Business Combination Agreement with Sprint Corp. As a result of the merger, T-Mobile is expected to be able to rapidly launch a nationwide 5G network, accelerate innovation, and increase competition in the U.S. wireless, video, and broadband industries.

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Our **Europe** operating segment comprises all fixed-network and mobile operations of the national companies in Greece, Romania, Hungary, Poland, the Czech Republic, Croatia, Slovakia, Austria, Albania, Macedonia, and Montenegro. The acquisition of cable network operator UPC Austria on July 31, 2018 has helped us to transform our subsidiary in Austria into an integrated provider. UPC Austria has been included in Deutsche Telekom's consolidated financial statements as a fully consolidated subsidiary since the acquisition date. In addition to consumer business, most of the national companies also offer ICT solutions for business customers. As part of our international wholesale business, Deutsche Telekom Global Carrier (TGC) sells wholesale telecommunications services to our operating segments as well as to third parties.

As a leading ICT service provider, our **Systems Solutions** operating segment offers business customers a portfolio of integrated products and solutions. With offerings for fixed and mobile communications, IT infrastructure, digitalization, and security, in addition to global partnerships, we offer our customers help and guidance to implement digital business models. Our Systems Solutions segment is realigning itself towards a portfolio-based structure under the transformation program launched at the start of 2018. Alongside an integrated and customer-centric sales unit, operations are split over ten portfolio units with full profit and loss accountability (TC Services, SAP, Digital Solutions, Public Cloud, Security, Internet of Things, Classified ICT, Road Charging, Managed Infrastructure Services and Private Cloud, and Dedicated SI Solutions), plus the emerging business unit, Health. A new organizational structure took effect on January 1, 2019 on the basis of these business areas. A comprehensive cost-saving program has also been launched.

Our **Group Development** operating segment comprises the entities T-Mobile Netherlands and Deutsche Funkturm (DFMG) and our equity investment in Ströer SE & Co. KGaA. We plan to actively manage these entities and investments and increase their value, with the aim of giving them the level of entrepreneurial freedom they need and thus promoting their strategic further development. The management teams maintain an intensive dialog with the segment management and the relevant supervisory and advisory boards. Deutsche Telekom Capital Partners (DTCP) and the Group functions of Mergers & Acquisitions and Strategic Portfolio Management have also been assigned to Group Development. Our financial stake in BT was transferred to the Group's own trust company, Deutsche Telekom Trust e.V., in March 2018 as capital funding to cover Deutsche Telekom's future pension obligations.

Group Headquarters & Group Services comprises all Group units that cannot be allocated directly to one of the operating segments. The segment also reports on our new Technology and Innovation Board department. As the organization that sets the direction and provides momentum, it defines strategic aims for the Group, ensures they are met, and becomes directly involved in selected Group projects. Group Services provides services to the entire Group; in addition to typical services such as financial accounting, human resources services, and operational procurement, Group Services also includes agency services, which are provided by our personnel service provider, Vivento. On the one hand, it is in charge of securing external employment opportunities for employees, mainly civil servants, predominantly in the public sector. On the other, Vivento also seeks to strategically place them internally, with the aim of retaining professional expertise within the Group, so as to reduce the use of external staff. We integrated Vivento Customer Services GmbH, a provider of call center services, into our Germany operating segment as of January 1, 2018; previously it was part of our Group Headquarters & Group Services segment. Further units are Group Supply Services (GSUS) for our real estate management and our strategic procurement, and MobilitySolutions, which is a full-service provider for fleet management and mobility services.

Our Technology and Innovation Board department unites the cross-segment network, innovation, and IT activities of our Germany, Europe and Systems Solutions operating segments. These include Deutsche Telekom IT, which focuses on the Group's internal national IT projects, and our central innovation unit, Product Innovation and Customer Experience (PIC), which works closely with our operating segments to develop new business areas and create products by focusing on the product and customer experience. Additional units are Network Infrastructure (NWI), Strategy & Technology Innovation (S&TI), and Pan-Net. NWI manages and operates a global network to offer voice and data communication services to wholesale customers. S&TI ensures efficient and customized research and provision of technologies, platforms, and services for mobile and fixed-network communications. Pan-Net is responsible for the shared pan-European network and for developing and providing services for our European national companies. The new Innovation Hub (IHUB), established as of October 1, 2018, pools the expertise required for future innovation projects within the Technology and Innovation Board department to ensure flexible innovation development.

MANAGEMENT AND SUPERVISION

As of December 31, 2018, Board of Management responsibilities were distributed across eight Board departments. Five of these are the central management areas:

- Chairman of the Board of Management

and the Board departments

- Finance
- Human Resources
- Data Privacy, Legal Affairs and Compliance
- Technology and Innovation

In addition, there are three segment-based Board departments:

- Germany
- Europe
- T-Systems

Changes in the composition of the Board of Management.

Effective January 1, 2018, the Supervisory Board of Deutsche Telekom AG appointed Dr. Dirk Wössner to the Board of Management as the new Board member responsible for Germany and Adel Al-Saleh as the new Board member responsible for T-Systems. At its meeting on February 21, 2018, the Supervisory Board of Deutsche Telekom AG resolved to extend Timotheus Höttges' contract as Chairman of our Board of Management by five years. Timotheus Höttges was reappointed as Chairman of the Board of Management effective January 1, 2019. Also at its meeting on February 21, 2018, the Supervisory Board of Deutsche Telekom AG resolved to appoint Dr. Christian P. Illek as Chief Financial Officer (CFO) effective January 1, 2019. The former CFO, Thomas Dannenfeldt, left Deutsche Telekom AG for personal reasons when his contract expired at the end of 2018.

At its meeting on July 13, 2018, the Supervisory Board of Deutsche Telekom AG resolved to appoint Birgit Bohle as the new Board of Management member responsible for Human Resources and as Labor Director effective January 1, 2019. Birgit Bohle succeeded Dr. Christian P. Illek in this position.

At its meeting on September 4, 2018, the Supervisory Board of Deutsche Telekom AG resolved to appoint Thorsten Langheim as the Board of Management member responsible for USA and Group Development, a newly created Board of Management department, effective January 1, 2019. Deutsche Telekom AG thus has had nine Board departments since the start of 2019.

Shareholders' representatives. Dr. Ulrich Schröder resigned from his position as a member of the Supervisory Board of Deutsche Telekom AG effective February 6, 2018. Dr. Günther Bräunig was initially court-appointed to the Supervisory Board of Deutsche Telekom AG effective March 21, 2018 and subsequently elected to this position by resolution of the shareholders' meeting on May 17, 2018. Margret Suckale was court-appointed to the Supervisory Board of Deutsche Telekom AG effective

September 28, 2017 and subsequently elected to this position by resolution of the shareholders' meeting on May 17, 2018.

Sari Baldauf's term of office expired at the end of the shareholders' meeting of May 17, 2018. Harald Krüger was elected to the Supervisory Board of Deutsche Telekom AG by the shareholders' meeting of May 17, 2018.


Prof. Ulrich Lehner was elected for a further term of office on the Supervisory Board of Deutsche Telekom AG by the shareholders' meeting of May 17, 2018. The members of the Supervisory Board once again elected Prof. Lehner to the position of Chairman.

Johannes Geismann resigned from his position on the Supervisory Board of Deutsche Telekom AG as of the end of the shareholders' meeting of May 17, 2018. Dr. Rolf Böisinger was court-appointed to the Supervisory Board of Deutsche Telekom AG effective June 1, 2018.

Employees' representatives. Hans-Jürgen Kallmeier resigned from his position as a member of the Supervisory Board of Deutsche Telekom AG effective midnight, December 31, 2017. Odysseus D. Chatzidis was court-appointed to the Supervisory Board of Deutsche Telekom AG effective January 3, 2018.

Monika Brandl resigned from her position on the Supervisory Board of Deutsche Telekom AG effective midnight June 30, 2018. Nicole Seelemann-Wandtke was court-appointed to the Supervisory Board of Deutsche Telekom AG effective July 5, 2018.

The delegates' assembly on November 20, 2018 re-elected the employees' representatives Josef Bednarski, Odysseus D. Chatzidis, Nicole Koch, Petra Steffi Kreusel, Lothar Schröder, Nicole Seelemann-Wandtke, Sibylle Spoo, and Karin Topel to the Supervisory Board of Deutsche Telekom AG until the end of the 2023 shareholders' meeting and elected Constantin Greve and Frank Sauerland for the first time as Supervisory Board members for the same period. Klaus-Dieter Hanas and Michael Sommer did not stand for re-election and left the Supervisory Board of Deutsche Telekom AG on November 20, 2018.

The Supervisory Board of Deutsche Telekom AG advises the Board of Management and oversees its management of business. It is composed of 20 members: 10 represent the shareholders and 10 the employees. 

The members of the Board of Management are appointed and discharged in accordance with § 84 and § 85 of the German Stock Corporation Act (Aktengesetz – AktG) and § 31 of the German Codetermination Act (Mitbestimmungsgesetz – MitbestG).

Amendments to the Articles of Incorporation are made pursuant to § 179 and § 133 AktG and § 18 and § 21 of the Articles of Incorporation. According to § 21 of the Articles of Incorporation, the Supervisory Board is authorized, without a resolution by the



For details on the activities of the Supervisory Board in the reporting year, please refer to page 7 et seq.

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shareholders' meeting, to adjust the Articles of Incorporation to comply with new legal provisions that become binding for the Company and to amend the wording of the Articles of Incorporation.

Composition of the Board of Management

Members of the Board of Management	Department
Timotheus Höttinges	Chairman of the Board of Management (CEO)
Adel Al-Saleh	T-Systems
Dr. Dirk Wössner	Germany
Thomas Dannenfeldt (until December 31, 2018) Dr. Christian P. Illek (since January 1, 2019)	Finance (CFO)
Srini Gopalan	Europe
Dr. Christian P. Illek (until December 31, 2018) Birgit Bohle (since January 1, 2019)	Human Resources
Dr. Thomas Kremer	Data Privacy, Legal Affairs and Compliance
Claudia Nemat	Technology and Innovation
Thorsten Langheim	USA and Group Development (since January 1, 2019)

The compensation system for our Board of Management is oriented towards the long-term performance of our Group. Since 2013, the compensation for our Supervisory Board has no longer included any long-term remuneration components. The recommendations of the German Corporate Governance Code are complied with.

GROUP STRATEGY

- Deutsche Telekom expands position as leading telecommunications provider in Europe
- Group strategy successfully implemented again in 2018

**OUR CORPORATE STRATEGY:
LEADING EUROPEAN TELCO**

Since 2014, we have been aligning all of our corporate activities with our Leading European Telco strategy – with the aim of becoming Europe's leading telecommunications provider.

This strategy has proved very successful: In terms of market capitalization, we are Europe's highest-value telecommunications company (as of December 31, 2018). In the reporting year, we increased revenue, adjusted EBITDA, and free cash flow once again. At the same time, we see our Group as facing new challenges:

- The parallel build-out of broadband and mobile infrastructure (optical fiber and 5G) calls for high investments and innovative approaches to implementation. This situation is intensified by sustained public and political pressure on our build-out strategy, predominantly in Germany.

- Innovative technologies like artificial intelligence are increasingly becoming part of everyday life. Voice-controlled assistants and chatbots, to name just a couple of examples, are permanently changing the face of the customer experience, our working environment, and our responsibility in the digital society.

- Businesses need simple, end-to-end solutions for connecting their production operations and managing ever increasing data streams. Providers like Google and Microsoft are also entering the global connectivity field.

- On top of this, our direct competitors in the telecommunications industry are digitalizing more and more elements of their core business, improving efficiency, and enhancing the customer experience.

We are tackling these challenges head on. We continue to systematically implement our **Leading European Telco** strategy. As the graphic below shows, our claim to leadership ranges over three dimensions: customer experience, technology, and business customer productivity. From this we derive three specific action areas with which we are creating the foundation for future organic growth. Because only if we grow can we sustainably secure our earnings performance and continue to meet the demands of our investors. This growth target is supported by two areas of operation which provide the framework for our internal activities.

Leading European Telco corporate strategy



For a description of the compensation systems for the Board of Management and the Supervisory Board, please refer to the section "Other disclosures" in the combined management report, page 129 et seq.

STRATEGIC AREAS OF OPERATION

One connectivity & perfect service

We want to offer our customers a seamless and technology-neutral telecommunications experience. Hence, we market fixed-network and mobile communications in one **convergent product** (fixed-mobile convergence, FMC). By the end of the reporting year, some 4.3 million customers in Germany had opted for MagentaEINS; that is more than 0.6 million more than in the prior year. The integrated national companies of our Europe operating segment won some 1.1 million new customers for MagentaOne and similar FMC offerings in 2018. Because we want to continue on this path of growth, we work continuously to improve and expand our convergent offer.



Our offer also includes attractive **TV content** across all screens and on any device. In 2018, we realigned our TV service in Germany under the MagentaTV brand, overhauling the user interface and adding further content. We aggregate linear television with extensive features, access to content from the biggest video-on-demand providers (Sky, Netflix, Maxdome, and Amazon Prime Video), exclusive TV series, and a wide range of sports content on a single platform. For the first time ever, customers can now access our TV content irrespective of their internet provider. The success of this product bears out our strategy: In the reporting year we won 0.2 million new TV customers in Germany. In the same period, the number of TV customers at our national companies in Europe grew in organic terms by 0.1 million. By standardizing our technical platforms and expanding our services to selected markets, we have consolidated our leading position.

As a premium provider, we set ourselves apart from our competitors with perfect **customer service**: In the reporting year, we presented several service improvement initiatives in Germany, including improved self-service options, callback services, a service for optimizing home Wi-Fi, and installation packages for the home network. Our top rating in the connect hotline test (number 1 spot among German broadband providers in 2018) shows that we are on the right track. We will continue our efforts in 2019 to offer customers the best service, for example by noticeably further improving our first-call resolution rate for customer queries. In the United States, T-Mobile US leads the competition in numerous service quality surveys. This year, we introduced the Team of Experts initiative in the United States with the aim of giving customers even more personal service and systematically removing frustration factors in customer service. This is one of the reasons why we won 4.9 million new mobile customers in the United States in 2018. At our national companies in Europe, we are currently focusing on increasing the level of digitalization in customer interaction; for example, using our specially developed service app. Following successful international rollout, this app aims to improve both the customer experience (e.g., with self-administration of contracts) and the monetization of our offerings (e.g., with customer-specific approaches).

We measure **customer satisfaction** using the globally recognized TRI*M method. Based on this performance indicator, we improve our customer contact processes, and our products and services. At the same time, we determine the loyalty of our customers towards the Company. The results are presented as a performance indicator, the TRI*M index, which ranges between minus 66 and plus 134 points. At the end of the reporting year, the indicator came in at 67.7 points versus an adjusted value of 67.2 points at the start of the year (measured on a comparable basis). Our goal for the coming years is to achieve a steady overall improvement in customer satisfaction.

Integrated gigabit networks

Convergent products require **integrated networks**. [SDG 9](#) That is why we are systematically building out and interlinking our fixed and mobile networks, so that we can offer our customers the fastest possible connection at top quality, anytime, anyplace. As part of this, we are also striking out in new directions, for example, with innovative technologies like fixed-network substitution using mobile technology to offer speeds of over 1 Gbit/s, or the use of artificial intelligence to ensure infrastructure is built out in line with demand, as well as exploring new partnerships and joint ventures. Integrated management also improves the capacity utilization of our infrastructure and increases efficiency in operations and maintenance.

Fiber optic-based **fixed networks** are the basis for an integrated network experience. We already operate the largest fiber-optic network in Germany with around 500,000 kilometers of fiber-optic cable. In 2018, we added some 60,000 kilometers. We are currently investing over EUR 5 billion annually in building out and operating networks across Germany, with over EUR 4 billion of this attributable to the Germany operating segment. That's more than any of our competitors are investing. We continued to build out our network in the reporting year by deploying vectoring. At present, we can offer high-speed internet to some 28 million households using this technology – around 14 million of these are already benefiting from speeds of up to 250 Mbit/s. At the same time, we are resolutely pressing ahead with the transition to fiber-optic technology: By 2022, for example, we plan to supply around 3,000 business parks with fiber to the office and thus offer gigabit connections to around 80 percent of companies in business parks across Germany. [SDG 8](#) In addition, existing customers are gradually being migrated to IP-based solutions and in consultation with the customers themselves. The migration of the German mass market will be completed in 2019 as planned. We have already completed the migration to IP lines in five national companies (Hungary, Croatia, Slovakia, Macedonia, and Montenegro) and will continue to move forward with our migration efforts in Greece on a step-by-step basis.

In **mobile communications**, we set ourselves apart from our competitors with the outstanding quality of our network. We have regularly come out on top in independent network tests. In 2018, we won the three big network tests – by connect, Chip, and Computer Bild – in Germany. Independent certification organization TÜV rated our mobile network as offering the best “quality to the customer.” In our Europe operating segment, six national companies were rated as “best in test overall” by the P3 communications network experts, as was T-Mobile Netherlands. Furthermore, T-Mobile US was once again the clear winner in the OpenSignal tests in August 2018. We intend to remain a quality leader and hence are further building out our LTE networks: In Germany, we plan to cover approximately 99 percent of the population with LTE by the end of 2020; in our European national companies, coverage is to reach around 98 percent on average.



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With the fifth-generation mobile communications standard (5G) [SDG 9](#), we will create a highly reliable mobile network with extremely low latency and high data throughput. To this end, network functions will be decoupled from the access medium (e.g., optical fiber, copper, or air). By distributing computing power in the network (mobile edge computing) and creating dedicated network layers for individual applications (network slicing), 5G creates the basis for future technologies such as virtual reality, autonomous driving, and the Internet of Things. Our goal is to work with policy-makers and industry to build the most powerful digital infrastructure for Germany – in cities and rural areas alike. We will continue to make massive investments in infrastructure, but at the same time need fair and reliable conditions to be in place.

Secure ICT solutions & big IoT

Our international network solutions remained popular among German business customers in 2018. Secure, reliable global connectivity is essential to the advancing digitalization of critical processes in companies and industry associations. We remain a dependable partner to German industry thanks to our portfolio of international communications solutions that combine the strengths of our national network infrastructure with our international network assets.

Our business with “traditional” IT outsourcing services for international corporate customers has been in decline for a number of years now, mainly due to persistent intense competition. For this reason, our Systems Solutions operating segment is currently undergoing a radical transformation comprising four key thrusts: a shift to portfolio-based business management, the integration of our sales organization, the reduction of interdisciplinary costs by streamlining processes and hierarchy levels, and a significant increase in the level of automation in service provision with a higher share of offshore/nearshore services. We made excellent progress with the transformation in the reporting year and will be able to implement the new portfolio-based organization in 2019 as planned. We will also tailor our IT and cloud offers even more closely to the needs of our SME customers in the future. In 2018, we generated revenue of some EUR 700 million in this area in our Germany operating segment, up once again by around 20 percent against 2017. As we expect this business to grow significantly over the coming years, we are expanding our IT and cloud ecosystem for SMEs together with market-leading technology partners.

For us, the biggest growth driver in the business customer environment is the Internet of Things. [SDG 12](#) Over the next few years, we expect billions of new devices – means of production such as machines or tools, everyday objects like cars or fridges, but also public infrastructure like street lights or park benches – to be connected to the Internet. Our NarrowBand IoT networks (NB-IoT) alongside M2M connectivity create the basis for cost-effective and energy-efficient networking. In addition, we will provide our customers – e.g., in the automotive, health-care and public sectors – with the platforms to manage these devices and use the data collected for their business. As a leading network operator in the NB-IoT environment, we also

operate networks in ten countries, offering coverage nationwide in the Netherlands, Austria, Slovakia, and the United States. At present, we work with over 500 customers in Europe, helping them to prepare and roll out their NB-IoT-based hardware and applications. These customers include, for example, Ista (smart submetering), BMW (paperless displays), the City of Hamburg (smart parking), Veolia and Geotermia Zakopane in Poland (smart metering), and Dual Inventive (rail track monitoring).

We supplement these offers with our comprehensive cybersecurity portfolio. [SDG 16](#) Telekom Security, which was established in early 2017, is today Germany's leading provider of cybersecurity solutions. In the medium term, we also want to take on a leading role in Europe. Since cyberattacks pose a growing threat to companies and our customers' need for data privacy and security is increasing, we expect growth rates in this business area to remain consistently high over the next few years.

SUPPORTING AREAS OF OPERATION

Save for growth investments

Future growth requires adequate investment. To this end, we are investing in our own innovativeness as well as integrating successfully new developments from outside our Company. Thanks to our strict cost discipline, we generate the funds we need to finance this investment and safeguard our competitiveness. We will therefore systematically continue on this path of cost transformation. In the long term, we also want to be Europe's leading telecommunications provider in terms of efficiency.

We take a value-oriented approach to managing our investment portfolio. Business areas that cannot be adequately developed within the Group are disposed of, while our growth ambitions are bolstered by means of equity investments and acquisitions. Since 2018, we can also offer convergent products from a single source in Austria and the Netherlands: The acquisition of cable provider UPC Austria by T-Mobile Austria was consummated. The European Commission also unconditionally approved the acquisition of Tele2 Netherlands by T-Mobile Netherlands.

We aim to strengthen our position in the U.S. mobile market through the business combination of T-Mobile US and Sprint, agreed in April 2018. Not only is the planned combination of business activities under the all-new, larger T-Mobile US consistent with our strategy of successfully developing our U.S. business, it will also bolster the customer-oriented Un-carrier strategy and allow us roll out 5G technology across the United States faster and better than before. After implementation of the planned combination, the new company will have a value of approximately USD 150 billion; the anticipated synergies will have a present value of around USD 43 billion (after integration costs).



Simplify, digitalize, accelerate

Simplicity in our offers and in our organization makes the digital transformation of our core business easier. In this way, we increase our **implementation speed** – both in the interaction with customers and in the implementation of new, strategic initiatives. This is why we want to become simpler, more digital, and ultimately more agile.

There are two main thrusts to our pursuit of **simplicity**. First, we want to offer our customers intuitive products and easy to understand rates: Our convergent products such as MagentaEINS are a first step in this direction. Going forward, we want to significantly further reduce product complexity. Second, we want our internal operation to be as efficient as possible, i.e., in terms of time and costs. Hence we will scrutinize our organization, processes, and decision-making procedures and further optimize them wherever possible.

The **digitalization** of our core business is helping us to improve customer experience and increase our efficiency. Our innovative service app lets our customers in Germany and Europe view their data and contracts at any time and get the most benefit from our extensive services. The app is a resounding success: For example, our customers rate the MeinMagenta app for iOS with 4.4 out of 5 stars. Long term, our plan is to digitalize all value creation stages in their entirety. To this end, we are implementing more agile IT solutions and systematically expanding our expertise in innovative technologies like artificial intelligence. Data-based analyses are already helping us to maintain our hardware more proactively, understand customer needs better, and manage our networks more efficiently. Innovation that works: A study by Berlin University of Applied Sciences and CEBIT in the reporting year rated, for example, our chatbot at T-Mobile Austria – Tinka – the best chatbot out of all the DAX 30 and MDAX companies.

However, simplicity and digitalization also call for new organizational forms, new skills, and a cultural shift. Given this, in the reporting year we introduced the principle of end-to-end customer responsibility, particularly in areas close to the market, and implemented an agile organizational structure. We target and systematically develop our employees' abilities in line with the challenges being faced in the digital age and promote diversity as a source of change, innovation, and creativity across our entire Company. Future Work offers our employees modern, open office environments that provide the perfect setting to encourage flexibility and new ways of working together. [SDG 8](#)

In summary, our Leading European Telco strategy is reflected in our goal:

To be the leading European telecommunications provider.

- We want to be a **leader** in terms of customer experience, technology, and the implementation of advances in productivity for our business customers. Because only when we lead can we **grow** and meet the demands of our investors in the long term.
- This growth will be made possible by carefully managing our **financial resources** and **systematically transforming** the Company to be simple, digital, and agile in every sense.
- We play a responsible and active role in **society**. We are a partner, not just at a social level, but also at a political one, and we work in the interests of ensuring the open, forward-looking development of all countries in which we are active. [SDG 8](#)

MANAGEMENT OF THE GROUP

We continue to be committed to the concept of value-oriented corporate governance. We want to strike a balance between the contrasting expectations of our stakeholders so that sufficient funding is available for an attractive dividend, debt repayment, responsible staff restructuring, and new investment for a positive customer experience.

- **Shareholders** expect an appropriate, reliable return on their capital employed.
- **Providers of debt capital** expect an appropriate return and that Deutsche Telekom is able to repay its debts.
- **Employees** expect jobs that are secure, prospects for the future, and that any necessary staff restructuring will be done in a responsible manner.
- **“Entrepreneurs within the enterprise”** expect sufficient investment funding to be able to shape Deutsche Telekom's future business and develop products, innovations, and services for the customer.

8 DECENT WORK AND ECONOMIC GROWTH



RELATIONSHIPS

8 DECENT WORK AND ECONOMIC GROWTH



EMPLOYEES

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FINANCE STRATEGY

We presented our updated finance strategy for the years 2018 through 2021 at the Capital Markets Day in late May 2018. Our forecast for growth through to 2021 remains at the same high level we anticipated at our Capital Markets Day in 2015.

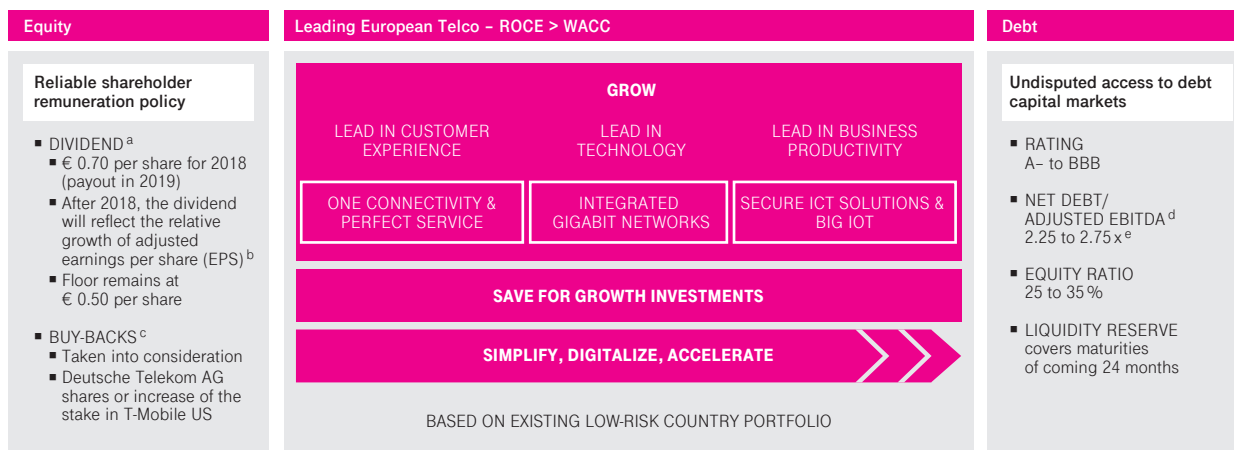
Part of our finance strategy is to achieve our target financial ratios – relative debt (ratio of net debt to adjusted EBITDA) and equity ratio – along with a liquidity reserve that covers our maturities of the coming 24 months at least. With these clear statements we intend to maintain our rating in a corridor from A- to BBB and safeguard undisputed access to the capital market.

There is a reliable dividend policy for shareholders, which is subject to approval by the relevant bodies and the fulfillment of other legal requirements. For the 2018 financial year, we will propose a dividend of EUR 0.70 per dividend-bearing share, which will also serve as a baseline for the dividend going forward. Starting from the 2019 financial year, the dividend is to reflect relative growth in earnings per share with a lower limit fixed at EUR 0.50 per dividend-bearing share. In terms of adjusted earnings per share, for 2018 we continue to expect a figure of around EUR 1.00 per share as announced at the Capital Markets Day in 2015 and expect this to rise to around EUR 1.20 per share through 2021. We thus offer our shareholders both an attractive return and planning reliability.

We will also take share buy-backs into consideration, both of Deutsche Telekom AG shares and shares in T-Mobile US. However, no shares will be bought back in the first three years after the successful closing of the business combination of T-Mobile US and Sprint.

Total capital expenditure is also to remain high in the next few years. The scope for investment is to be used to further roll out our broadband infrastructure and to accelerate the transformation of the Company to an IP-based production model. In mobile communications, the infrastructure build-out will focus on the LTE and 5G standards and, in the fixed network, on optical fiber and vectoring. The finance strategy supports the transformation of our Group into the Leading European Telco. In order to generate a sustainable increase in value, we intend to earn our cost of capital in the medium term. We aim to achieve this goal in part by optimizing the utilization of our non-current assets. We also intend to achieve our target of earning our cost of capital through strict cost discipline and improved cross-functional collaboration. Additionally, we focus our performance management on unadjusted EBIT. By taking capital expenditure into consideration, we can align EBIT more closely with the ROCE concept and support our rigorous focus on the efficient allocation of capital at the Deutsche Telekom Group.

Our finance strategy until 2021



^a Subject to approval by the relevant bodies and the fulfillment of other legal requirements.
^b Adjusted earnings per share (EPS) in 2018 as starting point.
^c Not relevant for the first three years after the successful closing of the business combination of T-Mobile US and Sprint.
^d Deviation from the target range for a short period after the successful closing of the business combination of T-Mobile US and Sprint.
^e Target corridor raised due to the increase in net debt as a result of the mandatory application of the IFRS 16 accounting standard.

PERFORMANCE MANAGEMENT SYSTEM

In order to set and achieve our strategic goals more effectively, we pursue a Group-wide, value-oriented performance management approach. We use a specific set of performance indicators to reliably and transparently measure success.

The following tables and information provide an overview of our key financial and non-financial performance indicators.

Financial performance indicators

		2018	2017	2016	2015	2014
ROCE	%	4.7	5.8	5.7	4.8	5.5
Net revenue	billions of €	75.7	74.9	73.1	69.2	62.7
Profit (loss) from operations (EBIT)	billions of €	8.0	9.4	9.2	7.0	7.2
EBITDA (adjusted for special factors)	billions of €	23.3	22.2	21.4	19.9	17.6
Free cash flow (before dividend payments and spectrum investment)	billions of €	6.2	5.5	4.9	4.5	4.1
Cash capex (before spectrum investment)	billions of €	(12.2)	(12.1)	(11.0)	(10.8)	(9.5)
Rating (Standard & Poor's, Fitch)		BBB+	BBB+	BBB+	BBB+	BBB+
Rating (Moody's)		Baa1	Baa1	Baa1	Baa1	Baa1

PROFITABILITY

In order to underline the importance of the successful long-term development of our Group, we have incorporated sustainable growth in enterprise value into our medium-term aims and implemented it as a separate KPI (key performance indicator) for the entire Group. **Return on capital employed (ROCE)** is our central performance indicator. ROCE is the ratio of operating result after depreciation, amortization and impairment losses plus imputed taxes (net operating profit after taxes (NOPAT)) to the average value of the assets tied up for this purpose in the course of the year (net operating assets, NOA).

ROCE is the performance indicator that helps us to embed our aim of sustainably increasing the value of our Group across all operational activities. Additional value accrues when the return on capital employed exceeds the cost of capital. Our goal, therefore, is to achieve or exceed the return targets imposed on us by providers of debt capital and equity on the basis of capital market requirements. We measure return targets using the weighted average cost of capital (WACC).

Calculation of the ROCE financial performance indicator

millions of €

		2018	2017	2016
ROCE	%	4.7	5.8	5.7
Profit (loss) from operations (EBIT)		8,001	9,383	9,164
Share of profit (loss) of associates and joint ventures accounted for using the equity method		(529)	76	(53)
Interest component of unrecognized rental and lease obligations		630	525	573
Other NOP adjustments		1	0	0
NET OPERATING PROFIT (NOP)		8,103	9,984	9,684
Tax (imputed tax rate 2018: 27.8%; 2017: 31.5%; 2016: 30.3%)		(2,253)	(3,145)	(2,934)
NET OPERATING PROFIT AFTER TAXES (NOPAT)		5,850	6,839	6,750
Cash and cash equivalents		3,679	3,312	7,747
Operating working capital		(511)	(3,555)	(5,056)
Intangible assets		64,950	62,865	60,599
Property, plant and equipment		50,631	46,878	46,758
Non-current assets and disposal groups held for sale ^a		145	161	372
Investments accounted for using the equity method		576	651	725
Other assets		331	410	279
Present value of unrecognized rental and lease obligations		15,760	13,127	14,320
Other provisions		(6,435)	(6,527)	(6,388)
Other NOA adjustments		0	0	0
NET OPERATING ASSETS (NOA)		129,126	117,322	119,356
AVERAGE NET OPERATING ASSETS (Ø NOA)		124,024	118,927	119,101

^a Excluding the carrying amounts of companies accounted for using the equity method.

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NOPAT is an earnings indicator derived from the income statement. As it does not take cost of capital into account, it also includes the interest component of unrecognized rental and lease obligations.


NOA includes all assets that make a direct contribution to revenue generation. These include all elements on the asset side of the consolidated statement of financial position that are essential to the rendering of services. Operating working capital is calculated from trade and other receivables, inventories, trade and other payables, as well as additional current and non-current assets and liabilities selected in line with the internal steering logic. NOA also includes rental and operating lease obligations recognized by the lessor where required for operations. The figure for other provisions is deducted as no return target exists for this.

We believe that ROCE best reflects the expectations of the four aforementioned stakeholders. The indicator measures how efficiently we generate revenues with the capital employed. ROCE is especially informative when taking a long-term view, because it takes into account both the immense value of the assets that are tied up in our capital-intensive infrastructure, and their utilization. This reveals the crucial advantage of this KPI. It does not focus on the absolute amount of the earnings generated, but rather how much earnings the capital employed generates.

REVENUE AND EARNINGS

Revenue corresponds to the value of our operating activities. Absolute revenue depends on how well we are able to sell our products and services on the market. The development of our revenue is an essential indicator for measuring the Company's success. New products and services as well as additional sales activities are only successful if they increase revenue.

EBITDA corresponds to EBIT (profit/loss from operations) before depreciation, amortization and impairment losses. EBIT and EBITDA measure the short-term operational performance and the success of individual business areas. We also use the EBIT and EBITDA margins to show how these indicators develop in relation to revenue. This makes it possible to compare the earnings performance of profit-oriented units of different sizes. Taking unadjusted EBIT/EBITDA as performance indicators means special factors are also taken into account. This promotes a holistic view of our costs. However, special factors have an impact on the presentation of operations, making it more difficult to compare performance indicators with corresponding figures for prior periods. For this reason, we additio-

nally adjust our performance indicators to provide transparency. Without this adjustment, statements about the future development of earnings are only possible to a limited extent. The adjusted values are calculated on the basis of the unadjusted performance indicators. 

FINANCIAL FLEXIBILITY

We define **free cash flow** as net cash from operating activities less net cash outflows for investments in intangible assets (excluding goodwill) and property, plant and equipment. This indicator is the main yardstick for providers of debt capital and equity. It measures the potential for further developing our Company, for generating organic growth, and for the ability to pay dividends and repay debt.

Central free cash flow management is responsible for transparency, steering, forecasts, and performance measurement in relation to free cash flow and especially in relation to working capital. As part of our measures to optimize working capital over the long term, in the reporting year the focus was on further extending the period of payment for our payables in Germany and Europe, expanding inventories management there, and further optimizing receivables management in all our operating segments. We plan to continue down this route in the coming years by focusing on the following areas: extending the period of payment for payables and improving receivables and inventories management in the United States, Germany, and Europe.


Cash capex (before spectrum investment) relates to cash outflows for investments in intangible assets (excluding goodwill) and property, plant and equipment, which are relevant for cash outflows as a component of free cash flow.

A **rating** is an assessment or classification of the creditworthiness of debt securities and its issuer according to uniform criteria. Assessment of creditworthiness by rating agencies influences interest rates on debt securities and thus also our borrowing costs. As part of our finance policy, we have defined a target range for our ratings. We are convinced that with a rating between A- and BBB (Standard & Poor's, Fitch) or between A3 and Baa2 (Moody's) we essentially have the necessary entry to the capital markets to generate the required financing.



For the reconciliation of EBITDA, EBIT, and net profit/loss to the respective figures adjusted for special factors, please refer to the table on page 54.

EFFECTS OF THE APPLICATION OF THE NEW IFRS 16 “LEASES” ACCOUNTING STANDARD ON OUR FINANCIAL PERFORMANCE INDICATORS

The mandatory first-time application of the new IFRS 16 “Leases” accounting standard as of January 1, 2019 has a material impact on Deutsche Telekom’s consolidated financial statements. The new standard requires payment obligations from existing operating leases to be discounted and recognized as lease liabilities; as financial liabilities, they increase net debt. At the same time, the lessee capitalizes a right of use. Operating expenses previously recognized in connection with operating leases will in future be recognized either in depreciation charges for capitalized right-of-use assets or in interest expenses for discounted obligations from operating leases, as appropriate. This will significantly improve EBITDA without any attendant change in the economic circumstances. In the statement of cash flows, the repayment portion of the lease payments from existing operating leases will reduce net cash from/used in financing activities and no longer affect net cash from operating activities. Interest payments will remain in net cash from operating activities and thus also in free cash flow. 




For further information on the first-time application of the accounting standards, please refer to the section “Summary of accounting policies” in the notes to the consolidated financial statements, page 153 et seq.

Since expenses and cash outflows for leases are substantial elements of our earnings performance and solvency, starting the 2019 financial year we will take into account the effects of the mandatory first-time application of the IFRS 16 accounting standard when determining our financial performance indicators. We also want to ensure maximum comparability with our previous performance indicators. In the future, our operational performance will be measured on the basis of “EBITDA after leases” (EBITDA AL) (previously EBITDA). EBITDA AL is calculated by adjusting EBITDA for depreciation of the capitalized right-of-use assets and for interest expenses on recognized

lease liabilities. The “free cash flow” financial performance indicator will be replaced by “free cash flow after leases” (free cash flow AL). Free cash flow AL is determined by adjusting free cash flow for repayments of lease liabilities. To improve comparability of our performance indicators with the EBITDA and “free cash flow” indicators reported in the financial statements of T-Mobile US in accordance with U.S. GAAP, which in future will continue to differentiate between operating and finance leases, expenses and repayments for finance leases at T-Mobile US will not be taken into account when determining EBITDA AL and free cash flow AL.

The ROCE calculation method has to be adjusted effective the start of the 2019 financial year as a result of the mandatory first-time application of the IFRS 16 accounting standard. NOA will be determined taking capitalized right-of-use assets from leases into consideration. By contrast, the present value of unrecognized rental and lease obligations as well as adjustments to their respective interest components will no longer be taken into account when determining NOPAT. As part of these changes, the definition of ROCE will be both refined and simplified, since operating working capital will in future be calculated solely from trade and other receivables, inventories, and trade and other payables. No further adjustments to NOPAT, NOA, or other assets under NOA will be necessary. Overall, the new calculation method will have a minor effect on ROCE.

From the start of the 2019 financial year, we will take the effects of the mandatory first-time application of the IFRS 16 accounting standard into account when calculating the actual values for our financial performance indicators. As such, the statements made with regard to our two-year forecast already refer to the new “after leases” indicators. 



For further information, please refer to the section “Forecast,” page 102 et seq.

NON-FINANCIAL PERFORMANCE INDICATORS

	2018	2017	2016	2015	2014
Customer satisfaction (TRI*M index)	67.7	68.6	70.2	67.4	65.9
Employee satisfaction (commitment index) ^a	4.1	4.1	4.1	4.1	4.0
FIXED-NETWORK AND MOBILE CUSTOMERS					
Mobile customers millions	178.4	168.4	165.0	156.4	150.5
Fixed-network lines millions	27.9	27.9	28.5	29.0	29.8
Broadband customers ^{b, c} millions	20.2	18.9	18.4	17.8	17.4
SYSTEMS SOLUTIONS					
Order entry ^d millions of €	6,776	5,241	6,851	5,608	7,107


^a Commitment index according to the most recent employee surveys in 2017 and 2015.


^b Excluding wholesale.

^c Starting in Q2 2018, we no longer report the number of broadband lines from a technical perspective. Instead, we report the number of broadband customers. The figures for 2016 and 2017 have been adjusted accordingly.

^d The figure for 2016 was adjusted retrospectively due to the change in the structure of the Group implemented as of January 1, 2017.

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We want our customers to be satisfied – or even delighted – as satisfied customers act as multipliers for our Company’s success. As a responsible, service-oriented company, the needs and opinions of our customers are of great importance to us, and we want them to stay with our Company in the long term. For this reason, we measure **customer retention/satisfaction** in our companies using the globally recognized TRI*M method. The results of systematic surveys are expressed by an indicator known as the TRI*M index. To underscore the major significance of customer retention/satisfaction for our operations, since 2010 we have made this key indicator one of four parameters for the long-term variable remuneration (Variable II) for our Board of Management members. It is also used as a parameter in the long-term incentive plan, which was launched in 2015 and is offered to our managers (with the exception of Board of Management members). We take the TRI*M indexes calculated for the operating entities as an approximation of the respective entities’ percentage of total revenue to create an aggregate TRI*M Group value. Over a period of four years, the eligible managers can benefit from the development of customer retention/satisfaction across the Group. 

Our employees want to contribute to the further development of the Company and identify with it. We want to establish an open dialog and a productive exchange with our employees: New ways of working and modern means of communication help us achieve this, as do regular surveys. The most important feedback instruments across the Group (excluding T-Mobile US) for assessing **employee satisfaction** include regular employee surveys and the pulse survey carried out twice a year. In our Company, we measure the employee satisfaction performance indicator using the **commitment index** – derived from the results of the last employee survey and updated with the results of the last pulse survey. 

In view of the major significance of employee satisfaction for the success of the Company, Board members are now also being managed and incentivized by means of the long-term variable performance-based remuneration (Variable II). Employee feedback as one of four parameters has been relevant for Variable II since 2010, and for the long-term incentive plan which was relaunched in 2015 for our managers (excluding Board members). This allows Board members and eligible managers to benefit from the development of employee satisfaction across the Group.

As one of the leading providers of telecommunications and information technology worldwide, the development of our Group – and thus also our financial performance indicators –

is closely linked to the development of **customer figures**. Acquiring and retaining customers are thus essential to the success of our Company. We have different ways of measuring the development of our customer figures according to the business activity in our operating segments: Depending on the activities of each segment, we measure the number of mobile customers and/or the number of broadband customers and fixed-network lines.

In our Systems Solutions operating segment, we use **order entry** as a non-financial performance indicator. We define and calculate order entry as the total of all amounts resulting from customer orders received in the financial year. Order entry in the form of long-term contracts is of great significance to the Group in order to estimate revenue potential. In other words, order entry is an indicator that provides a high degree of planning reliability.

THE ECONOMIC ENVIRONMENT

- Economic development in our core markets positive
- Regulatory intervention continues to impact negatively on the telecommunications market

MACROECONOMIC DEVELOPMENT

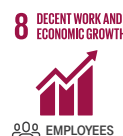
The global economy grew by 3.7 percent in the reporting year – more than in any single year in the period 2012 through 2016, and on a par with 2017. In our core markets, economic growth rates recorded positive trends overall in 2018. While growth in the United States was significantly stronger year-on-year, in the eurozone growth has tailed off in recent months.

GDP in Germany increased by 1.5 percent year-on-year, driven by consumer and public spending as well as investments. Average unemployment in 2018 was 5.2 percent, putting employment levels in Germany at a record high. The U.S. economy grew by 2.9 percent in the reporting year, with unemployment at 3.9 percent – its lowest level yet. The countries in our Europe operating segment posted consistently robust growth in 2018. The national economies continued to profit from rising domestic consumption and stable demand. The situation in the national labor markets in our Europe operating segment continued to improve thanks to positive economic growth.

The following table shows the GDP growth rate trends and the unemployment rates in our most important markets.



For further information on customer satisfaction, please refer to the section “Group strategy,” page 35 et seq.



For further information on employee satisfaction, please refer to the section “Employees,” page 97 et seq.

Development of GDP and the unemployment rate in our core markets from 2016 to 2018

	GDP for 2016 compared with 2015	GDP for 2017 compared with 2016	GDP estimate for 2018 compared with 2017	Unemployment rate in 2016	Unemployment rate in 2017	Estimated unemployment rate for 2018
Germany	2.2	2.2	1.5	6.1	5.7	5.2
United States	1.6	2.2	2.9	4.9	4.4	3.9
Greece	(0.2)	1.5	2.1	23.6	21.5	19.6
Romania	4.8	7.0	4.2	5.9	4.9	4.3
Hungary	2.3	4.1	4.7	5.1	4.2	3.6
Poland	3.1	4.8	5.1	6.2	4.9	3.3
Czech Republic	2.5	4.4	2.9	4.0	2.9	2.4
Croatia	3.5	2.9	2.8	13.4	11.1	9.1
Netherlands	2.2	2.9	2.5	6.0	4.9	3.9
Slovakia	3.1	3.2	4.2	9.7	8.1	6.9
Austria	2.0	2.6	2.7	6.0	5.5	4.8

Source: National authorities, Eurostat, European Commission, consensus forecasts. January 2019.

TELECOMMUNICATIONS MARKET

Demand for high-speed broadband – over the fixed and mobile networks – remains high. According to estimates by Analysys Mason, data traffic over the fixed network grew by 38 percent worldwide in 2018. In the same period, estimates by Dialog Consult put the average data volume per fixed-line connection and month in Germany at 90 gigabytes – more than quadruple the level seen five years ago. Analysys Mason estimates that mobile data traffic grew worldwide in 2018 by 67 percent, almost representing a fifteen-fold increase in five years. For the telecommunications industry, these developments present both a challenge and the opportunity to monetize the strong growth in volume.

Worldwide, revenues on the market for information and communications technologies (ICT) grew by 4.1 percent in the reporting year to EUR 3.26 trillion. The high-tech association Bitkom (Federal Association for Information Technology, Telecommunications and New Media) and EITO (European Information Technology Observatory) expect the telecommunications market segment (services and equipment) to record an increase of 3.3 percent worldwide to EUR 1.82 trillion and the information technology (IT) market segment to record an increase of 5.1 percent for 2018.

In the European Union (EU), revenues in the telecommunications market segment increased by 1.3 percent in 2018. Revenues with telecommunications equipment rose by 3.2 percent, while revenues with telecommunications services only grew slightly by 0.6 percent. In the Central and Eastern European Countries (excluding Russia), revenues with telecommunications equipment and services grew by 3.7 percent in the reporting year. In 2018, telecommunications revenues in Europe continued to grow at a slower pace overall than in other major industrial nations: The United States posted growth of 2.6 percent and China of 3.1 percent. While telecommunications policy in the EU is designed to relentlessly drive price competition by way of regulatory intervention, outside of the EU the focus is much more on encouraging investments.

The telecommunications industry is characterized by intense competition. Consumers benefit from a greater range of products to choose from. Each of our markets is occupied by three or four mobile operators with their own network infrastructure. On top of this, we are seeing mobile providers becoming established in many markets using the network infrastructure of the mobile network operators. Competition is also intense in the fixed network. Established telecommunications companies are competing with cable network operators, city network operators, and resellers, who predominantly make use of regulated wholesale products. Added to this are internet companies with over-the-top (OTT) communication services that further intensify the competitive pressure.

The rapid technological transformation in the telecommunications sector calls for high investments to build out next-generation network infrastructure. The rollout of 5G networks is fast approaching and the telecommunications networks are continually being upgraded with optical fiber. Established telecommunications companies like Deutsche Telekom are investing a substantial portion of their revenues in building out network infrastructure and acquiring spectrum. To ensure that these efforts can continue, it is essential that the market environment, especially in the European markets, improves. In such a capital-intensive and innovative industry as telecommunications, consumers benefit first and foremost from high investments by telecommunications network operators. As such, economies of scale and fair conditions for private investment and build-out partnerships play a prominent role.

Alongside the supply of basic broadband infrastructure, looking ahead the focus will be on connecting billions of things, appliances, machines, and sensors of all kinds to create an Internet of Things (IoT). In the next few years, connectivity will not be restricted to millions of smartphones and computers – billions of appliances worldwide will also communicate with each other. The network infrastructures of the gigabit society must enable the transportation of growing data volumes in parallel with providing intelligent features and services that offer the best sup-

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port for the diverging challenges generated by future applications, such as connected automated driving, IoT, Industry 4.0, e-health, and smart grids. The demands of these applications can vary a great deal with respect to real-time requirements, latency, availability, bandwidth, mobility, security, and energy efficiency, to name a few. For this reason, steps must be taken to ensure quality-assured services are possible both now and in the future. The infrastructures for the gigabit society will comprise an intelligent, application-specific mix of technologies at both a network and features level.

GERMANY

According to EITO, revenue from IT products and services, telecommunications, and consumer electronics increased by 2.1 percent to around EUR 138.2 billion in Germany in the reporting year. This was primarily attributable to the 2.5 percent growth in information technology. Telecommunications revenues (telecommunications services, hardware, and infrastructure systems) increased by 1.4 percent to around EUR 58.4 billion.

The number of broadband lines in Germany grew by 3.0 percent in 2018 to around 34.1 million at year-end, according to EITO. For 2019, the number of broadband lines is expected to grow by a further 2.3 percent to 34.9 million. Companies with their own infrastructure benefited the most from this market growth, along with resellers and regional providers. High-bandwidth lines are increasingly marketed in cable and VDSL/vectoring networks. The offerings in this area are supported by innovative hybrid connection technologies. The availability of high bandwidths in Germany and the large choice of HD content and video-on-demand services are stimulating customer growth in IPTV business. Convergent offers comprising fixed-network and mobile communications (fixed-mobile convergence, FMC) offer customers many advantages and help increase customer retention. The trend towards FMC offerings continued in the reporting year, with more and more providers expanding their portfolios. We launched our first convergent offering, MagentaEINS, on the market in fall 2014. Since then, we have been gradually enhancing the service both in the area of traditional communication and add-on services such as smart home, cloud computing, and security applications. [SDG 9](#) Vodafone and O₂ made up ground in terms of convergent offers.

In the German mobile market, service revenues increased by 1.4 percent against 2017 to approximately EUR 20.0 billion. This moderate revenue growth was driven largely by the continued rise in data usage, which offset the aforementioned regulatory effects as well as sustained price and competitive pressure. The use of mobile data is growing exponentially, the percentage of voice and data rate plans is rising steadily. Traditional voice and text messaging services are increasingly being replaced by free IP messaging services like WhatsApp and social networks like Facebook. Connected products such as smartphones and tablets, as well as watches, shoes, bicycles, and much more, are growing ever more popular, pushing up demand for mobile broadband speeds and for large data volumes in the rate plan portfolios.

Digitalization is continuing apace, and as a result there is also growing demand by the industry for even more connectivity to allow machines and production sites to be networked and to tap efficiencies in value chains. Extensive IT and cloud solutions, as well as intelligent approaches to M2M communication (machine-to-machine) are needed in order to meet these demands.

UNITED STATES

The mobile communications market in the United States continues to be divided between four major nationwide providers – AT&T, Verizon Wireless, T-Mobile US, and Sprint – and various regional network operators. In addition there are a number of mobile virtual network operators, which rely on the networks of one or more of the four national carriers to transport their voice and data traffic. The two largest national network operators are AT&T and Verizon Wireless, followed by T-Mobile US and Sprint.

The market continues to be very dynamic. Comcast, Charter, DISH, TracFone, and Google have successfully entered or are on the verge of entering the wireless market, demonstrating the intensity of current competition in the sector. For example, the cable companies Comcast and Charter have both begun offering mobile services to their customers. Both Comcast's and Charter's mobile services leverage their respective existing Wi-Fi networks, falling back on Verizon's network when out of their respective Wi-Fi footprints. Both offerings have slowly churned subscribers away from the traditional wireless providers, exerting new and unique competitive pressures and blurring market boundaries. Altice, after announcing an MVNO partnership with Sprint last year, has been gradually building up its mobile department in preparation of a launch some time in 2019. DISH, which holds licenses to vast swathes of airwaves, has announced near-term plans for both a Narrowband IoT network and a 5G network (DISH has license obligations to build out much of its spectrum by 2020).

AT&T's USD 85.4 billion acquisition of Time Warner, Inc. has closed, but is still making its way through the courts. AT&T beat an antitrust challenge by the U.S. Department of Justice at court, with the decision on the appeal forthcoming. The consolidation and convergence of the U.S. telecommunications market is expected to continue, as fixed and wireless become more integrated and wireless companies acquire content providers. On April 29, 2018, T-Mobile US and Sprint announced their intention to merge. The transaction is subject to customary closing conditions, including regulatory, antitrust, and national security approvals.

The FCC has issued a public notice requesting input from industry and analysts on the status of competition in the mobile wireless services market. Metrics are sought on total number of wireless connections, data usage trends, spectrum holdings, innovation and 5G, network quality, and market definition, etc. Although specific metrics are forthcoming, data consumption and smartphone penetration are steadily on the rise, and, with the advent of mobile 5G services expected in 2019, data consumption is expected to spike. For example, smartphone



data usage is expected to surpass fixed broadband usage in 2018. With over 400 million mobile devices, there are more wireless devices in the United States than people – in fact, about 1.2 devices for every person in the country. More than 68 percent of these devices are data-intensive smartphones.

In the United States, 5G commercialization is moving at a swift pace. One of the four national service providers began deploying a 5G fixed wireless Internet service at the beginning of October 2018. Another has announced plans to deploy 5G based on the 3rd Generation Partnership (3GPP), a leading mobile standards body, 5G standard by the end of the year. The other two providers plan to launch mobile 5G services in early 2019.

For its part, the FCC has taken various steps to encourage investment in the wireless space. For example, to help providers prepare for the deployment of next generation networks, the FCC has cleared regulatory hurdles, and preempted several state and local obstacles, in efforts to streamline the impending build-out required to realize true 5G mobile networks. And on November 14, 2018, the FCC began auctioning off spectrum in the 28 GHz band (Auction 101), its first ever high-band 5G spectrum auction. This auction will be followed in early 2019 by a second auction of spectrum in the 24 GHz band (Auction 102), for a total of 1.55 gigahertz of spectrum. An additional auction is planned for 2019 for spectrum in the 37 GHz, 39 GHz, and 47 GHz bands. However, there are not yet any further details published by the FCC regarding the award of that spectrum.

EUROPE

In the 2018 financial year, the traditional telecommunications markets continued last year's growth trend in the highly competitive market environment of our Europe operating segment. Steady growth in broadband and TV services offset declining revenues from voice telephony in fixed-network business. Growth rates for mobile data usage remained high, especially due to the wide range of video services available. Overall, mobile business developed positively, making it a driver of growth in the traditional telecommunications markets. The continued levying in 2018 of special taxes on telecommunications services in some countries had a negative impact, for example in Greece and Hungary.

Compared with prior years, expenses for the acquisition of spectrum and extension of existing mobile licenses remained at a moderate level in 2018. Spectrum award proceedings were held primarily in Hungary. In the reporting year, several merger and takeover transactions were concluded in the countries of our Europe operating segment (for instance T-Mobile Austria and UPC Austria, Digi/Invitel and the sale of Telenor to PPF in Hungary, and Vodafone/Cyta in Greece).

The trend towards convergent product bundles combining fixed-network and mobile communications (FMC) continues, for example with *Kombinieren & Sparen* (combine & save) in Austria, *Love* in Poland, and *MagentaOne* and *CosmoteOne* in our subsidiaries with integrated telecommunications infrastructure. These offers are enjoying strong growth and, for some providers, already address the majority of consumers. Streaming video services like Netflix and Amazon Prime Video continue to be of limited significance in Southern and Eastern Europe: According to Ampere Analysis, the household penetration rate there was 6 percent in the reporting year compared with 30 percent in Western Europe. In the business customer segment, the advance of digitalization prompted massive growth in M2M/IoT applications. We participate in this growth with our smart city projects, for instance in Hungary, Romania, and Greece. [SDG 11](#)

SYSTEMS SOLUTIONS

In the information and communications technology (ICT) industry in our core market of Western Europe, the volume addressed by our portfolio in the Systems Solutions operating segment increased by 5.3 percent in the reporting year to over EUR 185 billion. However, this trend impacted the business areas of the market in very different ways.

In the telecommunications segment, the market was dominated by continued price erosion in telecommunications services and by intense competition. The focus in this segment continues to be on the substitution of elements of the portfolio and demand for stable, intelligent and secure network solutions with increasingly large bandwidths. Growth in ICT security (cyber security), the Internet of Things, cloud computing, and unified communications is leading to a long-term stabilization of the markets served by our operating segment. Substitution effects between fixed-network and mobile operations continue to intensify. The migration to all-IP solutions, e.g., the combination of Internet access, Voice over IP, IP VPN, and Unified Communications, continues to increase.

In terms of IT services, demand has grown further for cloud services and cybersecurity services, as has the importance of digitalization, intelligent networks, the Internet of Things (including Industry 4.0), and communication between machines (M2M). The advance of digitalization and the shift towards cloud solutions also transformed demand in the systems integration business. Traditional project business – application development and the associated integration – stagnated. By contrast, the market for consultation and integration services for cloud solutions grew by almost 25 percent.



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The market for outsourcing computing and desktop services (CDS) grew marginally by 0.1 percent in the reporting year to EUR 54 billion. Two contrasting trends played a role in this context: Business from long-term, rather traditional outsourcing contracts declined by 4 percent, while the market for cloud computing grew by 13 percent.

Competitive and price pressure persisted in all submarkets of our Systems Solutions operating segment. This was caused in part by competitors such as BT Global Services and Orange Business Services in the telecommunications market and IBM, Atos, and Capgemini in the IT segment; in addition, the IT segment in particular came under price pressure from cloud providers such as Amazon Web Services, Google, and Microsoft. This effect is further intensified by providers of services rendered primarily offshore. We are positioning ourselves in this environment as a digital enabler, a cloud transformer, and an ICT operator, with a focus on quality, data security, and end-to-end responsibility for the transformation, integration, and operation of ICT services. Furthermore, we are increasingly entering into strategic partnerships with our competitors with the aim of offering our customers innovative solutions. [SDG 9](#)

GROUP DEVELOPMENT

The environment of our Group Development operating segment is largely dominated by the markets served by our companies T-Mobile Netherlands and Deutsche Funkturm (DFMG).

The mobile communications market in the Netherlands has been marked by high price and competitive pressure for quite some time, and this situation intensified again in 2018. One of the trends contributing toward this is the growing bundling of fixed-network and mobile products into convergent offers (FMC), an area that is dominated by the two companies KPN and VodafoneZiggo. As in the past, the trend towards bundled offers brings pressure to bear on prices for mobile products. The strong discount segment, comprising mobile providers' secondary brands and MVNOs, has further intensified competition. On November 27, 2018, the European Commission unconditionally approved the acquisition of telecommunications provider Tele2 Netherlands by T-Mobile Netherlands and the transaction was consummated on January 2, 2019.

DFMG is the biggest provider of passive wireless infrastructure for mobile communications and broadcasting in Germany. [SDG 9](#) The market also saw increased demand for cell sites in the 2018 financial year, due on the one hand to the fact that network operators plan to close gaps in coverage, and on the other to the fact that demand for mobile data services is growing, which calls for a further increase in the density of mobile networks.

MAJOR REGULATORY DECISIONS

Our business activities are largely subject to national and European regulation, which is associated with extensive powers to intervene in our product design and pricing. We were again subject to extensive regulation in our mobile and fixed-network businesses in 2018. The focus was primarily on the regulation of services for wholesale customers and the corresponding charges as well as the award of mobile spectrum.

REGULATION

Supreme Administrative Court ruling in our favor provides legal certainty for rolling out VDSL in the direct vicinity of local exchanges. Competitors had appealed against the Federal Network Agency's decision of September 2016 to green-light the deployment of vectoring. In September 2018, the Supreme Administrative Court upheld the Agency's decision, simultaneously establishing legal certainty regarding the VDSL rollout.

Federal Network Agency decision on StreamOn. On December 15, 2017, the Federal Network Agency prohibited elements of the MagentaMobil StreamOn add-on option. According to the Federal Network Agency, two aspects of this option breached the EU Regulations on net neutrality and roaming. The ruling stipulates that we must transmit all StreamOn data traffic at the maximum available bandwidth and that this also cannot be deducted from the included data volume contingent when roaming within the EU. However, we believe that our service complies with EU law. We continue to seek a preliminary injunction against the Agency's decision with the Münster Higher Administrative Court.

Federal Network Agency decisions on bitstream charges. On March 8, 2018, we received the Federal Network Agency's final decision on our rate application dated September 21, 2017. The application relates to the rates we can charge to wholesale customers for access to our broadband lines for "layer 2 bitstream access." In its final decision, the Federal Network Agency confirmed its preliminary decision from December 2017 and largely approved the majority at the current levels. We had requested an increase in the monthly rate as part of contingent models. As per the preliminary decision, this application was not approved in the final decision. On September 18, 2018, the Agency published a draft consultation on bitstream charges for supervectoring, which is used to make download bandwidths of up to 250 Mbit/s available. The approved charges are higher than the charges for slower speeds and were adopted unchanged in the final decision on December 18, 2018. The Agency thus consistently acknowledges investments in higher bandwidths.



RELATIONSHIPS




STRUCTURE

Federal Network Agency grants preliminary approval of new interconnection rates. On December 17, 2018, the Agency provisionally approved the fixed-network interconnection rates. The charges for fixed-network termination were reduced by 20 percent from EUR 0.10/min. to EUR 0.08/min. and for call origination by around 43 percent from EUR 0.23/min. to EUR 0.13/min. These rates were approved through December 30, 2020 in the draft ruling. The draft approval of the final rates is now the subject of a national consultation process, to be followed by consultation on a European level. The final rates approval is expected mid-2019.

AWARDING OF SPECTRUM

In Germany, the terms and conditions for awarding spectrum in the 2.1 GHz and 3.4 to 3.7 GHz ranges in the coming auction turned into a central topic of political debate in the latter half of 2018. Attention focused predominantly on requests to close

gaps in mobile data coverage and internet access (known as "white spots") alongside as rapid and comprehensive a rollout as possible of the new 5G mobile standard. The aim is to expand coverage to rural areas in particular and to all major transportation routes (road, rail, water). Given this, the final award conditions included extensive coverage obligations as well as legally disputed conditions on the granting of access between mobile network operators. Along with at least eight further market players, we have filed suit against the final award conditions.

The table below provides an overview of the main spectrum awards such as auctions as well as license extensions in Germany and at our international subsidiaries. It also indicates spectrum to be awarded in various countries in 2019. 



For further information on the spectrum awards, please refer to the section "Risk and opportunity management," page 113 et seq.

Main spectrum awards

	Expected start of award procedure	Expected end of award procedure	Frequency ranges (MHz)	Award process	Acquired spectrum (MHz)	Spectrum investment
Germany	Q1 2019	Q2 2019	2,100/3,400 – 3,700	Auction (SMRA ^a)	tbd	tbd
Greece	Q3 2019	Q4 2019	3,400 – 3,800	Auction (SMRA ^a), expected	tbd	tbd
Croatia	Q1 2019	Q2 2019	2,100/3,400 – 3,800	tbd	tbd	tbd
Macedonia	Q1 2019	Q2 2019	2,100	Extension of licenses	2x 15 MHz	No extension fees
Macedonia	Q1 2019	Q1 2019	1,800	Extension of licenses	tbd	tbd
Macedonia	Q2 2019	Q2 2019	700/2,100/3,400 – 3,800	Auction, details tbd	tbd	tbd
Netherlands	Q1 2020	Q2 2020	700/1,500/2,100	Auction, details tbd	tbd	tbd
Austria	Q1 2019	Q2 2019	3,400 – 3,800	Regional auction (CCA ^b)	tbd	tbd
Austria	Q1 2020	Q2 2020	700/1,500/2,100	Auction (CCA ^b), expected	tbd	tbd
Poland	Q2 2019	Q4 2019	3,700 – 3,800	tbd	tbd	tbd
Poland	Q3 2020	Q4 2020	700/3,600 – 3,800	tbd	tbd	tbd
Romania	Q4 2019	Q4 2019	700/800/1,500/2,600/3,400 – 3,600	Auction, details tbd	tbd	tbd
Slovakia	Q3 2019	Q4 2019	700	Auction (SMRA ^a), expected	tbd	tbd
Czech Republic	Q3 2019	Q4 2019	700/1,800	Auction, details tbd	tbd	tbd
Hungary	Q4 2018	Q4 2018	2,100	Extension of licenses	2x 15 MHz	HUF 11 billion (approx. € 34 million)
Hungary	Q3 2019	Q3 2019	700/1,500/2,100/2,300/2,600/26,000	Auction, details tbd	tbd	tbd
United States	Q4 2018	Q2 2019	28,000	Auction (SMRA ^a), since Nov. 14, 2018	tbd	tbd
United States	Q1 2019	Q2 2019	24,000	Auction (CCA ^b)	tbd	tbd

^a Simultaneous electronic multi-round auction with ascending, parallel bids for all available frequency ranges.

^b Combinatorial clock auction, three-stage, multi-round auction for spectrum from all available frequency ranges.

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DEVELOPMENT OF BUSINESS IN THE GROUP

STATEMENT OF THE BOARD OF MANAGEMENT ON BUSINESS DEVELOPMENT IN 2018

Bonn, February 12, 2019

We closed another successful year with strong results. In 2018, we once again met our most important corporate targets and set a course for the future. Net revenue increased by 0.9 percent to EUR 75.7 billion – in organic terms, i.e., adjusted in particular for the negative currency translation effects in the reporting year, net revenue grew by as much as 3.1 percent. The U.S. business continued to record strong growth, but Europe also put in a very positive business performance, and we can certainly rely on our home market in Germany. This development is the result of the great response we are seeing from customers, in particular in mobile communications and broadband business – in Germany and Europe also in the success of our convergent product range. In addition to consumer and business customer services, these products remain the focus of our strategy. The acquisitions of UPC Austria and Tele2 Netherlands further improved our position in Europe, especially with regard to the convergent product offering. We want to further develop our good position in the U.S. business by means of the agreed business combination of T-Mobile US and Sprint.

Adjusted EBITDA grew by 5 percent to EUR 23.3 billion, mainly on account of the strong development of operations driven by revenue growth and a further improvement in cost efficiency – it was not only the United States, but also Germany and in particular Europe that bolstered the earnings trend. Free cash flow (before dividend payments and spectrum investment) totaled EUR 6.2 billion; this represents year-on-year growth of around 13.7 percent.

Profit from operations (EBIT) decreased by EUR 1.4 billion in the reporting year to EUR 8.0 billion, due to an increase in special factors in connection with staff-related measures and to the positive special factors which had increased EBIT in the prior year as a result of the reversal of impairment losses previously recognized for spectrum licenses at T-Mobile US, as well as of the sale of Strato and Scout24 AG. We also recorded higher depreciation and amortization compared with 2017 as a result of the high level of investment in building and expanding our mobile networks and fixed-network infrastructure, as well as for the forward-looking migration to IP as part of our integrated network strategy.

Net profit decreased by EUR 1.4 billion to EUR 2.1 billion. The positive trend in loss from financial activities was offset by an increase in the tax burden compared with the prior year. The prior-year burden was significantly reduced by the reduction in the U.S. federal tax rate, which resulted in a non-cash deferred tax benefit at T-Mobile US. ROCE decreased year-on-year due largely to the higher net special factors compared with the prior year.

Net debt increased from EUR 50.8 billion to EUR 55.4 billion, primarily due to the acquisition of UPC Austria, our share buy-back programs, and the ongoing high level of capital expenditure for network build-out and modernization in the United States, Germany, and Europe. Currency translation effects also had a negative impact.

We presented our revised strategy and the financial outlook at our Capital Markets Day in May 2018. Our forecast for growth through to 2021 remains at the same high level we anticipated at our Capital Markets Day in 2015. There is a reliable dividend policy for our shareholders, which is subject to approval by the relevant bodies and the fulfillment of other legal requirements. For the 2018 financial year, we will propose a dividend of EUR 0.70 per dividend-bearing share, which will also serve as a baseline for the dividend going forward. Starting from the 2019 financial year, the dividend is to reflect relative growth in earnings per share with a lower limit fixed at EUR 0.50 per dividend-bearing share.

The trends in the industry, in particular on the European telecommunications markets, remain challenging, e.g., rising competition and strict regulatory requirements. The market for information and communications technologies, however, continues to grow. In order to succeed in the future, we continue to invest heavily in the key to our success: our network infrastructure. In 2018, we made investments (before spectrum) of EUR 12.2 billion. In the fixed network, our focus was on investments in fiber-optic roll-out, IPTV, and the continued migration to an IP-based network. In mobile communications, we invested in LTE, increased network coverage, and upgraded capacity to meet increasing demand for high-speed data transmission rates. Including spectrum payments, this figure was EUR 12.5 billion. Despite this high level of investment, our rating remained solid through 2018, and we had unrestricted access to the capital market at all times.

Against this backdrop, we are reasserting our commitment to the strategic goal of being the leading European telecommunications provider. With this goal in mind, in 2018 we continued to focus intently on delivering state-of-the-art networks, products, and services that give our customers simple, convenient access to the digital world. This keeps us in a good position to remain the driving force in our markets behind the creation of a modern and competitive digital future.

COMPARISON OF THE GROUP'S EXPECTATIONS WITH ACTUAL FIGURES

In the 2017 Annual Report, we outlined expectations for the 2018 financial year for our financial and non-financial key performance indicators anchored in our management system. The following tables summarize the pro-forma figures for 2017, the results expected for the reporting year, and the actual results achieved in 2018. The performance indicators that we also forecast in the 2017 Annual Report and their development are presented in the individual sections.

Comparison of the expected financial key performance indicators with actual figures

		Pro-forma figures for 2017	Expectations for 2018	Results in 2018
ROCE	%	5.8	decrease	4.7
Net revenue	billions of €	74.9	slight increase	75.7
Profit (loss) from operations (EBIT)	billions of €	9.4	decrease	8.0
EBITDA (adjusted for special factors)	billions of €	22.2	23.6 ^a	23.3
Free cash flow (before dividend payments and spectrum investment)	billions of €	5.5	6.3 ^a	6.2
Cash capex (before spectrum investment)	billions of €	12.1	12.5	12.2
Rating (Standard & Poor's, Fitch)		BBB+	from A- to BBB	BBB+
Rating (Moody's)		Baa1	from A3 to Baa2	Baa1

Comparison of the expected non-financial key performance indicators with actual figures

		Pro-forma figures for 2017	Expectations for 2018	Results in 2018
Customer satisfaction (TRI*M index)		67.2	slight increase	67.7
Employee satisfaction (commitment index) ^b		4.1	stable trend	4.1
FIXED-NETWORK AND MOBILE CUSTOMERS				
GERMANY				
Mobile customers	millions	43.1	increase	44.2
Fixed-network lines	millions	19.2	decrease	18.6
Broadband lines	millions	13.2	increase	13.6
UNITED STATES				
Branded postpaid	millions	38.0	increase	42.5
Branded prepay	millions	20.7	increase	21.1
EUROPE				
Mobile customers	millions	48.8	increase	50.5
Fixed-network lines	millions	8.4	slight decrease	9.1
Broadband customers ^c	millions	5.5	increase	6.4
SYSTEMS SOLUTIONS				
Order entry	billions of €	5.2	increase	6.8

^a Contrary to the forecasts published in the 2017 combined management report (2017 Annual Report, page 101 et seq.), we adjusted the forecast figures for 2018 during the course of the year (Interim Group Report as of March 31, 2018, page 26; Interim Group Report as of June 30, 2018, page 27; and Interim Group Report as of September 30, 2018, page 29).

^b Commitment index as per the 2017 employee survey.


^c Starting in Q2 2018, we no longer report the number of broadband lines from a technical perspective. Instead, we report the number of broadband customers.

We once again look back on a successful financial year. Our performance in 2018 was dominated by substantial growth in revenue and adjusted EBITDA. Revenue reached EUR 75.7 billion, achieving the expected rate of increase – adjusted for exchange rate effects and changes in the composition of the Group, this increase was even more pronounced. Adjusted EBITDA also followed this trend, reaching EUR 23.3 billion – adjusted for exchange rate effects and changes in the composition of the Group, it even surpassed our expectations of EUR 23.6 billion by EUR 0.2 billion. Adjusted for exchange rate effects and changes in the composition of the Group, free cash flow exceeded our expectations by EUR 0.1 billion. At EUR 12.2 billion, cash capex (before spectrum investment) fell short of the figure forecast. Adjusted for exchange rate effects and changes in the composition of the Group, this shortfall amounts to just under EUR 0.2 billion, due primarily to lower capital expenditure in our Systems Solutions operating segment.

Our key performance indicator ROCE (return on capital employed) declined by 1.1 percentage points in the reporting year to 4.7 percent. This negative trend was due to a decrease in net operating profit after taxes (NOPAT) while the average amount of net operating assets (NOA) increased slightly over the year. NOPAT was impacted by negative special factors of EUR 2.2 billion in 2018, in particular due to expenses for staff-related measures and for non-staff-related restructuring totaling EUR 1.3 billion, as well as impairment losses totaling EUR 0.7 billion recognized primarily on goodwill. Even the significant improvement in adjusted EBITDA could not completely offset these effects. In the prior year, NOPAT had been affected by negative special factors of EUR 0.4 billion, while positive special factors, such as the reversal of impairment losses previously recognized for spectrum licenses at T-Mobile US (EUR 1.7 billion) or the sale of Strato (EUR 0.5 billion) and of further shares in Scout24 AG (EUR 0.2 billion), had an off-

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setting effect. Overall, NOPAT amounted to EUR 5.9 billion in 2018, down from EUR 6.8 billion in 2017. NOA increased from EUR 118.9 billion to EUR 124.0 billion in 2018 as a result of growth in intangible assets and property, plant and equipment, as well as an increase in the present value of unrecognized rental and lease obligations, reflecting Deutsche Telekom's consistently high level of investment.


We are also very well on track with our non-financial key performance indicators, especially with regard to the development of fixed-network and mobile customer numbers. In our United States operating segment in particular, we again recorded continued strong mobile customer additions, both in the post-paid and prepaid segments. The customer growth in our Europe operating segment is largely a result of the fixed-network lines added as part of the acquisition of UPC Austria. Even without this effect, the number of fixed-network lines grew by 3.2 percent. At the end of the reporting year, customer satisfaction came in at 67.7 points versus 67.2 points at the start of the year. Changes to the revenue shares contributed by each country and steps to harmonize the statistical units in the countries led to us recalculating the baseline figure for 2018 on the basis of the new structures these changes entailed. The new baseline thus diverges from the figure of 68.8 reported as of December 31, 2017. This moderate upward trend is attributable to a slight increase in the Europe operating segment. Germany and Systems Solutions each essentially matched their prior-year levels. Our goal for the coming years is to achieve a steady overall improvement in customer satisfaction. Order entry at our Systems Solutions operating segment improved markedly in 2018, thanks in part to the successful conclusion of major deals in the traditional IT business. Order entry in our growth areas also developed very well in the reporting year. 

FIRST-TIME APPLICATION OF NEW ACCOUNTING STANDARDS AS OF JANUARY 1, 2018

The new accounting standards IFRS 15 "Revenue from Contracts with Customers" and IFRS 9 "Financial Instruments" took effect as of January 1, 2018. Prior-year comparatives were not adjusted.

IFRS 15 introduces an amended model for determining and recognizing revenue. The effects of the new regulations on our operating segments differ depending on the underlying business model and, for the most part, neutralize each other. For example, in our Germany operating segment – where the sale of subsidized handsets in combination with service contracts is still customary – the amortization of capitalized contract assets reduces revenue to a minor extent. In our United States operating segment – where customers are predominantly offered payment-by-installment models or lease models – there is a positive impact on revenue and EBITDA, mainly from the

capitalization of customer acquisition costs and their distribution over the average customer retention period. At Group level, there is an insignificant effect on revenue and a positive effect on EBITDA.

IFRS 15 has a material impact on the presentation of the Group's results of operations and its financial position. The main effects are explained where the changes in the relevant items of the statement of financial position are discussed. 

RESULTS OF OPERATIONS OF THE GROUP NET REVENUE

In 2018, we generated net revenue of EUR 75.7 billion, which was 0.9 percent or EUR 0.7 billion up on the prior-year level. Adjusted for negative net exchange rate effects of EUR 1.6 billion, and for slightly positive effects of changes in the composition of the Group, revenue increased by EUR 2.3 billion or 3.1 percent.

Our United States operating segment in particular contributed to the positive revenue trend with an increase of 2.2 percent – or, adjusted for exchange rate effects, of a substantial 6.8 percent. This increase was due primarily to higher service revenues from the rise in the average branded customer base, triggered in particular by the continued growth in existing and greenfield markets, the growing success in new customer segments, along with lower customer churn. In our German home market, revenue declined by 1.1 percent compared with the prior year. Adjusted for the effects of IFRS 15, revenue was at a comparable level with the previous year, with revenue from mobile business rising year-on-year. Higher IT and broadband revenues almost compensated for the decrease in fixed-network revenue. In our Europe operating segment, revenue was up by 2.6 percent year-on-year; adjusted for exchange rate effects and without the inclusion of UPC Austria as of July 31, 2018, it increased by 1.5 percent. Revenues in business customer operations and in mobile business had a positive effect. Fixed-network revenue also increased slightly year-on-year, mainly due to the positive revenue effect from TV and broadband business. These increases were partially offset by a decline in wholesale business. In our Systems Solutions operating segment, revenue remained on a par with the prior-year level. Revenues developed positively in our growth business, while declining as expected in our traditional IT business, notably in the international corporate customer business and due to the general market contraction in the core market of Western Europe, as well as to deliberate portfolio decisions. Revenue generated by our Group Development operating segment decreased by 3.4 percent year-on-year, a decline attributable in part to forgone revenue following the deconsolidation of Strato as of March 31, 2017. Positive effects on revenue at T-Mobile Netherlands resulted from high mobile handset sales; however, these were more than offset by negative regulatory effects. 



For details on remeasurement and reclassification effects, please refer to the section "Initial application of standards, interpretations, and amendments in the financial year" in the notes to the consolidated financial statements, page 154 et seq.



For further information on the trends in our main financial and non-financial key performance indicators, please refer to the relevant passages in this section as well as in the section "Development of business in the operating segments," page 60 et seq.



For further information on revenue development, please refer to the section "Development of business in the operating segments," page 60 et seq.

Contribution of the segments to net revenue

millions of €

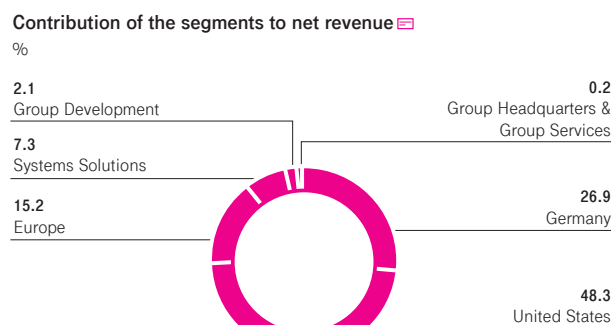
	2018	2017	Change	Change %	2016
NET REVENUE	75,656	74,947	709	0.9	73,095
Germany ^{a, b}	21,700	21,931	(231)	(1.1)	21,774
United States	36,522	35,736	786	2.2	33,738
Europe ^b	11,885	11,589	296	2.6	11,454
Systems Solutions ^b	6,936	6,918	18	0.3	6,993
Group Development ^b	2,185	2,263	(78)	(3.4)	2,347
Group Headquarters & Group Services ^{a, b}	2,735	2,935	(200)	(6.8)	3,460
Intersegment revenue	(6,307)	(6,425)	118	1.8	(6,670)

^a We assigned Vivento Customer Services GmbH, a provider of call center services, to our Germany operating segment as of January 1, 2018; previously it was part of our Group Headquarters & Group Services segment. Comparative figures have been adjusted retrospectively. For further information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq. and Note 35 "Segment reporting" in the notes to consolidated financial statements, pages 226 et seq.

^b Since January 1, 2017, we have reported on the Group Development operating segment and within the Group Headquarters & Group Services segment on the Board of Management department Technology and Innovation. Comparative figures have been adjusted retrospectively.

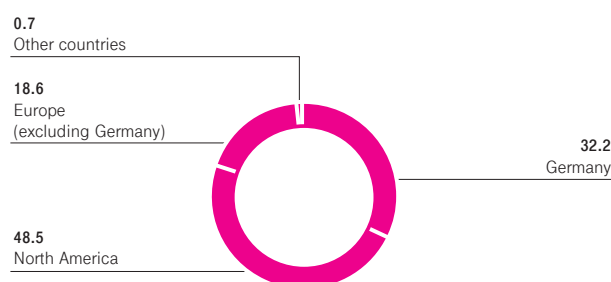


For further information, please refer to Note 35 "Segment reporting" in the notes to the consolidated financial statements, page 226 et seq.



Breakdown of revenue by region

%



For further information on the development of EBITDA/adjusted EBITDA in our segments, please refer to the section "Development of business in the operating segments," page 60 et seq. For an overview of the development of special factors, please refer to the table on page 54.

At 48.3 percent, our United States operating segment again provided the largest contribution to net revenue of the Group. This was an increase of 0.6 percentage points compared with the prior year, due in particular to ongoing strong customer additions. The proportion of net revenue generated internationally continued to increase, from 67.2 percent to 67.8 percent.

EBITDA, ADJUSTED EBITDA

Excluding special factors, adjusted EBITDA increased year-on-year by EUR 1.1 billion or 5.0 percent to EUR 23.3 billion in 2018. Negative exchange rate effects, primarily from the translation of U.S. dollars into euros, decreased the carrying amount by EUR 0.5 billion. Excluding these effects, adjusted EBITDA increased by as much as EUR 1.6 billion or 7.2 percent.

Adjusted EBITDA in our United States operating segment increased substantially, primarily due to higher revenue – the application of IFRS 15 also had a positive effect. Positive trends were also recorded by our Germany and Europe operating segments thanks to lower personnel costs and the successful implementation of our efficiency and digitalization initiatives – even without taking into account the acquisition of UPC Austria as of July 31, 2018 in the Europe operating segment. The decrease in adjusted EBITDA at our Systems Solutions operating segment was mainly attributable to the higher costs involved in establishing operations in growth areas, especially in the Internet of Things and the healthcare market, and to higher expenses resulting from the ongoing migration to all IP. Adjusted EBITDA in our Group Development operating segment remained stable at the prior-year level.

EBITDA decreased by EUR 2.1 billion or 8.9 percent compared with the prior year to EUR 21.8 billion due to a EUR 3.2 billion decrease in special factors to EUR -1.5 billion. The decline was attributable to a EUR 0.6 billion rise in expenses for staff-related measures and expenses for non-staff-related restructuring totaling EUR 1.3 billion. The prior year included a partial reversal of impairment losses on spectrum licenses at T-Mobile US, increasing the carrying amount by EUR 1.7 billion. Other positive factors in 2017 were income of EUR 0.5 billion from the divestiture of Strato, EUR 0.2 billion from the sale of further shares in Scout24 AG, and EUR 0.2 billion from the settlement agreement with BT. □

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Contribution of the segments to adjusted Group EBITDA

	2018		2017		Change		2016
	millions of €	Proportion of adjusted Group EBITDA %	millions of €	Proportion of adjusted Group EBITDA %	millions of €	Change %	
EBITDA (ADJUSTED FOR SPECIAL FACTORS) IN THE GROUP	23,333	100.0	22,230	100.0	1,103	5.0	21,420
Germany ^{a, b}	8,610	36.9	8,412	37.8	198	2.4	8,161
United States	10,088	43.2	9,316	41.9	772	8.3	8,561
Europe ^b	3,880	16.6	3,749	16.9	131	3.5	3,866
Systems Solutions ^b	429	1.8	509	2.3	(80)	(15.7)	530
Group Development ^b	921	3.9	915	4.1	6	0.7	943
Group Headquarters & Group Services ^{a, b}	(515)	(2.2)	(661)	(3.0)	146	22.1	(594)
Reconciliation	(79)	(0.3)	(11)	(0.0)	(68)	n.a.	(48)

^a We assigned Vivento Customer Services GmbH, a provider of call center services, to our Germany operating segment as of January 1, 2018; previously it was part of our Group Headquarters & Group Services segment. Comparative figures have been adjusted retrospectively. For further information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq., and Note 35 "Segment reporting" in the notes to consolidated financial statements, pages 226 et seq.

^b Since January 1, 2017, we have reported on the Group Development operating segment and within the Group Headquarters & Group Services segment on the Board of Management department Technology and Innovation. Comparative figures have been adjusted retrospectively.

EBIT



Group EBIT stood at EUR 8.0 billion in the reporting year, down EUR 1.4 billion or 14.7 percent against the prior year. This decrease is partly due to the effects described under EBITDA. Depreciation, amortization and impairment losses stood at EUR 13.8 billion overall, down EUR 0.8 billion on the prior year. Impairment losses on intangible assets and property, plant and equipment – mainly on goodwill in our Europe operating segment in the national companies in Poland and Romania – reduced EBIT by EUR 0.7 billion. In the prior year, impairment losses totaling EUR 2.2 billion were recognized, mainly on goodwill in the Systems Solutions and Europe operating segments. Depreciation and amortization was EUR 0.7 billion higher than in the prior year. 

PROFIT BEFORE INCOME TAXES

Profit before income taxes increased slightly from EUR 5.0 billion in the prior year to EUR 5.2 billion. At EUR 2.8 billion, the loss from financial activities was EUR 1.5 billion lower than a year earlier, offsetting the effects of the reduction in EBIT. The high loss in the previous year was due in particular to the EUR 1.5 billion impairment of our financial stake in BT that was recognized in profit or loss. In March 2018, we transferred our financial stake in BT to Deutsche Telekom Trust e.V., where it will be used as plan assets to cover our pension obligations. With effect from the beginning of 2018, changes in the value of our stake are recognized directly in equity (other comprehensive income) and no longer as profit/loss from financial activities in the income statement. Nor will future dividend income from the stake in BT be recognized in profit/loss from financial activities. Finance costs decreased by EUR 0.4 billion. This was essentially due to the fact that T-Mobile US has increasingly been financed

internally since 2017, and that refinancing terms continue to be favorable. The share of profit/loss of associates and joint ventures accounted for using the equity method decreased to EUR -0.5 billion. This was mainly attributable to the settlement agreement reached to end the Toll Collect arbitration proceedings, which had a negative effect of EUR 0.6 billion. By contrast, the profit distribution of Toll Collect GmbH – EUR 0.1 billion of which is attributable to Deutsche Telekom – had a positive effect. Losses from financial instruments increased losses from financial activities by EUR 0.4 billion, primarily as a result of the remeasurement of derivatives, in particular at T-Mobile US. In the prior year, losses from financial instruments were impacted by negative effects totaling EUR 0.8 billion.

NET PROFIT/LOSS

Net profit decreased year-on-year by EUR 1.3 billion to EUR 2.2 billion in 2018. After recording a tax benefit of EUR 0.6 billion in the prior year, which was primarily attributable to the reduction in the U.S. federal tax rate from 35 percent to 21 percent and to related non-cash deferred tax benefits of EUR 2.7 billion, we recorded a tax expense of EUR 1.8 billion in 2018.  Profit attributable to non-controlling interests decreased compared with 2017 by EUR 0.9 billion to EUR 1.2 billion. The recognized deferred tax benefit as well as the partial reversal in the prior year of impairment losses on spectrum licenses in our United States operating segment in particular contributed to this trend. 

The following table presents a reconciliation of EBITDA, EBIT, and net profit/loss to the respective figures adjusted for special factors.



For further information, please refer to Note 26 "Depreciation, amortization and impairment losses" in the notes to the consolidated financial statements, page 216.



For further information, please refer to Note 30 "Income taxes" in the notes to the consolidated financial statements, page 218 et seq.



For further information on the development of our results of operations, please refer to the disclosures under "Notes to the consolidated income statement" in the notes to the consolidated financial statements, page 214 et seq.

Consolidated income statement and effects of special factors

millions of €

	EBITDA 2018	EBIT 2018	EBITDA 2017	EBIT 2017	EBITDA 2016	EBIT 2016
EBITDA/EBIT	21,836	8,001	23,969	9,383	22,544	9,164
GERMANY	(598)	(598)	(308)	(308)	(905)	(905)
Staff-related measures	(565)	(565)	(221)	(221)	(857)	(857)
Non-staff-related restructuring	(46)	(46)	(26)	(26)	(38)	(38)
Effects of deconsolidations, disposals and acquisitions	0	0	0	0	8	8
Impairment losses	0	0	0	0	0	0
Other	13	13	(61)	(61)	(18)	(18)
UNITED STATES	(160)	(160)	1,633	1,633	406	406
Staff-related measures	(15)	(15)	(7)	(7)	(11)	(11)
Non-staff-related restructuring	0	0	0	0	0	0
Effects of deconsolidations, disposals and acquisitions	(145)	(145)	(11)	(11)	417	417
Impairment losses	0	0	1,651	1,651	0	0
Other	0	0	0	0	0	0
EUROPE	(122)	(797)	(130)	(995)	(93)	(277)
Staff-related measures	(90)	(90)	(93)	(93)	(100)	(100)
Non-staff-related restructuring	0	0	(3)	(3)	(4)	(4)
Effects of deconsolidations, disposals and acquisitions	(14)	(14)	18	18	25	25
Impairment losses	0	(674)	0	(865)	0	(184)
Other	(19)	(19)	(53)	(53)	(14)	(14)
SYSTEMS SOLUTIONS	(266)	(322)	(229)	(1,477)	(252)	(276)
Staff-related measures	(194)	(194)	(132)	(132)	(136)	(136)
Non-staff-related restructuring	(4)	(4)	(2)	(2)	(5)	(5)
Effects of deconsolidations, disposals and acquisitions	0	0	0	0	0	0
Impairment losses	0	(56)	0	(1,248)	0	0
Other	(68)	(68)	(94)	(94)	(111)	(135)
GROUP DEVELOPMENT	(27)	(27)	893	893	2,547	2,132
Staff-related measures	(6)	(6)	1	1	(35)	(35)
Non-staff-related restructuring	0	0	(5)	(5)	(3)	(3)
Effects of deconsolidations, disposals and acquisitions	(21)	(21)	708	708	2,585	2,585
Impairment losses	0	0	0	0	0	(415)
Other	(1)	(1)	189	189	0	0
GROUP HEADQUARTERS & GROUP SERVICES	(322)	(322)	(119)	(119)	(579)	(579)
Staff-related measures	(288)	(288)	(107)	(107)	(499)	(499)
Non-staff-related restructuring	(59)	(59)	(49)	(49)	(31)	(31)
Effects of deconsolidations, disposals and acquisitions	(44)	(44)	63	63	(19)	(19)
Impairment losses	0	0	0	0	0	0
Other	69	69	(26)	(26)	(29)	(29)
GROUP	(1,497)	(2,204)	1,740	(374)	1,125	502
Staff-related measures	(1,159)	(1,159)	(559)	(559)	(1,638)	(1,638)
Non-staff-related restructuring	(109)	(109)	(85)	(85)	(81)	(81)
Effects of deconsolidations, disposals and acquisitions	(223)	(223)	778	778	3,015	3,015
Impairment losses	0	(707)	1,651	(463)	0	(599)
Other	(6)	(6)	(45)	(45)	(171)	(195)
EBITDA/EBIT (ADJUSTED FOR SPECIAL FACTORS)	23,333	10,204	22,230	9,757	21,420	8,663
Profit (loss) from financial activities (adjusted for special factors)		(2,091)		(2,895)		(2,323)
PROFIT (LOSS) BEFORE INCOME TAXES (ADJUSTED FOR SPECIAL FACTORS)		8,114		6,863		6,340
Income taxes (adjusted for special factors)		(2,225)		949		(1,858)
PROFIT (LOSS) (ADJUSTED FOR SPECIAL FACTORS)		5,889		7,812		4,482
PROFIT (LOSS) (ADJUSTED FOR SPECIAL FACTORS) ATTRIBUTABLE TO						
Owners of the parent (net profit (loss)) (adjusted for special factors)		4,545		6,039		4,114
Non-controlling interests (adjusted for special factors)		1,344		1,773		368

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FINANCIAL POSITION OF THE GROUP

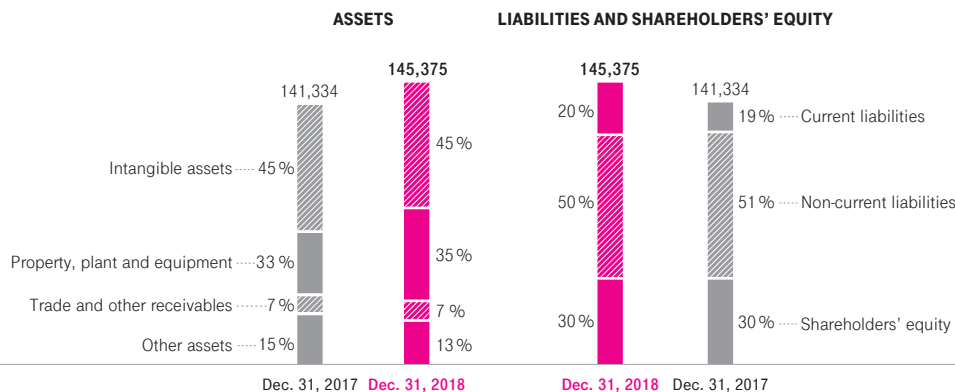
Condensed consolidated statement of financial position

millions of €

	Dec. 31, 2018	Change	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
ASSETS						
CURRENT ASSETS	21,870	1,478	20,392	26,638	32,184	29,798
Cash and cash equivalents	3,679	367	3,312	7,747	6,897	7,523
Trade and other receivables	9,988	265	9,723	9,362	9,238	10,454
Contract assets	1,765	n. a.	n. a.	n. a.	n. a.	n. a.
Non-current assets and disposal groups held for sale	145	(16)	161	372	6,922	5,878
Other current assets	6,293	(903)	7,196	9,157	9,127	5,943
NON-CURRENT ASSETS	123,505	2,562	120,943	121,847	111,736	99,562
Intangible assets	64,950	2,085	62,865	60,599	57,025	51,565
Property, plant and equipment	50,631	3,753	46,878	46,758	44,637	39,616
Capitalized contract costs	1,744	n. a.	n. a.	n. a.	n. a.	n. a.
Investments accounted for using the equity method	576	(75)	651	725	822	617
Other non-current assets	5,604	(4,944)	10,548	13,765	9,252	7,764
TOTAL ASSETS	145,375	4,041	141,334	148,485	143,920	129,360
LIABILITIES AND SHAREHOLDERS' EQUITY						
CURRENT LIABILITIES	29,144	1,778	27,366	33,126	33,548	28,198
Financial liabilities	10,527	2,169	8,358	14,422	14,439	10,558
Trade and other payables	10,735	(236)	10,971	10,441	11,090	9,681
Current provisions	3,144	(228)	3,372	3,068	3,367	3,517
Contract liabilities	1,720	n. a.	n. a.	n. a.	n. a.	n. a.
Liabilities directly associated with non-current assets and disposal groups held for sale	36	36	0	194	4	6
Other current liabilities	2,982	(1,682)	4,664	5,001	4,648	4,436
NON-CURRENT LIABILITIES	72,794	1,296	71,498	76,514	72,222	67,096
Financial liabilities	51,748	2,577	49,171	50,228	47,941	44,669
Non-current provisions	8,793	(2,737)	11,530	11,771	11,006	10,838
Other non-current liabilities	11,668	870	10,798	14,515	13,275	11,589
Contract liabilities	585	n. a.	n. a.	n. a.	n. a.	n. a.
SHAREHOLDERS' EQUITY	43,437	967	42,470	38,845	38,150	34,066
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	145,375	4,041	141,334	148,485	143,920	129,360

Structure of the consolidated statement of financial position

millions of €




Total assets amounted to EUR 145.4 billion, up by EUR 4.0 billion against December 31, 2017.

The mandatory first-time application of the new accounting standards IFRS 9 and IFRS 15 as of January 1, 2018 resulted in remeasurement and reclassification effects recognized directly in equity. For example, assets increased as of January 1, 2018 on account of **contract assets** of EUR 1.8 billion to be capitalized for the first time in accordance with IFRS 15 and **contract costs** to be capitalized of EUR 1.2 billion. By contrast, reclassifications and remeasurements were made from **trade and other receivables**, decreasing them by EUR 0.3 billion compared with December 31, 2017. Liabilities and shareholders' equity also increased as of the date of first-time application as a result of the initial recognition of current and non-current **contract liabilities** amounting to EUR 2.5 billion. At the same time, current and non-current **other liabilities** decreased by a comparable amount. 



For further information on the effects of the first-time application of the new accounting standards IFRS 9 and IFRS 15, please refer to the section "Summary of accounting policies" in the notes to the consolidated financial statements, page 153 et seq.

Cash and cash equivalents increased by EUR 0.4 billion year-on-year. 

Trade and other receivables increased by EUR 0.3 billion to EUR 10.0 billion, mainly due to higher receivables in both the United States and Germany operating segments. In the United States operating segment, this increase was the result of the higher volume of receivables for terminal equipment sold under installment plans and the larger customer base. Exchange rate effects from the translation of U.S. dollars into euros also contributed to the increase, which was partially offset in particular by reclassification and remeasurement effects from the mandatory first-time application of the new accounting standards IFRS 9 and IFRS 15.



For further information, please refer to the section "Consolidated statement of cash flows," page 152, and Note 34 "Notes to the consolidated statement of cash flows," page 223 et seq., in the notes to the consolidated financial statements.

Other current assets developed as follows until December 31, 2018: **Other current financial assets** decreased by EUR 0.5 billion to EUR 2.8 billion, due, among other factors, to the remeasurement as of the reporting date of derivatives. Exchange rate effects from the translation of U.S. dollars into euros had an offsetting effect. **Inventories** decreased by EUR 0.2 billion to EUR 1.8 billion, mainly due to the reduction in the stock levels of terminal equipment (in particular higher-priced smartphone models) in the United States operating segment; exchange rate effects, mainly from the translation of U.S. dollars into euros, had an offsetting effect. **Income tax receivables** increased by EUR 0.3 billion.

Intangible assets grew by EUR 2.1 billion to EUR 65.0 billion, mainly due to additions totaling EUR 4.0 billion. They mainly comprised capital expenditures in the United States, Europe, and Germany operating segments and in the Group Headquarters & Group Services segment. Exchange rate effects of EUR 1.7 billion, particularly from the translation of U.S. dollars into euros, and effects of changes in the composition of the Group in the amount of EUR 1.5 billion resulting from the ac-


quisition of the Austrian cable operator UPC Austria in the Europe operating segment and the online TV provider Layer3 TV in the United States operating segment, also increased the carrying amount. Depreciation and amortization of EUR 4.3 billion and impairment losses of EUR 0.7 billion reduced the carrying amount. In the Europe operating segment, the annual impairment test resulted in impairment losses on goodwill of EUR 0.6 billion in total in our national companies in Poland and Romania. The first-time application of IFRS 15 as of January 1, 2018 produced effects that reduced the carrying amount by EUR 0.1 billion.

Property, plant and equipment increased by EUR 3.8 billion to EUR 50.6 billion. Additions of EUR 11.3 billion, primarily in the United States and Germany operating segments, increased the carrying amount. They included, in particular, capital expenditure in connection with the modernization of the T Mobile US network as well as for broadband and fiber-optic build-out, the IP transformation, and mobile infrastructure in the Germany operating segment. They also included EUR 0.9 billion for capitalized higher-priced mobile handsets in connection with the JUMP! On Demand business model at T-Mobile US, under which customers do not purchase the device but lease it. Changes in the composition of the Group, particularly the acquisition of UPC Austria and Layer3 TV, also increased the carrying amount by EUR 1.4 billion. Exchange rate effects, primarily from the translation of U.S. dollars into euros, increased the carrying amount by EUR 0.6 billion. By contrast, depreciation, amortization and impairment losses of EUR 8.8 billion overall, and disposals of EUR 0.6 billion reduced the carrying amount. Of these disposals, EUR 0.3 billion was attributable to terminal equipment returned by customers under the JUMP! On Demand model.

Other non-current assets developed as follows until December 31, 2018: **Other non-current financial assets** decreased by EUR 4.1 billion to EUR 1.6 billion. On March 23, 2018, we transferred our 12 percent financial stake in BT, which was worth EUR 3.1 billion at the time, to the Group's own trust, Deutsche Telekom Trust e.V., where it will serve as plan assets to cover pension entitlements. The impairment loss on the exchange-traded stake in BT – which was recognized in other comprehensive income for the period from January 1, 2018 until the date of transfer – reduced the carrying amount by EUR 0.7 billion. Negative effects from the remeasurement of derivative financial instruments as of the reporting date also reduced the carrying amount.

Our current and non-current **financial liabilities** increased by EUR 4.7 billion compared with the prior year to EUR 62.3 billion in total. This was mainly due to the euro bonds with a total volume of EUR 3.4 billion issued by Deutsche Telekom International Finance B.V., U.S. dollar bonds with a total volume of EUR 1.5 billion (USD 1.75 billion), and pound sterling bonds with a total volume of EUR 0.3 billion (GBP 0.3 billion), as well

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as to the bonds issued by T-Mobile US with a volume of EUR 2.0 billion (USD 2.5 billion). In addition, OTE issued a euro bond with a volume of EUR 0.4 billion. The settlement agreed in the Toll Collect arbitration proceedings increased financial liabilities by EUR 0.6 billion. Payment of the first tranche of EUR 0.2 billion in the reporting year reduced financial liabilities. The early repayment of T-Mobile US' debt instruments in the amount of EUR 2.7 billion (USD 3.4 billion) and regular repayments in the Group of euro bonds of EUR 1.1 billion and U.S. dollar bonds of EUR 0.7 billion (USD 0.85 billion) also decreased the carrying amount of financial liabilities. The initial recognition and measurement of forward-payer swaps with a total volume of USD 9.6 million in the United States operating segment gave rise to a remeasurement loss recognized directly in equity of EUR 0.4 billion. 

Trade and other payables decreased from EUR 11.0 billion at the end of 2017 to EUR 10.7 billion. A decline in liabilities in the United States operating segment was offset by a slight increase in liabilities in the Germany operating segment. Exchange rate effects from the translation from U.S. dollars into euros had an increasing effect.

Current and non-current **provisions** decreased substantially against the prior-year level by EUR 3.0 billion to EUR 11.9 billion, of which EUR 5.5 billion (December 31, 2017: EUR 8.4 billion) related to provisions for pensions and other employee benefits. The decrease is mainly due to the transfer of our stake in BT and the associated netting of these plan assets with the defined benefit obligations. At EUR 6.4 billion, other provisions were slightly lower than in the prior year.

Shareholders' equity increased from EUR 42.5 billion as of December 31, 2017 to EUR 43.4 billion. This increase was attributable in particular to the net profit of EUR 3.3 billion and to the transition to IFRS 9 and 15. The cumulative effect of this was an increase of EUR 1.5 billion in retained earnings (including shares attributable to non-controlling interests) recognized directly in equity as of January 1, 2018. Currency translation effects of EUR 1.0 billion recognized directly in equity and capital increases from share-based payments of EUR 0.4 billion, especially in our United States operating segment, also increased shareholders' equity. By contrast, the carrying amount was reduced in particular by dividend payments for the 2017 financial year to Deutsche Telekom AG shareholders in the amount of EUR 3.1 billion and to non-controlling interests in the amount of EUR 0.2 billion. In addition, transactions with owners reduced shareholders' equity by a further EUR 1.4 billion. These transactions include EUR 0.9 billion for T-Mobile US' share buy-back program, EUR 0.3 billion for the acquisition of another 5 percent stake in the Greek subsidiary OTE, and EUR 0.2 billion for the T-Mobile US shares acquired by Deutsche Telekom in the first quarter of 2018. Furthermore, the subsequent measurement in other comprehensive income of equity instruments held reduced the carrying amount by EUR 0.6 billion; this figure includes the impairment loss of EUR 0.7 billion on the exchange-traded stake in BT that was recognized in other comprehensive income for the period from January 1, 2018 through March 23, 2018.



For further information on the development of financial liabilities, please refer to Note 12 "Financial liabilities" in the notes to the consolidated financial statements, page 196 et seq.

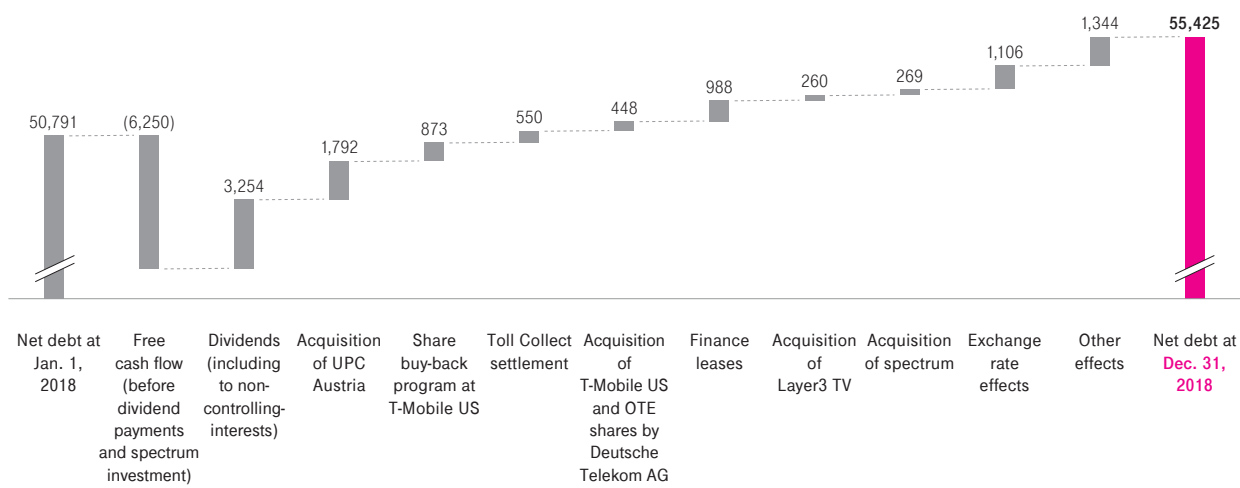
Calculation of net debt

millions of €


	Dec. 31, 2018	Dec. 31, 2017	Change	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
Financial liabilities (current)	10,527	8,358	2,169	14,422	14,439	10,558
Financial liabilities (non-current)	51,748	49,171	2,577	50,228	47,941	44,669
FINANCIAL LIABILITIES	62,275	57,529	4,746	64,650	62,380	55,227
Accrued interest	(719)	(692)	(27)	(955)	(1,014)	(1,097)
Other	(928)	(781)	(147)	(1,029)	(857)	(1,038)
GROSS DEBT	60,628	56,056	4,572	62,666	60,509	53,092
Cash and cash equivalents	3,679	3,312	367	7,747	6,897	7,523
Available-for-sale financial assets/financial assets held for trading	0	7	(7)	10	2,877	289
Derivative financial assets	870	1,317	(447)	2,379	2,686	1,343
Other financial assets	654	629	25	2,571	479	1,437
NET DEBT	55,425	50,791	4,634	49,959	47,570	42,500

Changes in net debt

millions of €



Our **net debt** increased by EUR 4.6 billion year-on-year to EUR 55.4 billion. The reasons for this are presented in the graphic above. Other effects of EUR 1.3 billion include, among other factors, liabilities for the acquisition of media broadcasting rights and financing options under which the payments for trade payables become due at a later point in time by involving banks in the process. Remeasurement losses from forward payer swaps recognized directly in equity are also included.

Off-balance sheet assets and other financing formats. In addition to the assets recognized in the statement of financial position, we use off-balance-sheet assets. This primarily relates to leased property. 



For further information, please refer to Note 37 "Leases," pages 232 and 233, and Note 38 "Other financial obligations," page 234, in the notes to the consolidated financial statements.

Off-balance-sheet financial instruments mainly relate to the sale of receivables by means of factoring. Total receivables sold as of December 31, 2018 amounted to EUR 4.7 billion (December 31, 2017: EUR 4.7 billion). This mainly relates to factoring agreements in the United States and Germany operating segments. The agreements are used in particular for active receivables management.

Furthermore, in the reporting year, we chose financing options totaling EUR 0.2 billion (2017: EUR 0.3 billion) which extended the period of payment for trade payables from operating and investing activities by involving banks in the process and which upon payment are shown under cash flows used in/from financing activities. As a result, we show these payables under financial liabilities in the statement of financial position.

In 2018, we leased network equipment for a total of EUR 1.0 billion (2017: EUR 1.0 billion), primarily in the United States operating segment, which is recognized as a finance lease. In the statement of financial position, we therefore also recognize this item under financial liabilities and the future repayments of the liabilities in net cash from/used in financing activities.

Finance management. Our finance management ensures our Group's ongoing solvency and hence its financial equilibrium. The fundamentals of Deutsche Telekom's finance policy are established each year by the Board of Management and overseen by the Supervisory Board. Group Treasury is responsible for implementing the finance policy and for ongoing risk management.

The rating of Deutsche Telekom AG

	Standard & Poor's	Moody's	Fitch
LONG-TERM RATING			
Dec. 31, 2014	BBB+	Baa1	BBB+
Dec. 31, 2015	BBB+	Baa1	BBB+
Dec. 31, 2016	BBB+	Baa1	BBB+
Dec. 31, 2017	BBB+	Baa1	BBB+
DEC. 31, 2018	BBB+	Baa1	BBB+
OUTLOOK			
	CreditWatch negative	Negative	Stable
SHORT-TERM RATING			
	A-2	P-2	F2

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Financial flexibility

	2018	2017	2016	2015	2014
RELATIVE DEBT					
Net debt	2.4 x	2.3 x	2.3 x	2.4 x	2.4 x
EBITDA (adjusted for special factors)					
EQUITY RATIO					
%	29.9	30.0	26.2	26.5	26.3

To ensure financial flexibility, we primarily use the KPI relative debt. This is a core component of our finance strategy and an important performance indicator for investors, analysts, and rating agencies.


Condensed consolidated statement of cash flows

millions of €

	2018	2017	2016
NET CASH FROM OPERATING ACTIVITIES	17,948	17,196	15,533
Cash outflows for investments in intangible assets (excluding goodwill and before spectrum investment) and property, plant and equipment (CASH CAPEX)	(12,223)	(12,099)	(10,958)
Proceeds from disposal of intangible assets (excluding goodwill) and property, plant and equipment	525	400	364
FREE CASH FLOW (BEFORE DIVIDEND PAYMENTS AND SPECTRUM INVESTMENT)	6,250	5,497	4,939
NET CASH USED IN INVESTING ACTIVITIES	(14,297)	(16,814)	(13,608)
NET CASH USED IN FINANCING ACTIVITIES	(3,259)	(4,594)	(1,322)
Effect of exchange rate changes on cash and cash equivalents	(17)	(226)	250
Changes in cash and cash equivalents associated with non-current assets and disposal groups held for sale	(8)	3	(3)
Net increase (decrease) in cash and cash equivalents	367	(4,435)	850
CASH AND CASH EQUIVALENTS	3,679	3,312	7,747

Free cash flow. Free cash flow of the Group before dividend payments and spectrum investment grew from EUR 5.5 billion in the prior year to EUR 6.2 billion, with **net cash from operating activities** increasing by EUR 0.8 billion to EUR 17.9 billion. Exchange rate effects adversely affected the positive business trend in the United States operating segment. In addition, positive effects from factoring agreements – in particular in the Systems Solutions and Germany operating segments – on net cash from operating activities were EUR 0.3 billion lower than in the prior year. A EUR 0.1 billion increase in income tax payments compared with the prior year also had a negative impact. Furthermore, the comparable figure in the prior year included a EUR 0.1 billion higher dividend payment from BT (totaling EUR 0.2 billion), while the profit of EUR 0.1 billion distributed

by Toll Collect GmbH was a key component in the reporting year. A decrease of EUR 0.8 billion in net interest payments compared with the prior year, mainly due to the fact that T-Mobile US has increasingly been financed internally since 2017, and that refinancing terms continue to be favorable, had a positive effect on the trend in net cash from operating activities.

Cash capex (before spectrum investment) increased by EUR 0.1 billion compared with 2017. Capital expenditures were focused primarily on the United States, Germany, and Europe operating segments and went toward the build-out and upgrade of our networks. Adjusted for exchange rate effects, cash capex was significantly higher overall than in the prior year. 



For further information on the statement of cash flows, please refer to Note 34 "Notes to the consolidated statement of cash flows" in the notes to the consolidated financial statements, page 223 et seq.

DEVELOPMENT OF BUSINESS IN THE OPERATING SEGMENTS



For detailed information, please refer to the IR back-up at www.telekom.com/en/investor-relations (content not audited by the external auditor).

GERMANY CUSTOMER DEVELOPMENT

thousands

	Dec. 31, 2018	Dec. 31, 2017	Change	Change %	Dec. 31, 2016
Mobile customers	44,202	43,125	1,077	2.5	41,849
Contract customers	25,435	25,887	(452)	(1.7)	25,219
Prepay customers	18,767	17,238	1,529	8.9	16,630
Fixed-network lines ^a	18,625	19,239	(614)	(3.2)	19,786
Of which: retail IP-based	15,356	11,996	3,360	28.0	9,042
Retail broadband lines ^b	13,561	13,209	352	2.7	12,922
Of which: optical fiber	7,236	5,803	1,433	24.7	4,250
Television (IPTV, satellite)	3,353	3,139	214	6.8	2,879
Unbundled local loop lines (ULLs)	5,236	6,138	(902)	(14.7)	7,195
Wholesale broadband lines	6,722	5,639	1,083	19.2	4,377
Of which: optical fiber	4,970	3,783	1,187	31.4	2,555

^a The baseline as of January 1, 2018 increased (by 62 thousand) due to the inclusion of new products launched in the Business Customer portfolio. Prior-year comparatives were not adjusted.

^b The baseline as of January 1, 2018 increased (by 53 thousand) due to the inclusion of new products launched in the Business Customer portfolio. Prior-year comparatives were not adjusted.



For information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq., and Note 35 "Segment reporting" in the notes to the consolidated financial statements, page 226 et seq.

Total

In Germany we continue to be market leader both in terms of fixed-network and mobile revenues. This success is attributable to our high-performance networks. [SDG 9](#) We offer best customer experience with multi-award winning network quality – like in the connect readers' choice awards where we came top of the fixed and mobile provider categories – and a broad portfolio of products. Due to the growing demand for our convergent product MagentaEINS the number of new customers increased by 642 thousand year-on-year, bringing the total number of customers to 4.3 million at the end of 2018.

In mobile communications, we won another 1,077 thousand customers in 2018. High demand for mobile rate plans with included data volumes resulted in an increase in the number of branded contract customers under the Telekom and congstar brands. Business fluctuations at one of our service providers in 2018, due in part to the deregistration of inactive SIM cards, had a negative impact overall on customer development. We recorded growth in the number of prepay customers.

By the end of 2018, we had migrated 21.9 million retail and wholesale lines to IP, which corresponds to an overall migration rate of 86 percent.

We continued to see strong demand for our fiber-optic products. As of the end of 2018, the number of lines had increased to 12.2 million overall. In other words, we connected another 2.6 million lines to our fiber-optic network in Germany in the course of the reporting year. With the progress made in fiber-optic rollout and innovative vectoring technology, we also drove the marketing of higher bandwidths.

Mobile communications

In 2018, we won a total of 329 thousand contract customers under the Telekom and congstar brands and at Telekom Deutschland Multibrand GmbH. The number of mobile contract customers with service providers decreased, primarily due to business fluctuations – in part from the deregistration of inactive SIM cards – at one of our service providers. The number of prepay customers increased by 1,529 thousand.

Fixed network

Due to the persistently challenging development in the fixed-network market, primarily owing to aggressive pricing offers of competitors, we are pursuing new paths in marketing. Our focus is on convergent offerings, such as the market launch of MagentaTV in October 2018 with exclusive access to a wide range of extra content from the German TV stations ARD and ZDF, and our TV and fiber-optic lines. As a result, in 2018 the number of broadband lines grew by 299 thousand and the number of TV customers by 214 thousand. In the traditional fixed network, the number of lines decreased by 676 thousand.

Our MagentaZuhause rate plans offer a comprehensive product portfolio for the fixed network based on IP technology and rate plan-specific bandwidths. MagentaZuhause Hybrid bundles fixed-network and mobile technology in a single router. To date, 458 thousand customers, primarily based in rural areas, have selected this innovative product.



FINANCE

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Wholesale

As of December 31, 2018, fiber-optic lines accounted for 41.6 percent of all lines – 9.5 percentage points higher than the prior-year figure. This accelerated growth was driven largely by high demand for our contingent model. The number of unbundled local loop lines decreased by 902 thousand or

14.7 percent compared with the end of the prior year. This is due first to the move to higher-quality fiber-optic lines, and second to retail customers switching to cable operators. In addition, wholesale customers are migrating their retail customers to their own fiber-optic lines. The total number of lines in the wholesale sector increased compared with 2017 to 12.0 million.

DEVELOPMENT OF OPERATIONS

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE	21,700	21,931	(231)	(1.1)	21,774
Consumers	11,543	11,797	(254)	(2.2)	11,739
Business Customers ^a	6,082	6,017	65	1.1	5,923
Wholesale	3,720	3,747	(27)	(0.7)	3,742
Other ^a	355	370	(15)	(4.1)	370
Profit from operations (EBIT)	3,969	4,276	(307)	(7.2)	3,552
EBIT margin %	18.3	19.5			16.3
Depreciation, amortization and impairment losses	(4,042)	(3,828)	(214)	(5.6)	(3,703)
EBITDA	8,012	8,104	(92)	(1.1)	7,256
Special factors affecting EBITDA	(598)	(308)	(290)	(94.2)	(905)
EBITDA (ADJUSTED FOR SPECIAL FACTORS)	8,610	8,412	198	2.4	8,161
EBITDA margin (adjusted for special factors) %	39.7	38.4			37.5
CASH CAPEX	(4,240)	(4,214)	(26)	(0.6)	(4,031)

^a As of July 1, 2017, a share of revenue previously recognized under "Other" was assigned to Business Customers on account of a reorganization. Prior-year comparatives were not adjusted.

Total revenue

Total revenue decreased by 1.1 percent year-on-year in 2018. Adjusted for the effects of the IFRS 15 accounting standard, the application of which is mandatory from January 1, 2018, total revenue developed on a par with the prior year. In mobile business, revenue declined by 2.0 percent year-on-year; excluding the effects of IFRS 15, revenue increased compared with the prior year. Higher IT and broadband revenues had a positive impact on fixed-network revenue. This was sufficient to almost completely offset the year-on-year decrease in fixed-network revenues (primarily from voice components).

Revenue from **Consumers** declined by 2.2 percent year-on-year; adjusted for the effects of IFRS 15, the decline was only marginal. Volume-related revenue decreases continued to affect traditional fixed-network business. By contrast, revenue from broadband business increased.

Revenue from **Business Customers** grew by 1.1 percent; this growth was even slightly stronger once adjusted for the effects of IFRS 15. Mobile revenues increased by 2.6 percent and IT revenues by 22.1 percent compared with 2017. In the fixed network, by contrast, a decline was recorded in traditional voice telephony, due largely to the increasing number of customers moving to flat-rate plans.

Wholesale revenue was down slightly year-on-year. Adjusted for the effects of IFRS 15, revenue would have grown.

EBITDA, adjusted EBITDA

EBITDA amounted to EUR 8.0 billion in 2018, a decline of 1.1 percent against the prior year, due mainly to higher special factors for expenses in connection with our staff restructuring. EBITDA adjusted for special factors totaled EUR 8.6 billion in the reporting year, up 2.4 percent compared with the prior year. This year-on-year increase was attributable largely to the lower headcount and the successful implementation of our efficiency and digitalization initiatives. Our adjusted EBITDA margin increased to 39.7 percent, up from 38.4 percent in the prior year.

EBIT

Profit from operations decreased by 7.2 percent year-on-year to EUR 4.0 billion. In addition to the effects described under EBITDA, depreciation, amortization and impairment losses increased on account of sustained high investments in our network infrastructure.

Cash capex

Cash capex increased by 0.6 percent year-on-year. As part of our integrated network strategy, we again made significant investments in the broadband and fiber-optic rollout, our IP transformation, and our mobile infrastructure.



For information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq.

UNITED STATES

CUSTOMER DEVELOPMENT

thousands

	Dec. 31, 2018	Dec. 31, 2017	Change	Change %	Dec. 31, 2016
Mobile customers	79,651	72,585	7,066	9.7	71,455
Branded customers ^a	63,656	58,715	4,941	8.4	54,240
Branded postpaid ^a	42,519	38,047	4,472	11.8	34,427
Branded prepay ^a	21,137	20,668	469	2.3	19,813
Wholesale customers ^b	15,995	13,870	2,125	15.3	17,215

^a Due to certain acquisitions by T-Mobile US at the beginning of 2018, the number of branded postpaid customers as of the first quarter of 2018 included an adjustment of 13 thousand and the number of branded prepay customers as of the first quarter of 2018 included an adjustment of 9 thousand.

^b T-Mobile US believes current and future regulatory changes have made the Lifeline program offered by T-Mobile US' wholesale partners uneconomical. T-Mobile US will continue to support its wholesale partners offering the Lifeline program, but has excluded the Lifeline customers from the reported wholesale subscriber base resulting in the removal of 4,528 thousand reported wholesale customers in 2017.

Total

At December 31, 2018, the United States operating segment (T-Mobile US) had 79.7 million customers, compared to 72.6 million customers at December 31, 2017. Net customer additions were 7.0 million for the year ended December 31, 2018, compared to 5.7 million net customer additions for the year ended December 31, 2017 due to the factors described below.

Branded customers. Branded postpaid net customer additions were 4,459 thousand for the year ended December 31, 2018, compared to 3,620 thousand branded postpaid net customer additions for the year ended December 31, 2017. The increase in branded postpaid net customer additions was due primarily to higher gross customer additions from wearables, specifically the Apple watch, lower churn, continued growth in existing and greenfield markets, and the growing success of new customer segments such as T-Mobile ONE™ Unlimited 55+, T-Mobile ONE

Military and T-Mobile for Business. These increases were partially offset by the impact from more aggressive service promotions and the launch of Un-carrier Next – All Unlimited (with taxes and fees) in the first quarter of 2017.

Branded prepay net customer additions were 460 thousand for the year ended December 31, 2018, compared to 855 thousand branded prepay net customer additions for the year ended December 31, 2017. The decrease was due primarily to increased competitive activity in the marketplace, partially offset by lower migrations to branded postpaid plans.

Wholesale customers. Wholesale net customer additions were 2,125 thousand for the year ended December 31, 2018, compared to 1,183 thousand for the year ended December 31, 2017. The increase was due primarily to lower deactivations driven by the removal of Lifeline program customers during 2017.

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DEVELOPMENT OF OPERATIONS

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE	36,522	35,736	786	2.2	33,738
Profit from operations (EBIT)	4,634	5,930	(1,296)	(21.9)	3,685
EBIT margin %	12.7	16.6			10.9
Depreciation, amortization and impairment losses	(5,294)	(5,019)	(275)	(5.5)	(5,282)
EBITDA	9,928	10,949	(1,021)	(9.3)	8,967
Special factors affecting EBITDA	(160)	1,633	(1,793)	n.a.	406
EBITDA (ADJUSTED FOR SPECIAL FACTORS)	10,088	9,316	772	8.3	8,561
EBITDA margin (adjusted for special factors) %	27.6	26.1			25.4
CASH CAPEX	(4,661)	(11,932)	7,271	60.9	(5,855)

Total revenue

Total revenue for the United States operating segment of EUR 36.5 billion in 2018 increased by 2.2 percent, compared to EUR 35.7 billion in 2017. In U.S. dollars, T-Mobile US' total revenues increased by 6.8 percent year-on-year due primarily to growth in service revenue from increases in T-Mobile US' average branded customer base primarily from the continued growth in existing and greenfield markets, the growing success of new customer segments such as T-Mobile ONE™ Unlimited 55+, T-Mobile ONE Military, and T-Mobile for Business, along with lower postpaid churn in 2018, and higher connected devices, partially offset by lower branded postpaid Average Revenue per User (ARPU). Additionally, the increase in equipment revenues from a higher average revenue per device sold due to an increase in the high-end device mix and a positive impact from IFRS 15 since January 1, 2018, partially offset by a decrease in the number of devices sold and lower volumes of purchased leased devices at the end of the lease term, also contributed to the increase in total revenues.

EBITDA, adjusted EBITDA

In euros, adjusted EBITDA increased by 8.3 percent to EUR 10.1 billion in 2018, compared to EUR 9.3 billion in 2017. Adjusted EBITDA margin increased to 27.6 percent in 2018, compared to 26.1 percent in 2017. In U.S. dollars, adjusted EBITDA increased by 13.6 percent during the same period. Adjusted EBITDA increased due primarily to higher total revenues as discussed above, the positive impact of the reimbursements from our insurance carriers, net of costs incurred related to hurricanes, for 2018 of USD 247 million, compared to costs incurred related to hurricanes for 2017 of USD 294 million, as

well as from the positive impact from IFRS 15 and lower losses on equipment sales. These increases were partially offset by higher employee-related costs, costs related to managed services, higher lease, employee-related and repair and maintenance costs associated with network expansion, higher commissions, and lower gains on the disposal of spectrum.

EBITDA for 2018 included special factors of EUR -0.2 billion compared to special factors of EUR 1.6 billion for 2017. Special factors in 2018 mainly included costs related to the proposed Sprint transaction. The decrease in special factors was primarily due to a spectrum impairment reversal in 2017. Overall, EBITDA decreased by 9.3 percent to EUR 9.9 billion in 2018, compared to EUR 10.9 billion in 2017, due to the factors described above, including special factors.

EBIT

EBIT decreased to EUR 4.6 billion in 2018 compared to EUR 5.9 billion in 2017 driven by lower EBITDA and higher depreciation related to the continued build-out of our 4G LTE network, and the implementation of the first component of our new billing system.

Cash capex

Cash capex decreased to EUR 4.7 billion in 2018, compared to EUR 11.9 billion in 2017. In U.S. dollars, cash capex decreased to USD 5.5 billion compared to USD 13.2 billion in 2017, due primarily to spectrum licenses acquired in 2017. Excluding the effects of spectrum acquisitions, the increase in cash capex from 2017 to 2018 was not significant. Cash capex in 2018 was related to network build and the continued deployment of 600 MHz.



For information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq., and Note 35 "Segment reporting" in the notes to the consolidated financial statements, page 226 et seq.

EUROPE

CUSTOMER DEVELOPMENT

thousands

		Dec. 31, 2018	Dec. 31, 2017	Change	Change%	Dec. 31, 2016
EUROPE, TOTAL	Mobile customers	50,542	48,842	1,700	3.5	47,952
	Contract customers	26,665	25,483	1,182	4.6	24,315
	Prepay customers	23,877	23,359	518	2.2	23,637
	Fixed-network lines	9,068	8,439	629	7.5	8,531
	Of which: IP-based	7,420	5,734	1,686	29.4	5,016
	Broadband customers ^a	6,405	5,530	875	15.8	5,291
	Television (IPTV, satellite, cable)	4,835	4,244	591	13.9	4,049
	Unbundled local loop lines (ULLs)/wholesale PSTN	2,275	2,265	10	0.4	2,259
	Wholesale broadband lines	411	389	22	5.7	370
GREECE	Mobile customers	7,893	7,981	(88)	(1.1)	7,725
	Fixed-network lines	2,566	2,547	19	0.7	2,564
	Broadband customers ^a	1,893	1,757	136	7.7	1,631
ROMANIA	Mobile customers	5,360	5,258	102	1.9	5,722
	Fixed-network lines	1,741	1,865	(124)	(6.6)	1,969
	Broadband customers ^a	1,101	1,134	(33)	(2.9)	1,148
HUNGARY	Mobile customers	5,330	5,293	37	0.7	5,332
	Fixed-network lines	1,663	1,632	31	1.9	1,629
	Broadband customers ^a	1,148	1,073	75	7.0	1,012
POLAND	Mobile customers	10,787	10,454	333	3.2	10,634
	Fixed-network lines	18	32	(14)	(43.8)	20
	Broadband customers ^a	18	25	(7)	(28.0)	40
CZECH REPUBLIC	Mobile customers	6,188	6,176	12	0.2	6,049
	Fixed-network lines	318	197	121	61.4	140
	Broadband customers ^a	251	176	75	42.6	141
CROATIA	Mobile customers	2,273	2,244	29	1.3	2,234
	Fixed-network lines	931	967	(36)	(3.7)	1,001
	Broadband customers ^a	618	624	(6)	(1.0)	618
SLOVAKIA	Mobile customers	2,369	2,243	126	5.6	2,225
	Fixed-network lines	853	858	(5)	(0.6)	850
	Broadband customers ^a	543	516	27	5.2	479
AUSTRIA^b	Mobile customers	7,194	5,702	1,492	26.2	4,594
	Fixed-network lines	644	0	644	n. a.	0
	Broadband customers ^a	594	0	594	n. a.	0
OTHER^c	Mobile customers	3,149	3,490	(341)	(9.8)	3,438
	Fixed-network lines	333	340	(7)	(2.1)	358
	Broadband customers ^a	238	225	13	5.8	222

^a Starting Q2 2018, we no longer report the number of retail broadband lines from a technical perspective. Instead we report the number of broadband customers. Prior-year comparatives have been adjusted.

^b Following the acquisition of UPC Austria, we report fixed-network lines and broadband customers in Austria for the first time from Q3 2018.

^c "Other": national companies of Albania, Macedonia, and Montenegro, as well as the lines of the GTS Central Europe group in Romania.

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Total

The markets in our segment remained intensely competitive throughout the reporting year. We rose to the challenge in several ways, for instance by achieving substantial growth in 2018 of 49.9 percent in the number of FMC customers (fixed-mobile convergence), thanks in part to our convergent product portfolio, MagentaOne. The acquisition of UPC Austria as of July 31, 2018 in particular contributes to our aim of becoming an integrated provider of mobile and fixed-network products across our entire segment. We also concluded an agreement with Orange in July of this year that will enable us to offer comprehensive convergent services in Poland in the future, thanks to the shared use of Orange's fiber-optic network. In addition to the agreement with Orange, T-Mobile Polska signed another wholesale FTTH agreement with network operator Nexera, covering more than 450 thousand further households to be connected by the end of 2020. Our broadband and TV operations are becoming consistent revenue drivers, not least thanks to the large-scale build-out of our network with state-of-the-art fiber-optic-based lines (FTTH, FTTB, and FTTC). As a result, the number of IP lines increased by 29.4 percent to 7.4 million as of December 31, 2018, primarily thanks to the migration from traditional PSTN lines to IP technology. Our mobile operations recorded growth overall, with increases in both the number of high-value contract customers and the number of prepaid customers compared with the end of the prior year.

Mobile communications

The number of mobile customers totaled 50.5 million at the end of the reporting year, up by 3.5 percent or 1.7 million customers compared with the end of 2017. The number of contract customers continued to grow throughout the fourth quarter of 2018, bringing the total number of customers won in the reporting year to 1.2 million, an increase of 4.6 percent. These additions include the customer base of UPC Austria starting from the third quarter of 2018. Overall, our national companies reported positive trends in their customer base, especially in Poland, Romania, Hungary, Austria, and the Czech Republic. Contract customers accounted for 52.8 percent of the total customer base. Our customers benefited not only from our innovative services/rate plans, but also from greater coverage with fast mobile broadband – a result of our integrated network strategy. As of December 31, 2018, we already covered 97 percent of the population in the countries of our operating segment with LTE, reaching around 109 million people in total. Customer demand for high data volumes has risen sharply due to the explosion in data traffic driven by video streaming services, for example. The number of prepaid customers grew by 2.2 percent or 518 thousand.

Fixed network

Our TV and entertainment services saw substantial growth of 13.9 percent as of December 31, 2018, driven primarily by the acquisition of UPC Austria. But even without this effect, customer growth would have stood at 3.2 percent, with our national companies in Hungary, the Czech Republic, and Slovakia accounting for the majority of these net customer additions. With both telecommunication providers and OTT players offering TV services in the countries of our segment, the TV market there is highly contested.

The number of broadband customers increased by 15.8 percent as of the end of the reporting year to 6.4 million, with the acquisition of UPC Austria accounting for the majority of these net customer additions. Without this effect, there would have been growth of 5.7 percent. In particular, the customer bases of our national companies in Greece, the Czech Republic, Hungary, and Slovakia saw growth, partly on the back of increased investment in innovative fiber-optic-based technologies. We continued to extend our fiber-optic coverage and, as of December 31, 2018, had reached 7.6 million households.

Consistent growth in IP-based lines as a percentage of all fixed-network lines confirms that we are making good progress: At the end of December 2018, this share amounted to 81.8 percent. The acquisition of UPC Austria increased the number of fixed-network lines in our Europe operating segment to 9.1 million overall, an increase of 7.5 percent. Without this effect, development would have remained stable.

FMC – fixed-mobile convergence

Our portfolio of convergent products, MagentaOne, remained highly popular with consumers across all of our integrated national companies. As of December 31, 2018, we had 3.3 million FMC customers; this corresponds to significant growth of 49.9 percent or 1.1 million net additions year-on-year. Our national companies in Greece and Hungary were the main drivers of this trend. We have also been increasingly successful in marketing our MagentaOne Business product to business customers.

DEVELOPMENT OF OPERATIONS

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE^a	11,885	11,589	296	2.6	11,454
Greece	2,888	2,846	42	1.5	2,883
Romania	933	972	(39)	(4.0)	985
Hungary	1,889	1,808	81	4.5	1,673
Poland ^a	1,526	1,509	17	1.1	1,488
Czech Republic	1,047	1,011	36	3.6	959
Croatia	966	955	11	1.2	925
Slovakia	761	748	13	1.7	766
Austria	1,055	900	155	17.2	855
Other ^b	1,031	1,069	(38)	(3.6)	1,132
Profit from operations (EBIT)	744	462	282	61.0	1,184
EBIT margin %	6.3	4.0			10.3
Depreciation, amortization and impairment losses	(3,013)	(3,157)	144	4.6	(2,589)
EBITDA	3,757	3,619	138	3.8	3,773
Special factors affecting EBITDA	(122)	(130)	8	6.2	(93)
EBITDA (ADJUSTED FOR SPECIAL FACTORS)^a	3,880	3,749	131	3.5	3,866
Greece	1,180	1,135	45	4.0	1,120
Romania	138	166	(28)	(16.9)	175
Hungary	547	545	2	0.4	539
Poland ^a	390	419	(29)	(6.9)	482
Czech Republic	444	406	38	9.4	400
Croatia	398	386	12	3.1	374
Slovakia	322	315	7	2.2	302
Austria	345	266	79	29.7	258
Other ^b	116	110	6	5.5	215
EBITDA margin (adjusted for special factors) %	32.6	32.3			33.8
CASH CAPEX	(1,887)	(1,874)	(13)	(0.7)	(2,600)

The contributions of the national companies correspond to their respective unconsolidated financial statements and do not take consolidation effects at operating segment level into account.

^a The business of T-Systems Polska Sp. z o.o., which, in organizational terms, was previously assigned to the Systems Solutions operating segment, is now disclosed under the Europe operating segment as of September 1, 2017. Prior-year comparatives were not adjusted.

^b "Other": national companies of Albania, Macedonia, and Montenegro, as well as IWS (International Wholesale), consisting of Deutsche Telekom Global Carrier (TGC, formerly International Carrier Sales & Solutions (ICSS)) and units assigned to TGC in the national companies, as well as the GTS Central Europe group in Romania, and the Europe Headquarters.

Total revenue

Our Europe operating segment generated total revenue of EUR 11.9 billion in the reporting year, a year-on-year increase of 2.6 percent. In organic terms, i.e., assuming constant exchange rates and adjusted for the inclusion of UPC Austria as of July 31, 2018, revenue increased slightly by 1.5 percent. The mandatory first-time application of the IFRS 15 accounting standard as of January 1, 2018 did not have a material effect on the development of revenues at segment level.

Our business customer operations made the biggest contribution to organic growth, driven mainly by the good development of ICT business in Hungary. Mobile revenue also increased year-on-year, with most of the countries in our operating segment contributing to this trend. Fixed-network revenue at segment level also increased slightly year-on-year in the core business, mainly due to the positive revenue effect from broadband and TV business, especially in Greece, Hungary, and Slovakia. These increases were offset by a decline in wholesale business.

Intense competition on the telecommunications markets had a negative impact on our revenue in some countries of our operating segment.

Revenue from **Consumers** increased by 3.4 percent compared with the prior year, driven mainly by mobile business. Revenue from fixed-network business rose, too, on the back of the trend in TV and broadband operations driven by our innovative TV and program management activities as well as the continuous rollout of fiber-optic technology in most of our national companies. In addition to higher terminal equipment revenues, strong growth in the number of FMC customers had a positive impact on revenue. This offset declining voice telephony revenues.

Revenue from **Business Customers**, especially in ICT, grew again in 2018, increasing 3.7 percent year-on-year. Core business with fixed-network and mobile communications remained stable as a result of our convergent SME solutions (MagentaOne Business), which we sell on the markets. We generated double-

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digit percentage figures compared with the prior year with our corporate customers in key ICT/cloud computing business as well as in the innovative smart city/IoT fields. In terms of digitalization, in 2018 we showed our customers in countries including Hungary and Croatia new, simpler, and faster ways to manage their contracts with Deutsche Telekom, using self-service apps and portals.

Wholesale revenue declined year-on-year, driven largely by falling levels of minute volumes resulting from the substitution of voice telephony with messenger services as well as negative price effects.

Looking at the development by country, our national companies in Hungary, Greece, Slovakia, and Poland made the largest contributions to the organic development of revenue in the reporting year. This more than offset the decline in revenue in Romania in particular, which was attributable to lower fixed-network revenue from voice telephony in particular. A smaller customer base combined with lower prices also had a negative impact on broadband and TV business. B2B/ICT business customer operations made a positive revenue contribution. Mobile business remained stable compared with the prior-year level – the positive effect of the increase in customer numbers was offset by lower prices.

EBITDA, adjusted EBITDA

Our Europe operating segment generated adjusted EBITDA of EUR 3.9 billion in the reporting year, a year-on-year increase of 3.5 percent. In organic terms, i.e., assuming constant exchange rates and adjusted for the inclusion of UPC Austria, adjusted EBITDA increased by 1.8 percent. We thus ended 2018 posting year-on-year growth for four quarters in succession.

The positive trend in adjusted organic EBITDA was driven both by the growth in revenue and by savings made in indirect costs, especially in Romania, Croatia, the Czech Republic, and Greece – in the latter primarily as a result of lower personnel costs. By contrast, in terms of direct costs, market investments and costs relating to the B2B/ICT operations increased. In addition, regulatory effects, including the reduction in EU roaming charges, reduced adjusted EBITDA.

Looking at the development by country, the increase in adjusted organic EBITDA was largely attributable to the positive trends at our national companies in Greece, the Czech Republic, Hungary, and Austria. Contrasting developments were reported primarily at the national companies in Poland and Romania. In Romania, adjusted EBITDA was down 16.9 percent year-on-year, attributable on the one hand to the lower revenue contribution and on the other to higher direct costs resulting in part from higher market investments and regulation-induced higher roaming costs. The decline in adjusted EBITDA was partially offset by improved cost efficiency with regard to staff-related expenses.

Our EBITDA increased by 3.8 percent year-on-year to EUR 3.8 billion, due primarily to higher adjusted EBITDA. At EUR -122 million, special factors were EUR 8 million lower than in the prior year. In organic terms, EBITDA grew by 2.1 percent.

Development of operations in selected countries

Greece. In Greece, revenue stood at EUR 2.9 billion in the reporting year, up year-on-year by 1.5 percent. This was driven primarily by higher mobile revenue and consistently high fixed-network revenue. Broadband business posted particularly strong growth as a result of the marketing of fiber-optic and vectoring lines. The growth trend continued in our B2B/ICT business customer operations and wholesale business. Intense competitive pressure caused TV revenues to decline year-on-year. The FMC offering developed positively, with rising customer numbers and corresponding revenues.

In the reporting year, adjusted EBITDA in Greece increased substantially year-on-year by 4.0 percent to EUR 1.2 billion, driven largely by improved cost efficiency, especially with regard to personnel costs.

Hungary. In Hungary, revenue in the reporting year grew substantially by 4.5 percent compared with the prior year to EUR 1.9 billion. In organic terms, it increased by 7.8 percent. This growth was driven by rising mobile service revenues and by fixed-network business with sustained clear revenue growth in B2B/ICT business customer operations. Broadband and TV business also made a positive contribution to revenue. Our MagentaOne portfolio of FMC products is enjoying success among consumers and business customers alike, a trend that is underpinned by growing customer numbers and a corresponding rise in revenue. Both service revenues and terminal equipment business performed well, which was attributable to our high-speed, high-reach mobile network.

At EUR 547 million, adjusted EBITDA remained virtually at the prior-year level. Organically, adjusted EBITDA increased by 3.7 percent.

Austria. In Austria, we generated revenue of EUR 1,055 million in the reporting year, up 17.2 percent compared with the prior year. This increase is attributable to the effects of the acquisition of UPC Austria, which now allows us to offer fixed-network technology in addition to the mobile broadband internet services already being successfully marketed to our customers. In organic terms, i.e., adjusted for the inclusion of UPC Austria, revenue would remain on a par with the prior-year level.

The increase in revenue also impacted adjusted EBITDA, which increased by 29.7 percent year-on-year to EUR 345 million. Adjusted for the acquisition of UPC Austria, adjusted EBITDA would have been 3.3 percent higher year-on-year.

Poland. Revenue at our national company in Poland increased by 1.1 percent year-on-year to EUR 1.5 billion; in organic terms, it increased by 1.2 percent. This was mainly a result of higher revenue in B2B/ICT business following the integration of our Systems Solutions operations in the prior year. Mobile business remained on a par with the prior-year level; the positive effect of the increase in customer numbers was offset by a negative price effect. Fixed-network business posted a decline in wholesale revenue.

Adjusted EBITDA stood at EUR 390 million, down 6.9 percent year-on-year. In organic terms, adjusted EBITDA decreased by 6.7 percent. The positive revenue contribution was offset by higher direct costs – in particular higher interconnection costs and regulation-induced higher roaming costs. Indirect costs also reduced adjusted EBITDA marginally year-on-year as a result of higher personnel costs in connection with setting up new shops. Overall, the revenue trend, especially in the sale of terminal equipment and in fixed-network business, as well as a need for increased investment due to technological development and requirements, resulted in a lowering of revenue and earnings expectations in Poland.

SYSTEMS SOLUTIONS ORDER ENTRY

millions of €

	2018	2017	Change	Change%	2016
ORDER ENTRY	6,776	5,241	1,535	29.3	6,851

Development of business

We realigned our strategy for the Systems Solutions operating segment with a focus on returning to sustained growth in this area. Our previous investments in growth areas and innovation fields (such as the public cloud, the Internet of Things, all IP) along with efforts to scale back the number of risk-prone legacy contracts in our traditional IT operations mark important steps on our transformation journey. On this basis, we continue to realign the segment strategy to focus on consistently moving the business into strategic growth areas while simultaneously strengthening our telecommunications business and successfully managing the decline in traditional IT business.

EBIT

EBIT in our Europe operating segment increased significantly by 61.0 percent in the reporting year to EUR 744 million, driven by the positive development in EBITDA and a 4.6 percent reduction in depreciation, amortization and impairment losses. The cyclical impairment tests carried out at the year-end resulted in impairment losses recognized on goodwill totaling EUR 0.6 billion in Poland and Romania. In the prior year, impairment losses on goodwill and on property, plant and equipment had reduced EBIT by EUR 0.9 billion. Impairment losses amounting to EUR 35 million were recognized on property, plant and equipment and intangible assets in the reporting year in connection with the sale of the shares in Telekom Albania agreed in January 2019.

Cash capex

In 2018, our Europe operating segment reported cash capex of EUR 1.9 billion, putting it on a par with the prior-year level. Alongside subdued investments at individual national companies, our capital expenditures were focused primarily on building out our broadband and fiber-optic technology in the Czech Republic and Austria as part of our integrated network strategy. We acquired a small number of spectrum licenses in the reporting year, predominantly in Hungary.

With this in mind, we launched a comprehensive transformation program under which we realigned our organization and workflows, developed a new strategy for our portfolio, and created three offering clusters. Ten portfolio units and one emerging business unit will in future look after not only our traditional IT and telecommunications business, but also our growth areas (SAP, digital solutions, public cloud, security, Internet of Things, classified ICT, health, and toll collection systems).

Order entry in our Systems Solutions operating segment was up by 29.3 percent in the reporting year, marking a particularly positive development compared with the prior year. This is due in part to a number of big deals that we closed in traditional IT business this year, which compare with a lower volume included in the prior-year figure. Order entry in our growth areas also developed very well in the reporting year.

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DEVELOPMENT OF OPERATIONS^a

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE	6,936	6,918	18	0.3	6,993
Of which: external revenue	5,497	5,504	(7)	(0.1)	5,678
Loss from operations (EBIT)	(291)	(1,356)	1,065	78.5	(150)
Special factors affecting EBIT	(322)	(1,477)	1,155	78.2	(276)
EBIT (adjusted for special factors)	32	121	(89)	(73.6)	126
EBIT margin (adjusted for special factors) %	0.5	1.7			1.8
Depreciation, amortization and impairment losses	(453)	(1,636)	1,183	72.3	(428)
EBITDA	163	280	(117)	(41.8)	278
Special factors affecting EBITDA	(266)	(229)	(37)	(16.2)	(252)
EBITDA (ADJUSTED FOR SPECIAL FACTORS)	429	509	(80)	(15.7)	530
EBITDA margin (adjusted for special factors) %	6.2	7.4			7.6
CASH CAPEX	(462)	(383)	(79)	(20.6)	(402)

^a The business of T-Systems Polska Sp. z o.o., which, in organizational terms, was previously assigned to the Systems Solutions operating segment, is now disclosed under the Europe operating segment as of September 1, 2017. Prior-year comparatives were not adjusted.

Total revenue

Total revenue in our Systems Solutions operating segment in the financial year amounted to EUR 6.9 billion, on a par with the prior-year level. Revenue in our growth areas developed positively, driven mainly by the public cloud, the Internet of Things, the healthcare industry, and toll collection systems. By contrast, revenue with traditional IT business declined year-on-year. This was primarily a result of the decline in our international corporate customer operations and the general falling market trend in our core market of Western Europe, as well as to deliberate portfolio decisions (such as the termination of end-user services).

EBITDA, adjusted EBITDA

In the reporting year, adjusted EBITDA at our Systems Solutions operating segment declined by EUR 80 million to EUR 429 million, which was in line with our expectations. The decrease was attributable primarily to the higher costs involved in establishing operations in growth areas, in particular in the Internet of Things and the healthcare market, and to higher financial burdens in our telecommunications business due to the ongoing migration to all IP. EBITDA decreased by EUR 117 million year-on-year to EUR 163 million, mainly due to the effects described under adjusted EBITDA. Special factors were up EUR 37 million year-on-year, attributable primarily to restructuring measures.

EBIT, adjusted EBIT

Adjusted EBIT in our Systems Solutions operating segment declined by EUR 89 million year-on-year, coming in at EUR 32 million. The effects described under adjusted EBITDA were the main drivers of this decrease. EBIT increased significantly year-on-year to EUR -291 million, attributable largely to an impairment loss on goodwill of EUR 1.2 billion that had been recognized in the prior year.

Cash capex

Cash capex in the Systems Solutions operating segment stood at EUR 462 million in the reporting year, compared with EUR 383 million in the prior year. Capital expenditures remain focused on developing our operations in growth areas, such as digital solutions, the Internet of Things, and toll collection systems. In parallel, we are investing in the upgrade of our in-house IT systems.

GROUP DEVELOPMENT CUSTOMER DEVELOPMENT

thousands

		Dec. 31, 2018	Dec. 31, 2017	Change	Change %	Dec. 31, 2016
NETHERLANDS	Mobile customers	4,021	3,850	171	4.4	3,746
	Fixed-network lines	241	191	50	26.2	164
	Broadband customers	241	191	50	26.2	164

After successfully repositioning itself in the market, T-Mobile Netherlands posted year-on-year growth of 4.4 percent for the 2018 financial year with its mobile services for consumers and business customers. This was driven by a positive response to the rate plan portfolio, made particularly attractive thanks to high-volume and unlimited data packages, as well as growth in the business customer base. Despite intense competition, the number of fixed-network consumers increased by 50 thousand as a result of our attractive rate plan portfolio.

DEVELOPMENT OF OPERATIONS

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE	2,185	2,263	(78)	(3.4)	2,347
Of which: Netherlands	1,322	1,355	(33)	(2.4)	1,331
Profit from operations (EBIT)	560	1,504	(944)	(62.8)	2,730
Depreciation, amortization and impairment losses	(334)	(304)	(30)	(9.9)	(760)
EBITDA	893	1,808	(915)	(50.6)	3,490
Special factors affecting EBITDA	(27)	893	(920)	n. a.	2,547
EBITDA (ADJUSTED FOR SPECIAL FACTORS)	921	915	6	0.7	943
Of which: Netherlands	425	421	4	1.0	358
EBITDA margin (adjusted for special factors) %	42.2	40.4			40.2
CASH CAPEX	(271)	(290)	19	6.6	(271)

Total revenue

Total revenue in our Group Development operating segment decreased in 2018 by 3.4 percent year-on-year, due to the forgone revenue following the sale of Strato effective March 31, 2017. Revenue at DFMG remained almost unchanged against the prior year. The positive effects on revenue at T-Mobile Netherlands of high mobile handset sales and growing fixed-network business were more than offset by negative effects from the mandatory application of the new IFRS 15 accounting standard as of January 1, 2018, as well as by regulatory effects including lower EU roaming charges and national termination rates.

EBITDA, adjusted EBITDA

EBITDA decreased year-on-year from EUR 1.8 billion to EUR 0.9 billion. Regular reviews of our investment portfolio prompted us to sell our stake in Strato and our remaining shares in Scout24 AG last year. The disposals resulted in

income recognized as special factors of around EUR 0.7 billion. In addition, the prior year had included positive special factors of EUR 0.2 billion originating from a settlement agreement with BT concluded in July 2017.

Adjusted EBITDA in our Group Development operating segment was on a par with the prior-year level. Forgone earnings following the deconsolidation of Strato caused a decline. At T-Mobile Netherlands, adjusted EBITDA was up by 1.0 percent in the 2018 financial year due to positive customer development. Adjusted EBITDA at DFMG increased substantially by 3.7 percent year-on-year.

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EBIT

EBIT decreased by EUR 0.9 billion year-on-year to EUR 0.6 billion, due primarily to the same factors described under EBITDA. Depreciation, amortization and impairment losses were higher than in the prior-year period, mainly due to higher capital expenditure on network capacity and quality at T-Mobile Netherlands.

Cash capex

Cash capex at our Group Development operating segment decreased in the 2018 financial year by 6.6 percent year-on-year as a result of lower investments in network build-out at T-Mobile Netherlands.

GROUP HEADQUARTERS & GROUP SERVICES

DEVELOPMENT OF OPERATIONS

millions of €

	2018	2017	Change	Change %	2016
TOTAL REVENUE	2,735	2,935	(200)	(6.8)	3,460
Loss from operations (EBIT)	(1,662)	(1,437)	(225)	(15.7)	(1,848)
Depreciation, amortization and impairment losses	(825)	(657)	(168)	(25.6)	(676)
EBITDA	(837)	(780)	(57)	(7.3)	(1,172)
Special factors affecting EBITDA	(322)	(119)	(203)	n. a.	(579)
EBITDA (ADJUSTED FOR SPECIAL FACTORS)	(515)	(661)	146	22.1	(594)
CASH CAPEX	(1,078)	(1,005)	(73)	(7.3)	(936)



For information on changes in the organizational structure, please refer to the section "Group organization," page 31 et seq., and Note 35 "Segment reporting" in the notes to the consolidated financial statements, page 226 et seq.

Total revenue

Total revenue in our Group Headquarters & Group Services segment in 2018 decreased by 6.8 percent year-on-year. This decline was mainly due to the fact that, as of January 2016, the costs of intragroup development services newly commissioned from Deutsche Telekom IT in Germany are no longer charged internally. Other reasons for the decrease were lower revenues from land and buildings, largely due to the ongoing optimization of space, and the forgone revenue from DeTeMedien following the completion of its sale in June 2017. Higher intragroup revenue at Deutsche Telekom IT from the licensing of the Group-wide ERP system had a positive effect.

EBITDA, adjusted EBITDA

Adjusted EBITDA at our Group Headquarters & Group Services improved by EUR 146 million year-on-year in the reporting year, mainly due to higher revenue at Deutsche Telekom IT from the licensing of the Group-wide ERP system, which does not impact on earnings at Group level. The reduction in headcount brought about by ongoing restructuring of the Vivento workforce also had a positive effect. By contrast, lower revenue from land and buildings had a negative impact on adjusted EBITDA.

Overall, negative net special factors of EUR 322 million affected EBITDA in the reporting year. Expenses for staff-related measures were partially offset by the positive effect of the reversal of provisions for legal risks in connection with the Toll Collect arbitration proceedings. In the prior year, negative net special factors totaled EUR 119 million and mainly comprised expenses for staff-related measures on the one hand and income from the sale of DeTeMedien on the other.

EBIT

EBIT declined by EUR 225 million year-on-year largely as a result of the same effects described under EBITDA and a EUR 168 million increase in depreciation, amortization and impairment losses. This increase was due, in particular, to higher depreciation and amortization caused by increased levels of capitalization at Deutsche Telekom IT. The latter were attributable to the fact that the costs of newly commissioned intragroup development services in Germany are no longer charged internally. This development was partially offset by lower depreciation, amortization and impairment losses from land and buildings as a result of our continued optimization of the real estate portfolio.

Cash capex

Cash capex increased by EUR 73 million year-on-year, primarily owing to increased investment in technology and innovation, mainly for development activities. In addition, cash capex for vehicles and the procurement of licenses increased, offset partially by lower investments in real estate-related construction and project services.

DEVELOPMENT OF BUSINESS AT DEUTSCHE TELEKOM AG

Deutsche Telekom AG prepares its annual financial statements in accordance with the principles of German GAAP, as specified in the German Commercial Code (Handelsgesetzbuch – HGB) and the German Stock Corporation Act (Aktiengesetz – AktG).

As the Headquarters of the Deutsche Telekom Group, we perform strategic and cross-segment management functions and provide services for other Group companies. The profits and losses of our subsidiaries and Group financing measures have a material effect on our financial position and results of operations. In our home market, revenue was at a comparable level with the prior year. Mobile revenues increased year-on-year, while higher IT and broadband revenues almost compensated for the decrease in revenue from the traditional fixed-network business. In our Systems Solutions operating segment, we recorded an upward trend in revenue in our growth business (in particular in cloud, Internet of Things, digital solutions, toll

collection, and SAP), which, however, was offset by a year-on-year decrease in revenues from the traditional IT business.

A positive revenue trend in our growth areas, but also lower roaming charges and ongoing intense competition had an impact on the Europe operating segment in 2018. In the United States operating segment, revenue increased as a result of higher service revenues. This increase was attributable to continued growth in existing and greenfield markets, the growing success of new business areas, along with lower postpaid churn, and higher connected devices.

Deutsche Telekom AG reported income after taxes for the 2018 financial year of EUR 4.2 billion. In addition to the operating business, the development of business in the reporting year was influenced by a number of very different factors, including the intragroup restructuring within the DFMG group, the equity repayment by T-Mobile Global Holding GmbH, Bonn, to T-Mobile Global Zwischenholding GmbH, Bonn, calculated at fair value, and the agreement in the Toll Collect arbitration proceedings.

RESULTS OF OPERATIONS OF DEUTSCHE TELEKOM AG

Statement of income of Deutsche Telekom AG under German GAAP (total cost method)

millions of €

	2018	2017	Change	Change %	2016
NET REVENUE	3,546	3,603	(57)	(1.6)	3,927
Other own capitalized costs	7	4	3	75.0	4
TOTAL OPERATING PERFORMANCE	3,553	3,607	(54)	(1.5)	3,931
Other operating income	2,672	2,769	(97)	(3.5)	2,120
Goods and services purchased	(1,024)	(1,060)	36	3.4	(1,151)
Personnel costs	(2,537)	(2,732)	195	7.1	(3,516)
Depreciation, amortization and write-downs	(289)	(341)	52	15.2	(338)
Other operating expenses	(4,521)	(4,251)	(270)	(6.4)	(3,570)
OPERATING RESULTS	(2,146)	(2,008)	(138)	(6.9)	(2,524)
Financial income (expense), net	6,488	7,151	(663)	(9.3)	4,717
Income taxes	(143)	(198)	55	27.8	(154)
INCOME AFTER INCOME TAXES	4,199	4,945	(746)	(15.1)	2,039
Other taxes	(13)	(18)	5	27.8	(19)
INCOME AFTER TAXES	4,186	4,927	(741)	(15.0)	2,020

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The negative operating results increased by approximately EUR 0.1 billion year-on-year, due mainly to EUR 0.3 billion higher other operating expenses and a EUR 0.1 billion lower operating income compared with the prior year. Lower personnel costs of EUR 0.2 billion and a decline of EUR 0.1 billion in depreciation, amortization and write-downs had an offsetting effect.

Net revenue remained more or less unchanged from the prior-year level.

A decrease of EUR 0.4 billion in foreign currency translation gains and lower income from derivatives in connection with U.S. dollar contracts, and a decrease of EUR 0.2 billion in income from asset disposals were the main drivers of the year-on-year decline in other operating income, which was down by EUR 0.1 billion overall. By contrast, the write-ups on Deutsche Telekom Europe Holding GmbH, Bonn, of EUR 0.4 billion, and on T-Mobile Global Zwischenholding GmbH, Bonn, of EUR 0.1 billion, had a positive effect on other operating income.

The increase of EUR 0.3 billion in other operating expenses was mainly attributable to an expense of EUR 0.6 billion in connection with the agreement in the Toll Collect arbitration proceedings, an increase of EUR 0.1 billion in derivatives in connection with U.S. dollar contracts, and an increase of EUR 0.1 billion in other employee-related expenses. These effects were offset by a decrease of EUR 0.6 billion in foreign currency transaction losses resulting in particular from U.S. dollar contracts.

The year-on-year decrease in personnel costs of EUR 0.2 billion is mainly attributable to lower expenses arising from the early retirement program for civil servants.

Net financial income declined by EUR 0.7 billion to EUR 6.5 billion, primarily as a result of a EUR 1.5 billion decrease in income related to subsidiaries, associated and related companies. A decrease in write-downs on financial assets of EUR 1.0 billion compared with the previous year had an offsetting effect.

Income related to subsidiaries, associated and related companies, which declined by EUR 1.5 billion compared with the prior year, was positively affected in the reporting year by profits transferred by Telekom Deutschland GmbH, Bonn, of EUR 3.7 billion (2017: EUR 3.9 billion), DFMG Holding GmbH, Bonn, of EUR 2.5 billion (2017: EUR 3.8 billion), and T-Mobile Global Zwischenholding GmbH, Bonn, of EUR 1.6 billion (2017: EUR 1.4 billion). The transfer of the losses from Deutsche Telekom IT GmbH, Bonn, of EUR 0.7 billion (2017: EUR 0.5 billion) and T-Systems International GmbH, Frankfurt/Main, of EUR 0.3 billion (2017: EUR 0.3 billion), had an offsetting effect.

In addition to the operating business of the consolidated subsidiaries, the income related to subsidiaries, associated and related companies resulted from effects arising from reorganization measures as well as from an equity repayment, calculated at fair value, by T-Mobile Global Holding GmbH, Bonn. The loss arising from the intragroup sale, based on a valuation report, of the indirectly held interests in the BT Group plc, London, United Kingdom, had a negative effect on income related to subsidiaries, associated and related companies.

The increase in the net interest expense of EUR 0.2 billion compared with the prior year was primarily the result of an increase in expenses in connection with the interest added back on non-current accruals.

Income after income taxes was particularly impacted by the aforementioned effects and decreased by EUR 0.7 billion year-on-year in 2018.

Other tax expense of EUR 13 million combined with the aforementioned factors resulted in income after taxes of EUR 4,186 million in 2018. Taking into account EUR 2,845 million in unappropriated net income carried forward, unappropriated net income totaled EUR 7,031 million.

FINANCIAL POSITION OF DEUTSCHE TELEKOM AG

Balance sheet of Deutsche Telekom AG under German GAAP

millions of €

	Dec. 31, 2018	Dec. 31, 2018 %	Dec. 31, 2017	Change	Dec. 31, 2016
ASSETS					
Intangible assets	186	0.2	195	(9)	249
Property, plant and equipment	2,376	1.9	2,698	(322)	2,993
Financial assets	94,431	77.3	93,807	624	81,240
NONCURRENT ASSETS	96,993	79.4	96,700	293	84,482
Inventories	1	0.0	1	0	1
Receivables	22,325	18.3	22,073	252	16,308
Other assets	1,630	1.3	1,659	(29)	1,629
Cash and cash equivalents	680	0.6	157	523	208
CURRENT ASSETS	24,636	20.2	23,890	746	18,146
Prepaid expenses and deferred charges	522	0.4	676	(154)	516
Difference between plan assets and corresponding liabilities	7	0.0	51	(44)	36
TOTAL ASSETS	122,158	100.0	121,317	841	103,180
SHAREHOLDERS' EQUITY AND LIABILITIES					
Capital stock and reserves	53,015	43.4	53,011	4	51,651
Unappropriated net income	7,031	5.8	5,928	1,103	3,795
SHAREHOLDERS' EQUITY	60,046	49.2	58,939	1,107	55,446
Pensions and similar obligations	3,747	3.1	3,164	583	3,247
Tax accruals	238	0.2	238	0	238
Other accruals	2,377	1.9	2,321	56	1,642
ACCRUALS	6,362	5.2	5,723	639	5,127
Debt	6,705	5.5	6,398	307	5,021
Other liabilities	48,904	40.0	50,101	(1,197)	37,413
LIABILITIES	55,609	45.5	56,499	(890)	42,434
Deferred income	141	0.1	156	(15)	173
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES	122,158	100.0	121,317	841	103,180

In addition to shareholders' equity, our financial position is mainly determined by noncurrent assets and receivables from and payables to Group companies. Loans recognized under financial assets as well as receivables from and payables to subsidiaries primarily resulted from financing relationships between Deutsche Telekom AG and its subsidiaries, whereby financing on the external capital market is generally handled by Deutsche Telekom AG International Finance B.V., Maastricht, and passed on to Deutsche Telekom AG.

The balance sheet total increased by EUR 0.8 billion year-on-year to EUR 122.2 billion.

The development of total assets was primarily attributable to the increase of EUR 0.3 billion in noncurrent assets, of EUR 0.3 billion in receivables, and of EUR 0.5 billion in cash and cash equivalents. By contrast, prepaid expenses and deferred charges decreased by EUR 0.2 billion.

The growth in financial assets of EUR 0.6 billion year-on-year was mainly due to the capital increase at Deutsche Telekom Europe Holding GmbH, Bonn, of EUR 1.8 billion, and to write-ups on interests in subsidiaries of EUR 0.5 billion. Financial assets also increased as a result of the purchase of shares in Hellenic Telecommunications Organization S.A. (OTE), Athens, of EUR 0.3 billion, and due to loans to T-Mobile USA, Inc., Bellevue, and to Telekom Deutschland GmbH, Bonn, of EUR 0.1 billion in each case. The equity repayment by CTA Holding GmbH, Bonn, of EUR 1.3 billion and the intragroup sale of shares in CTA Holding GmbH, Bonn, of EUR 1.0 billion had an offsetting effect.

The decrease of EUR 0.3 billion in property, plant and equipment was primarily due to the depreciation of real estate.

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The increase of EUR 0.3 billion in receivables was mainly due to an increase of EUR 0.8 billion in receivables from cash management, offset by a decline of EUR 0.5 billion in financial receivables from subsidiaries.

The decline in prepaid expenses and deferred charges was mainly attributable to a decline of EUR 0.1 billion in deferred personnel costs.

The development of total shareholders' equity and liabilities was mainly influenced by the increase of EUR 1.1 billion in shareholders' equity, and of EUR 0.6 billion in accruals for pensions and similar obligations. By contrast, other liabilities decreased by EUR 1.2 billion.

The increase in shareholders' equity was mainly due to income after taxes for the financial year of EUR 4.2 billion and its effect on unappropriated net income. The EUR 3.1 billion dividend payment for the previous year had an offsetting effect.

The increase in accruals for pensions and similar obligations is mainly attributable to an effect of EUR 0.3 billion due to a lower notional interest rate for the calculation of pension accruals compared with the prior year, and an effect of EUR 0.2 billion due to the refund of plan assets.

Other liabilities declined year-on-year in particular as a result of loan repayments to CTA Holding GmbH, Bonn, of EUR 5.4 billion. Loans of EUR 4.0 billion taken out from Deutsche Telekom International Finance B.V., Maastricht, had an offsetting effect.

Statement of cash flows of Deutsche Telekom AG under German GAAP

millions of €

	2018	2017	Change	2016
INCOME AFTER TAXES	4,186	4,927	(741)	2,020
Net cash provided by (used for) operating activities	4,409	2,988	1,421	(1,531)
Net cash provided by (used for) investing activities	1,940	(12,890)	14,830	4,156
Net cash (used for) provided by financing activities	(5,826)	9,851	(15,677)	(2,638)
NET CHANGE IN CASH AND CASH EQUIVALENTS	523	(51)	574	(13)
Cash and cash equivalents, at the beginning of the year	157	208	(51)	221
CASH AND CASH EQUIVALENTS, AT THE END OF THE YEAR	680	157	523	208

Net cash provided by for operating activities increased year-on-year by EUR 1.4 billion, resulting in net cash provided by operating activities of EUR 4.4 billion. This increase was due mainly to the EUR 2.8 billion lower net increase in receivables from cash management compared with the previous year, and a EUR 0.5 billion smaller decrease in liabilities from the early retirement program for civil servants compared with the previous year. The decrease in income after taxes, which was adjusted for non-cash write-downs and write-ups on financial assets, had an offsetting effect.

In contrast to the prior year, when net cash used for investing activities resulted in particular from medium- and long-term investments at subsidiaries of EUR 10.8 billion, net cash provided by investing activities in the reporting year was largely influenced by an equity repayment by CTA Holding GmbH, Bonn, of EUR 1.3 billion, cash inflows from the intragroup sale of shares in CTA Holding GmbH, Bonn, of EUR 1.0 billion, and the repayment of a short-term investment by T-Mobile Netherlands B.V., The Hague, to Deutsche Telekom AG of EUR 0.5 billion. Net cash provided by investing activities also included interest received of EUR 0.9 billion. A capital increase at Deutsche Telekom Europe Holding GmbH, Bonn, of EUR 1.8 billion in connection with the takeover of all shares in UPC Austria GmbH, Vienna, by T-Mobile Austria Holding GmbH, Vienna, in particular had an offsetting effect.

Net cash used for financing activities increased by EUR 15.7 billion year-on-year to EUR 5.8 billion. In contrast to the prior year, when net cash provided by financing activities was impacted by the net issuance of liabilities of EUR 12.5 billion, in the reporting year, it was mainly the result of net repayments of current financial liabilities of EUR 7.4 billion, interest payments of EUR 1.1 billion, and the payment of the dividend for the 2017 financial year of EUR 3.1 billion. The net issuance of medium- and long-term liabilities of EUR 5.8 billion had an offsetting effect.

In all, this resulted in an increase in cash and cash equivalents of EUR 523 million in the reporting year.

RISK MANAGEMENT IN HEDGE ACCOUNTING

We use derivatives to hedge interest rate and currency exposures; i.e., exclusively for hedging purposes, not for speculative gains. In the process, we monitor the effectiveness of the hedges on a regular basis.

CORPORATE RESPONSIBILITY AND NON-FINANCIAL STATEMENT

■ Act responsibly. Enable sustainability.

We are more than a company providing society with telecommunications infrastructure. In an ever more complex and digital world, we are a trusted adviser through every stage of life. As such, we take our responsibility for society and the environment very seriously. We work systematically to minimize the potentially negative impact of our business activities while creating effective, positive impetus for sustainable change. We have been transparently reporting on our corporate responsibility (CR) activities for over 20 years. In our CR report and annual report, and on our website, we provide comprehensive information every year on the challenges we are facing and the progress we have made as a responsible company focused on sustainable action. Since the 2016 financial year, we have also explained how our core business contributes to achieving the UN Sustainable Development Goals (SDGs), which have been set as part of the 2030 Agenda. In addition, this year's management report is the first in which we are also highlighting how our activities are having a positive impact on our business development (i.e., adding value). 



For further information on our business model, please refer to the sections "Group organization," page 31 et seq., and "Group strategy," page 35 et seq.



For further information, please refer to the section "Sustainable development goals," page 22

Since the 2017 reporting year, we have published a combined non-financial statement (NFS) as part of our management report, thereby fulfilling our reporting obligation as per the CSR Directive Implementation Act. When selecting the subjects for the present 2018 NFS, we again not only considered legal requirements, but also incorporated the results of our materiality process. Regularly analyzing materiality in this way helps us align our sustainability activities with our stakeholders' expectations and structure our reporting accordingly. [SDG 17](#)

17 PARTNERSHIPS FOR THE GOALS




 RELATIONSHIPS

The Supervisory Board of Deutsche Telekom AG is responsible for the review of the content of the NFS. In the reporting year, it did this with the support of PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (independent auditor) in the form of a limited assurance engagement. This audit was based on the International Standard on Assurance Engagements ISAE 3000 (as amended). Unless otherwise stated, all disclosures in this NFS apply in equal measure to the Group and the parent company. To avoid repetitions within the management report, we refer to further information provided in other sections wherever relevant. References to disclosures not contained in the combined management report are provided as background information; these disclosures are not part of the NFS and thus are not covered by the review. By publishing our 2018 CR report in March 2019, we are using a tried-and-tested format to fulfill our stakeholders' expectations of transparency, basing our work as usual on the guidelines of the Global Reporting Initiative (GRI). The concepts described in this NFS are consistent with this long-standing reporting tradition and make reference to the GRI standards, while also taking statutory requirements into consideration.

In 2018, we received a further accolade for our sustainability performance and our associated reporting, taking the top spot in the Good Company Ranking, which rates the sustainability performance of all DAX 30 companies based on audited publications. In addition, our 2017 Annual Report secured us a double victory in the Investors' Darling 2018 capital market competition, in the categories of "Corporate social responsibility" and "Strategy reporting."

EXPLANATION OF THE BUSINESS MODEL

We are one of the leading telecommunication companies worldwide. We offer our consumers fixed-network/broadband, mobile, internet, and internet-based TV products and services, as well as ICT solutions for our business and corporate customers. 

STRATEGIC AND ORGANIZATIONAL APPROACH TO SUSTAINABILITY

We see ourselves as a responsible company on the basis of our Leading European Telco strategy: We want to be the leading telecommunications provider in Europe. For us, social and ecological responsibility is inextricably linked with such a leadership role. Our mission statement is "Act responsibly. Enable sustainability." We are committed to implementing sustainability along our entire value chain – and to playing an important role in meeting today's environmental, economic, and social challenges. We are expressly committed to the principles of the United Nations Global Compact, the German Sustainability Code, and Germany's Code of Responsible Conduct for Business. Furthermore, we support the SDGs of the United Nations (UN), in particular contributing to the following goals: (3) Good health and well-being, (4) Quality education, (5) Gender equality, (8) Decent work and economic growth, (9) Industry, innovation and infrastructure, (11) Sustainable cities and communities, and (13) Climate action.

Our CR strategy, which is oriented to our core business, includes three fields of action: "Connected life and work – enabling a sustainable lifestyle," "Connect the unconnected – access to and participation in the information and knowledge society," and "Low-carbon society." In addition, the following topics are of particular importance within our sustainability management system: data security and data privacy, digitalization, sustainable supply chains, human rights, circular economy and resource decoupling, as well as being a responsible employer.

Our Board of Management bears overall responsibility for our CR goals, discussing and making decisions on key CR-related issues. The Group Corporate Responsibility (GCR) unit develops Group-wide policies and guidelines. It is also responsible for positioning and aligning CR strategically, and monitors all of the corresponding processes. The CR managers from the different business units and national companies are responsible for implementing our CR strategy, and work closely together in the international CR Manager Network. GCR is also advised by the CR Board, composed of the heads of key Group areas, in order to ensure direct feedback is always shared between CR and our core business. Our values and basic principles are anchored in our Guiding Principles, the Code of Conduct, the Code of Human

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Rights & Social Principles, and other subject-specific policies. The cornerstones of our sustainability management activities are formally set out in our CR Policy, which is binding for all Group units. As part of our CR controlling system, we record environmental, social, and governance (ESG) data and performance indicators. We use this data primarily to calculate our Group-wide ESG KPIs (key performance indicators), which we use to measure and control our CR performance. We regularly review these KPIs to ensure they provide reliable information, revising them as needed. In some cases, the KPIs and other metrics can also be linked to the SDGs to show the progress we are making in the SDG focus areas.

We use the Socially Responsible Investment ESG KPI to determine how the finance markets rate our sustainability activities. This indicator measures the proportion of T-Shares held by investors whose investment strategy is based not only on economic but also, at least in part, on environmental and social aspects of corporate governance. As of September 30, 2018, around 18 percent of all T-Shares were held by SRI (socially responsible investment) investors, and 3 percent were held by investors who manage their funds primarily in accordance with SRI aspects. In addition, during the reporting year, our shares were again listed on leading sustainability indexes, such as RobecoSAM's prominent DJSI World and DJSI Europe. Our share also continued to be listed on the FTSE4Good and UN Global Compact 100 indexes. [SDG 8](#)



FINANCE

Listing of the T-Share in sustainability indexes/ratings

Rating agency	Indexes/ratings/ranking	2018	2017	2016	2015	2014
RobecoSAM	DJSI World	✔	✔	✔	✔	✘
	DJSI Europe	✔	✔	✔	✔	✘
CDP	STOXX Global Climate Change Leaders	✔	✔	✔	✔	✔
oekom research AG	"Prime" (Sector Leader)	✔	✔	✔	✔	✔
Sustainalytics	STOXX Global ESG Leaders	✔	✔	✔	✔	✔
	iSTOXX 50 SD KPI	✔	✔	✔	✔	✔
	UN Global Compact 100	✔	✔	✔	✔	✔
FTSE Financial Times Stock Exchange	FTSE4Good	✔	✔	✔	✔	✔

✔ Successfully listed ✘ Not listed

Our aim is to continuously improve the effects our products, solutions, and programs have on society. To this end, we need to quantify the extent to which our business activities help solve social challenges. In 2018, we initiated a pilot project for measuring this impact and are defining a uniform process for evaluating our products, solutions, and programs. This pilot project is intended to lay the foundations for managing our sustainability activities with a focus on their effects. You can find in-depth information about the project in our 2018 CR report, which is due to be published in March 2019. [SDG 12](#)

PROCESS FOR DETERMINING SIGNIFICANT TOPICS

By following a comprehensive materiality process that we evolve and adapt every year, we aim to determine what topics are relevant for our reporting and to develop our sustainability strategy along these lines. In 2018, we incorporated a document analysis into the process, which we have used to evaluate aspects such as current legislation and determine the impact of the topics covered on the ICT sector and our value chain. For more detailed information on our approach, please refer to our CR report for 2018.

We have reviewed whether and to what extent the result of our materiality analysis requires us to amend the concepts covered in the previous year's NFS. This was done to ensure the present NFS for 2018 adheres to the requirements set out in the CSR Directive Implementation Act. This involved considering

the main topics key to understanding business operations, the operating result, the Company's situation, and the effects on non-financial aspects. It was confirmed there was no need to extend the range of topics covered in the previous year. Nonetheless, conserving resources is becoming an increasingly debated topic both in the public arena and among our own workforce. This reporting year, we therefore decided to address this issue under Aspect 1: "Environmental concerns" – despite the fact that the operations of Deutsche Telekom as a service provider have a relatively minor impact in this regard.

As part of our comprehensive risk and opportunity management system, we also determine existing and potential risks and opportunities arising from environmental, economic, or social aspects, and from how our Company is managed. Topics such as climate protection, suppliers, data privacy and data security, health and the environment involve potential risks, which we have outlined in the section "Risk and opportunity management." We maintain this practice to provide the transparency our stakeholders expect, even if the risk assessment has found that these topics have a "low" risk significance and therefore do not need to be rated as "very likely severe" in the meaning of the CSR Directive Implementation Act. The present NFS focuses on these risks and opportunities in relation to the relevant aspects. [SDG 12](#)



FINANCE



For further information, please refer to the section "Risk and opportunity management," page 113 et seq.

ASPECT 1: ENVIRONMENTAL CONCERNS

“We assume responsibility for a low-carbon society” is one of the action areas of our CR strategy. It not only expresses our commitment to minimize the impact our business activities may exert on the climate, but also our desire to tap into the opportunities for sustainable development offered by digitalization. In our 2018 CR report, we will discuss environmental topics where our business activities have a comparatively low impact, with examples including the preservation of biodiversity and water consumption.

Our comprehensive environmental management system is based on the international ISO 14001 standard. Furthermore, in May 2018 we published a new environmental guideline that summarizes and complements the existing voluntary commitments in force across the entire Group. You can access this guideline on our Group website.

CLIMATE PROTECTION AND RESOURCE CONSERVATION SDG 13

Demand for faster data services with full-coverage availability is growing rapidly. That is why we continue to drive forward the build-out of our infrastructure and increase data transmission rates. Our investments in the network build-out make us one of the biggest investors in the industry. Operating our network consumes energy. Increasing energy consumption is associated not only with higher costs, but can also lead to an increase in CO₂ emissions and thereby accelerate climate change. We must therefore ensure our energy consumption grows to a much lesser extent than the volumes of data we transmit and, at the same time, promote the use of renewable energies to set energy consumption apart from CO₂ emissions. We also need to harness the opportunities opened up by digitalization – which, when implemented properly, can help save energy and thus slow down climate change.

Our integrated climate strategy includes four aspects of climate protection: CO₂ emissions, renewable energy, energy efficiency, and sustainable products. The climate strategy applies Group-wide and is implemented on an interdisciplinary and decentralized basis at the level of the national companies. Our Board of Management set a climate-related goal as early as in 2013. By 2020, we aim to reduce total CO₂ emissions in the Group (excluding T-Mobile US) by 20 percent compared to 2008. In 2018, we modified how we calculate CO₂ emissions for our climate goal in line with the market-based method used by the Greenhouse Gas (GHG) protocol in order to place greater emphasis on the use of renewable energy as a means of lowering emissions.

In all, 40 business units in 29 countries have undertaken to work toward our climate goal. Our national companies are helping us achieve this goal in different ways and to different extents, depending on developments in their local markets. GCR reports to the Board of Management on the status quo on an annual basis. Despite the challenges posed by rapidly growing data volumes and the continuous network build-out this entails, we continue to stand by our climate goal. Over the past few years, we have succeeded in moderately reducing our emissions. According to this calculation method, we are at the level forecast for 2018. To achieve our current climate goal, we are focusing on areas that consume particularly high amounts of energy, first and foremost our networks and data centers. For instance, we are migrating our network infrastructure to IP technology, which is more powerful yet consumes less electricity. We are working to process data traffic from no more than a few, particularly efficient data centers. The PUE metric serves as an indicator for enhancing energy efficiency. We determine this metric using the method recommended by The Green Grid Association, which takes the total energy consumed by data centers into account, not only that used to operate the servers. In 2018, the global PUE metric for our T-Systems data centers was 1.63. From 2008 to 2018, we reduced the average PUE metric for T Systems data centers in Germany from 1.85 to 1.57. Our data center in Biere, Saxony-Anhalt, is extremely efficient. It was also awarded the respected LEED Gold sustainability certification (Leadership in Energy and Environmental Design). By taking steps such as migrating data from inefficient data centers to Biere, we achieved a PUE metric of 1.36 by the end of 2018.

In 2017, we set about updating our climate strategy and devising new climate targets for the period after 2020. We are developing the new goals for reducing our CO₂ emissions (Scope 1, 2, and 3) based on current scientific and political conditions. In 2018, we established such goals in the United States and Hungary using the Science-Based Targets method and submitted them to the Science-Based Targets initiative, which has already endorsed those set for the United States. Our climate strategy also focuses on further increasing the share of renewable energy in electricity consumption.

We obtain renewable energy through direct purchases, in the form of certificates for electricity from renewable sources and, to a small extent, by producing it ourselves. Whenever it is possible and practicable, we also invest in our own systems – for instance in the construction of cogeneration plants and the installation of photovoltaic systems. SDG 7



For further information, please refer to “Deployment of ICT products to the benefit of society” in this section under Aspect 3: “Social concerns,” page 82 et seq.




For further information, please refer to the section “Development of business in the operating segments,” page 60 et seq.



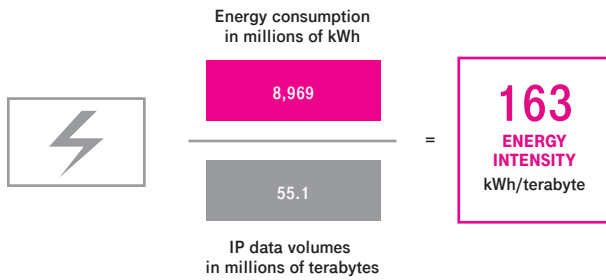
For further information about the opportunities and risks associated with climate protection, please refer to the section “Risk and opportunity management,” page 113 et seq.



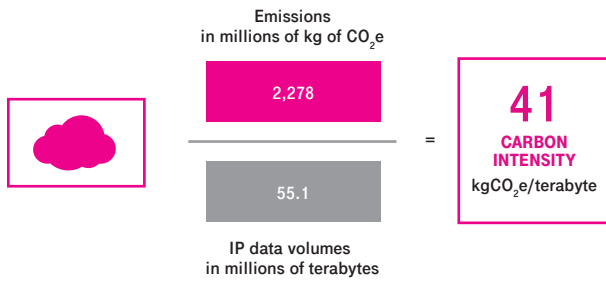
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We determine the effectiveness of our climate protection measures using key performance indicators (KPIs). The KPIs Energy Intensity and Carbon Intensity for Deutsche Telekom are shown in the following graphics. Both KPIs reflect our energy consumption and our CO₂ emissions in relation to the volume of data transmitted, thus demonstrating how our network's energy and emissions efficiency has developed in practice. The result for the Energy Intensity KPI is 163 and 41 for the Carbon Intensity KPI. For the Group as a whole in Germany, the Energy Intensity KPI stands at 110 and the Carbon Intensity KPI at 26. The Renewable Energy KPI shows how much of our Company's overall electricity consumption is obtained from renewable sources. In 2018, this amounted to 52 percent. When calculating this KPI, we also look at direct purchases, Guarantees of Origin, Renewable Energy Certificates, the renewable energy we produce ourselves, and the proportion of renewable energy used across the countries. We use the Enablement Factor ESG KPI to calculate the positive CO₂ effects facilitated for our customers through using our products. 

Energy Intensity ESG KPI
Deutsche Telekom Group in 2018

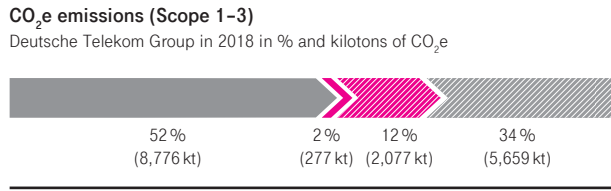


Carbon Intensity ESG KPI
Deutsche Telekom Group in 2018




We use the internationally recognized GHG protocol to calculate our CO₂ emissions. This allows us to take measures to reduce our ecological footprint at the corporate and product levels. The standard distinguishes between three CO₂ emissions categories (Scope 1, 2, and 3). We report on these in June each year as part of the CDP.

The following graphic visualizes the emissions of the different scopes resulting from our business activities, shown as CO₂-equivalent emissions (CO₂e emissions).



- **Scope 3 emissions from upstream activities:**
Transport services, products and services purchased, capital goods, production waste, energy and fuel upstream chains, business travel, and journey to work.
- **Scope 1 emissions from Deutsche Telekom's own activities:**
Emissions from the operation of Deutsche Telekom's systems, buildings and vehicles.
- ▨ **Scope 2 emissions from energy procured:**
Emissions from the generation of electricity and district heating procured by Deutsche Telekom.
- ▨ **Scope 3 emissions from downstream activities:**
Emissions from the transport of products sold to the customer, use of products sold or leased, and disposal and recycling of products sold.

 For further information, please refer to "Deployment of ICT products to the benefit of society" in this section under Aspect 3: "Social concerns," page 82 et seq.

We are aware that effectively combating climate change calls for everyone involved to work together and take determined action, which is why we participate in many national and international associations and organizations. Particularly noteworthy here is the Global e-Sustainability Initiative – a corporate association with the vision of making society more climate-friendly and sustainable with ICT solutions. We are also working systematically and successfully on improving climate protection throughout our supply chain. Since 2016, the CDP's supplier engagement rating has assessed how well companies have integrated the topic of climate protection into their supply chains. In 2018, we were awarded an A rating by CDP and included on its Supplier Engagement Leader Board. Over 70 percent of our procurement volume is covered by disclosures collected from our suppliers by rating organization CDP as part of its 2018 supply chain program. [SDG 17](#)

Last but not least, handling valuable resources responsibly also plays a vital role in a holistic approach to climate protection. In light of the islands of plastic gathering in the sea, growing mountains of waste, and the resulting consequences for humanity and the environment, people are increasingly turning their attention to the topic of resource efficiency. An employee survey conducted at Deutsche Telekom in September 2018 confirmed this fact, leading CEO Tim Höttges to launch the Stop Wasting – Start Caring! initiative, which provides a new platform for the Group's long-lasting commitment to greater resource efficiency. Its core aim is to deploy and recycle resources as efficiently as possible in keeping with the concept of a circular economy – for example by reducing the amount of plastic, paper, and packaging we use even further and pursuing alternatives wherever possible. The approach taken to achieve this goal covers everything from product procurement, design, internal processes right through



to the end product and its usage. We are leading the way when it comes to taking back old devices. In addition to this, we are notably promoting resource efficiency by virtualizing our products and advocating sharing economy models through the use of our network, which help conserve resources by dispensing with the need for purchased goods. In September 2018, Tim Höttges called upon every employee to assume a creative role in the initiative at their place of work, stating: "We need to adopt a more sustainable manner of thinking in everything we do." Our national companies are also putting resource conservation into practice in a number of projects. A prime example is the OTE group, which became the first company in Greece to offer to recycle terminal equipment (ADSL, VDSL, VoIP modems, and TV decoders), collecting and recycling a huge quantity of devices in 2018. [SDG 12](#)

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



ENVIRONMENT



For further information, please refer to the "Employees" section, page 97 et seq.

ASPECT 2: EMPLOYEE CONCERNS

The digital transformation is expected to improve everyone's lives. That is why people will remain a priority for us. This applies in particular to the 216,000 or so employees working in our Company. They use their commitment, their expertise, and their abilities to smooth the path towards a digital society and thus make a key contribution to our business success. Five Guiding Principles, representing our values, form the cornerstones for collaboration within our Company. These Guiding Principles are stated in the section "Group organization." Our strategic priorities in HR focus on four areas. [We attach great importance to employee involvement and fair behavior toward colleagues, promote diversity, and engage in systematic health management.](#) [SDG 8](#)

8 DECENT WORK AND ECONOMIC GROWTH



EMPLOYEES

17 PARTNERSHIPS FOR THE GOALS



EMPLOYEES

COLLABORATION WITH EMPLOYEES' REPRESENTATIVES AND TRADE UNIONS [SDG 17](#)

Digitalization is fundamentally changing the way we work together. Employees are expected to demonstrate greater flexibility, social skills, and autonomy, to continue learning throughout their lives, and to work with greater independence. We have made it our goal to support our employees in this transformation – and to help them not just overcome change, but take an active role in shaping it.

Codetermination rights play a key role in the digital transformation. Together with employees' representatives and trade unions, we want to create the working world of the future – with an eye to the needs of our workforce and the success of our Company. We negotiated and signed over 150 agreements in 2018 through constructive dialog with our works councils. In the same year, we ran two organizational programs – "Technology & Innovation 2018" and "T Systems Transformation" – as key transformation projects in close collaboration with the works councils. The relevant business areas were restructured as these projects progressed, which has led to the optimization of organizations and processes, the establishment of flexible forms of organization, as well as the workforce being restructured as required in a socially responsible way. In addition, 85 collective agreements were concluded with the trade union ver.di in the course of 2018. Besides collective wage agreements, the focus in 2018 was placed on collectively agreed arrangements to harmonize

the Group's pay systems as closely as possible. As the underlying laws and contracts vary from country to country, code-termination matters are managed locally with trade unions and employees' representatives. Group management is involved in all major issues as a matter of principle.

The works councils, central works councils, and Group Works Council represent the interests of Group employees in Germany. Our partner representing the employees' interests on a European level is the European Works Council (EWC). We also have executive staff representation committees and representatives of disabled employees at unit, company, and Group level. The EWC, which has 32 members, has been one of our established key dialog partners for many years, representing the interests of Group employees in countries within the European Union and the European Economic Area. Collective bargaining plays an important role and has a long tradition at our Company, a fact made clear by the percentage of employees covered by collective agreements. As of December 31, 2017, 72.76 percent of employees in Germany were covered by collective agreements. For the Group as a whole, the coverage rate was 52.28 percent. We carefully monitored the trade union matters in the United States over the course of 2018. The responsibility for national human resources management matters in the United States lies with T-Mobile US' management. This responsibility is assumed with a great deal of commitment and accompanied by excellent customer satisfaction results.

Across the globe, Deutsche Telekom respects the rights to freedom of association and collective bargaining in accordance with national law. This naturally also applies to the United States, with each employee at T-Mobile US entitled to form or join a trade union. At the same time, employees are also free to choose not to do so. T-Mobile US will not exert any influence in this respect, neither favoring nor discriminating against employees because of a decision they have made.

The results of employee surveys conducted at T-Mobile US in 2018 showed that 93 percent of respondents take pride in working for the company. 89 percent said they would recommend T-Mobile US as a great place to work, and 84 percent believe the company inspires them to go above and beyond their usual work-related duties. These results are among the highest in the Group. T-Mobile US has been awarded numerous accolades in recent years for its appeal as an employer. In 2018, T-Mobile US was named "Best Place to Work" by the independent employee platform Glassdoor and ranked 86th in the top 100 Fortune U.S. companies in the categories "Great Place to Work for Diversity" and "Great Place to Work for Families." For ten years in succession, T-Mobile US was rated one of the most ethical businesses worldwide by Ethisphere Institute and for eleven years in succession as one of the United States' top military friendly employers. T-Mobile US also received a perfect score of 100 in the Human Rights Campaign Corporate Equality Index for the fifth time in a row, making it the best place to work for the equal treatment of gay, lesbian, bisexual, and transgender employees.

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Collaboration with employees' representatives is founded on our commitment to trusting cooperation – anchored in our Group-wide Employee Relations Policy, which sets out eleven core elements describing what we stand for as an employer around the world. The policy also describes our aspiration with regard to the following HR topics: employee development, responsible handling of changes, health and sustainability, fair pay, work-life balance, leadership, diversity, the prohibition of discrimination, and how we communicate and work together with employees' representatives. In order to ensure the Employee Relations Policy is implemented throughout the Group, two or three national companies undergo an internal review process each year. If the results of this review deviate from the norm, we initiate improvement measures. Our Code of Human Rights & Social Principles also includes a voluntary commitment to safeguarding the freedom of association and the right to collective bargaining (in compliance with national law in each case).

Our employee survey, carried out every two years, is a key indicator of the relationship between our Company and its workforce. We supplement it with pulse surveys, which give us a snapshot of the mood across the Group twice a year. In the most recent employee survey (excluding T-Mobile US) from 2017, the commitment index came in at 4.1 (on a scale of 1.0 to 5.0) and therefore remained at a high level. This result was underscored by the pulse survey carried out in November 2018.

DIVERSITY AND EQUAL OPPORTUNITY SDG 10

Just as much as demographic developments and different perceptions of roles, social trends such as globalization must not lead to certain groups being shut out of the labor market. Equal opportunities are essential for social stability and business alike. Respecting human individuality and harnessing individuals' distinctive traits for joint success is just as important for our Group as developing a shared identity. A Culture & Diversity team, based in the HR Development unit, was created specifically for this task.

Women and men, young and old, as well as people with different abilities and cultural backgrounds from roughly 150 countries work together very effectively at our Company. This diversity helps us remain competitive around the world with good ideas and outstanding products, and consolidate our position as an attractive employer. Developments in the proportion of women in leadership positions and serving on the supervisory boards are reported to and discussed in-depth by the Board of Management every six months, while the age structure and internationality of the workforce is recorded on an annual basis in our Personnel Structure Report. For us, diversity also means offering our employees numerous opportunities to develop personally and grow professionally, regardless of their gender, age, sexual preference, health situation, ethnic background, religion, or culture. Our Group-wide Diversity Policy, five Guiding Principles, the Employee Relations Policy, and Code of Human Rights & Social Principles form the foundation of our commitment to diversity. We are also a founding member of the corporate

Diversity Charter initiative and strive to promote diversity within and outside of our Company.

We meet the requirements set out in the Act to Promote Transparency of Pay Structures by publishing a remuneration report every five years. The last time we did so was as part of our 2017 Annual Report.

OCCUPATIONAL HEALTH AND SAFETY SDG 3

Measures that promote health within the Company not only help individual employees and ensure long-term business success, but also have positive effects beyond that on society as a whole. We use health management to take on social responsibility and promote a proactive culture of health. We support our employees in maintaining their health and occupational safety with a host of target audience-specific measures and extensive prevention programs. We consider the statutory requirements to be only the minimum standard we must achieve. Our corporate occupational health and safety measures are effectively incorporated into our structures via certified management systems and appropriate policies and guidelines. We support this Group-wide approach with an internationally standardized health, safety, and environmental management system based on the OHSAS 18001, ISO 45001, ISO 14001, and ISO 9001 international standards for health, occupational and environmental safety, and quality.

The Board of Management bears overarching responsibility for safeguarding health, occupational safety, and the environment. Quarterly reports on the health rate are just one example of its commitment in this area. Our Health & Safety Environment handbook outlines our health and safety management system, including the parties involved, their duties, and the programs in force. The handbook serves to harmonize, simplify, and align our management system with common targets across the Group. We pool together and manage our occupational safety and health protection programs at a Group level, with on-site health and safety managers responsible for putting them into practice. We systematically review our programs to ensure they are effective. To do so, we review the results of our employee survey, evaluating stress prevention measures under collective agreements, competitor benchmarks, and other relevant indicators. We analyze this data each year to derive measures that exceed the statutory requirements. Raising awareness, prevention, and encouraging individual responsibility are high priorities at our Company.

Group-wide initiatives serve to promote health awareness and health literacy among all employees. For example, all teams across 30 countries are issued recommendations and granted access to services depending on their health index rating. These include services that can be used by all teams in 30 countries based on the results of the health index, which is determined every two years. Occupational health promotion in Germany covers a range of services for employees such as stress prevention programs; flu vaccinations; colon cancer screening; information on diet and nutrition, exercise, and relaxation; and a comprehensive annual health check-up. We also offer psychosocial support to our employees and managers.



For further information, please refer to the "Employees" section, page 97 et seq.



900 EMPLOYEES



For further information, please refer to the "Employees" section, page 97 et seq.



900 EMPLOYEES

Standards in Germany serve to improve occupational safety by regulating aspects such as safe, ergonomic environments in buildings and vehicles. Furthermore, we offer all employees and their relatives driver safety training (for passenger vehicles and motorcycles), as well as cycling schemes for employees at various locations across Germany. Alongside generally available services, we also have target group-specific programs in place, such as driver safety training for specific areas of work, and the "Tritt sicher" (step safely) campaign developed in cooperation with Berufsgenossenschaft Verkehr, the German professional association for transport and traffic, to prevent trips and falls. By raising awareness and implementing preventive measures, our aim is to promote employees' health, boost their motivation, improve the health rate, and continue to reduce the accident rate.

A variety of key figures demonstrate the effectiveness of our corporate health management services. The health rate (including long-term illnesses) at Telekom Deutschland was 93.6 percent in 2018 (prior year: 93.7 percent). Excluding long-term illnesses, the health rate in 2018 stood at 95.3 percent (prior year: 95.4 percent). The target for 2018 was 95.6 percent. The health rate is reported to the Board of Management at the end of each quarter. In 2017, we launched a project designed to steadily improve the health rate by 2020. We aim to bring the Group-wide health rate up to 95.9 percent by 2020 (excluding long-term illnesses). The total number of work-related accidents continued to decline in the reporting year in comparison with the previous year. With 8.7 accidents (resulting in over three days of absence) per thousand employees, the accident rate in Germany was well below the industry average. The Group-wide health index – calculated in 30 countries as part of the last employee survey in 2017 – increased by 0.1 to 3.6 (on a scale from 1.0 to 5.0). As in previous years, 2018 saw a range of new measures being taken to raise the health rate, such as a workshop where management staff learned about different short-, medium- and long-term strategies for promoting health. Plans are in place to implement further health promotion measures throughout the Group by 2020. With digital transformation set to take on an increasingly important role in the context of health, we are looking into potential strains that digitalization may cause. Step by step, we are adapting our health programs to the needs raised by progressive virtualization, digitalization, and internationalization. For example, we already offer web-based training for managers on health and safety, mental health, and operational integration management. In 2018, we teamed up with BARMER health insurance to further expand our Digitalization and Health project launched the previous year. For example, Deutsche Telekom employees were given the opportunity to test the M-sense app, which enables users to analyze the specific causes of their headaches and migraines, and draw up a personal treatment plan. Based on the results, a decision will be made whether and how M-sense will continue to be used at Deutsche Telekom.

ASPECT 3: SOCIAL CONCERNS

We are finding new solutions to many different challenges our society is currently facing as a result of the digital transformation. Since this development affects every area of our lives, access to state-of-the-art information technologies is key to participating in a knowledge and information society. As a telecommunications company, we are responsible for providing such access to as many people as possible and for promoting the competent use of ICT. The security of our customers' data is our top priority in this respect. When used properly, ICT can also make a valuable contribution to sustainable development.

DEPLOYMENT OF ICT PRODUCTS TO THE BENEFIT OF SOCIETY SDG 12

One of the biggest challenges we must face up to is climate change. Given our desire to help limit global warming to below two degrees Celsius, we are systematically working toward shrinking our carbon footprint. We can make a very significant contribution with our products and services. According to the SMARTer2030 study conducted by GeSI, ICT products have the potential to save almost ten times as much CO₂ emissions in 2030 in other industries as the ICT industry itself produces. SDG 12 We can also use our products, services, and activities to contribute to tackling many other environmental and social challenges, as was made clear in a comparison with the 17 sustainability goals (SDGs) adopted by the United Nations. For instance, ICT solutions can help reduce resource consumption in agriculture and increase harvests, shape cities up for the future in terms of sustainability, stabilize power supply grids, or improve access to education and medical care – areas of application that offer market opportunities for our Company. SDG 12 In order to evaluate the concepts described in this NFS, it is important to also look to the opportunities digitalization opens up for sustainable development. For this reason, we are addressing the topic here, even though it is not a holistic concept within the meaning of the CSR Directive Implementation Act. The individual national companies are responsible for developing new products and solutions.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



FINANCE



For further information, please refer to the section "Risk and opportunity management," page 113 et seq.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



STRUCTURE

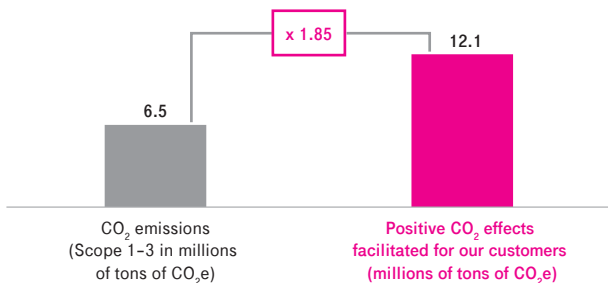
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Since 2014, we have been analyzing the scope of the sustainability benefits offered by selected products. With such benefits including better air quality in urban environments, we are currently carrying out three smart city projects in Romania, where monitoring stations continuously analyze data on the humidity, pressure, and CO₂, ozone, and sulfur dioxide content of the air. **[SDG 11]** In Greece, we developed an integrated ICT solution as part of our Digital Service for Warning & Firefighting project that makes it easier to manage fire-related incidents, coordinate available firefighting resources, and communicate with local authorities. Using this solution, emergency response teams can access information at any time on a range of different devices such as smartphones, tablets, or personal navigation devices (PNDs) to ensure fire rescue missions progress swiftly and are more effective. The project was carried out by a team of different businesses led by our Greek national company. **[SDG 15]** ICT can even help better understand illnesses and improve treatment – like our cell phone game Sea Hero Quest, which is helping with dementia research. **[SDG 3]** In 2018, we expanded our detailed analyses of how our product groups contribute to sustainability, and have already examined a total of 29 product groups thus far. Using the Sustainable Revenue Share ESG KPI, we determine how much revenue (excluding T-Mobile US) we generate with these products; in 2018, the figure stood at around 42 percent.

We also calculate the positive CO₂ effects facilitated for our customers through using our products. We combine this figure with our own CO₂ emissions to determine the enablement factor, which we use to measure our overall performance in relation to climate protection. According to this figure, the positive CO₂ effects facilitated for our customers in Germany were 85 percent higher in 2018 than our own CO₂ emissions (enablement factor of 1.85 to 1).

Enablement Factor ESG KPI
Deutsche Telekom Group in Germany in 2018



Sustainable products are another key competitive factor at our Company. In order to highlight these sustainability benefits to our customers, we aim to have our products certified by recognized environmental labels such as the Blue Angel. The majority of Telekom Deutschland's fixed-network devices and media receivers, for example, carry the Blue Angel seal of approval. The strict requirements for these environmental awards not only provide us with ways to further improve our products, but also encourage us to do so.

CONNECTING THE UNCONNECTED – ACCESS TO AND PARTICIPATION IN THE INFORMATION AND KNOWLEDGE SOCIETY

All around the world, having access to state-of-the-art information technologies is a precondition for economic performance and participation in a knowledge and information society. That is why we continue to rapidly expand our infrastructure and improve transmission speeds with new, secure technology. At the same time, we use our social initiatives to reduce potential obstacles to ICT use. Responsibility for shaping the digital transformation has to be assumed by society as a whole. The Board of Management of Deutsche Telekom AG plays an active role in this discussion, which entails looking at matters such as how we can use artificial intelligence (AI) responsibly. AI is a well-hidden feature in an ever-growing number of ICT products and services. We use it on a daily basis, for example while searching the internet or using a satnav. It opens up new opportunities, but also presents fresh challenges. In 2018, under the auspices of Group Compliance Management, we therefore established guidelines for the ethical use of artificial intelligence. These guidelines serve to define how we at Deutsche Telekom aim to adopt a responsible approach to AI and develop our AI-based products and services in the future. Far from claiming our guidelines, as they currently stand, set out universal rules for the responsible use of AI, we are keen to develop them further in discussions with our employees and external stakeholders. **[SDG 8]**

Demand for faster data services with full-coverage availability is growing continuously. The majority of the Group's investment volume in Germany, which currently amounts to over EUR 5 billion a year, is for the build-out of broadband networks. This build-out is based on the goals of our Europe-wide integrated network strategy, which we use to help achieve the EU Commission's network build-out targets and the Federal Government's Digital Agenda and broadband strategy. Founded on two pillars – building out mobile networks and rolling out optical fiber – our strategy sets out, among other elements, to upgrade our mobile networks with 4G/LTE technology so as to offer greater network coverage with fast mobile broadband. By the end of 2018, we had already covered more than 97 percent of the German population with LTE. Moreover, we are in the process of developing the upcoming 5G standard, having demonstrated the first 5G data connection in Europe's live network in Berlin in 2018, for example. At the end of 2018, our fixed network provided 28 million households in Germany with at least 50 Mbit/s; that's 65 percent of the population. In addition to vectoring technology, we are using other innovative products, such as our hybrid router,





For further information on our build-out targets, please refer to the section "Group strategy," page 35 et seq.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



STRUCTURE



For further information, please refer to the section "Risk and opportunity management," page 113 et seq.

3 GOOD HEALTH AND WELL-BEING



ENVIRONMENT

4 QUALITY EDUCATION



RELATIONSHIPS



www.medienabersicher.de/en/



www.teachtoday.de/en/

which combines the transmission bandwidths of fixed-network and mobile communications, thus attaining significantly higher transmission speeds – particularly in rural areas. [SDG 9](#)

In general, we want to make our network infrastructure and our products as efficient, environmentally friendly, and harmless to health as possible. That is why we are committed to addressing the topic of mobile communications and health responsibly. Our Group-wide EMF Policy (EMF being short for "electro-magnetic fields") has played a key role in this process since 2004, defining the standard requirements – which considerably exceed the applicable national legal requirements – for addressing mobile communication and health-related matters. [SDG 3](#)

But access to technology alone is not enough to ensure everyone can participate in the knowledge and information society – people also need to know how to use digital media safely, competently, and responsibly. More and more, this issue not only has a private dimension – the protection of personal data – but also a social and political one. Incorrect information and hate posts shape public opinion and can even influence elections. That is why we are working to build media literacy skills in broad swaths of society. Group Corporate Responsibility is in charge of coordinating this topic at Group level. The individual national companies are responsible for developing and implementing media literacy projects, which allows regionally specific conditions to be better taken into account. One example of our national companies' dedicated efforts is the programming workshops for children and young people that Telekom Romania has been offering in collaboration with the CoderDojo charity since 2011. At this stage of the 2018-19 school year, approximately 450 children and young people have so far attended these free workshops. In addition, Telekom Romania's Smart Education package provides schools with internet access, online teaching material, and electronic devices to be used in the classroom. The package is already available in more than half of districts throughout the country – both in urban and rural areas. [SDG 4](#)

We present all our initiatives in Germany on our "Media, sure! But be secure." website. [□](#) One example is our multi-award-winning Teachtoday initiative [□](#), in which we help children and young people learn how to navigate the internet safely and skillfully. But children are not the only ones who need help finding their way through the digital world, which is why we provide informational material for all ages. Together with the German National Association of Senior Citizens' Organizations (BAGSO), for instance, we support media literacy projects for the elderly. Teaching media literacy skills is also a core focus of our corporate volunteering programs, where employees devote their free time so as to share their expertise.

Being able to tell the difference between reliable information and intentionally misleading statements is a key aspect of media literacy. Our 1001 TRUTH initiative, launched in 2018, and the digital platform of the same name aim to promote responsible and critical use of media. Topical issues relating to the digital world are presented on the platform in easy-to-understand modules that range from "opinion making on the internet" to "digital estate" and "data protection and security." The content is suitable for self-study, but is also aimed at coaches working with learning groups. The modules are available in German and English, with simple language versions being progressively added.

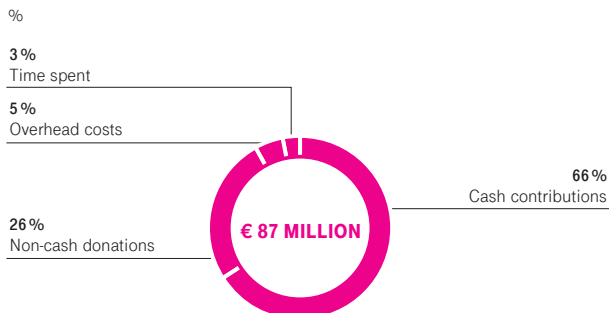
Data security is another focal point of our efforts. Our German-language online advisory service www.telekom.com/en/corporate-responsibility/data-protection-data-security/digitally-secure and our app-based "We care" magazine in German and English offer practical advice on how to use digital media safely and securely.

As one of Germany's major corporate foundations, the Deutsche Telekom Foundation is dedicated to improving education in STEM subjects (science, technology, engineering, and mathematics) in the digital world. Since 2018, the foundation has supported the initiative "The Future of STEM Learning," developing and testing concepts for high-quality STEM lessons and integrating them into teacher training programs in collaboration with five German universities. In total, the Deutsche Telekom Foundation has invested EUR 1.6 million in this project.

We measure the impact of our Group's social commitment with a set of three ESG KPIs. The Community Investment ESG KPI maps our social commitment in terms of financial, human, and material resources. In 2018, this amounted to EUR 87 million. The marked year-on-year rise (EUR 57 million) is attributable to a special donation by Telekom Deutschland and a redoubled commitment to education at T-Mobile US. The Beneficiaries ESG KPI shows the number of people involved in community activities and how many people we have reached – 15 million in 2018. The Media Literacy ESG KPI calculates the proportion of the target group reached through media literacy programs as part of our social commitment efforts. In 2018, this KPI increased slightly to 42 percent, up from 41 percent in the prior year. We aim to reach 45 percent by 2020. The 2018 ESG KPIs for the Deutsche Telekom Group in Germany were EUR 55 million (Community Investment), 13 million people reached (Beneficiaries), and 47 percent (Media Literacy).

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Community Investment ESG KPI



Helping refugees integrate into the German labor market constitutes another core element of our social commitment efforts. For example, we offer internships for which we hire suitable candidates at specially organized application events. Our focus in 2018, however, was to promote longer-term integration, for example by offering openings that allow candidates to transition from an internship to vocational training or a cooperative study program. We have succeeded in filling around 30 percent of the longer-term positions with candidates who had previously completed an internship. Our “Internship PLUS direct entry” program also focuses on the longer term, offering a two-year employment contract following an orientation period of three to six months. This program is aimed at refugees encountering difficulties integrating into the German labor market – perhaps because their vocational qualifications are not recognized in Germany – for whom an apprenticeship would not be a suitable course of action. We developed this program further in 2018 and created new jobs in areas such as customer service, which are in particularly urgent need of staff. Through our various programs, we made approximately 440 offers to refugees in 2018 – 250 of which were new openings created during the reporting year.

SDG 4

DATA PRIVACY AND DATA SECURITY **SDG 16**

The process of digitalization comes with new kinds of threats, such as hacker attacks on the sensitive data of private individuals or companies. People will only actually use new ICT solutions if they trust in the security of their personal data – and only then can these solutions develop their true potential for more sustainable development. Specifically as an ICT company, gaining our customers’ trust is hugely important for our business to succeed – which is why we attach particularly great importance to protecting and securing their data.

In 2008 we set up a Board of Management department for Data Privacy, Legal Affairs and Compliance as well as the Group Privacy unit. Since 2009, the Board of Management has been advised by an independent Data Privacy Advisory Council comprising reputable experts from politics, science, business, and independent organizations. Furthermore, our data privacy-related compliance management systems outlines the measures, processes, and audits we use to ensure compliance with laws, regulations, and voluntary commitments to uphold data privacy in the Group.

Data privacy and data security are subject to both the Binding Corporate Rules Privacy (BCRP), which govern how the Group treats personal data, and the Group Security Policy. The EU General Data Protection Regulation (GDPR) entered into force in May 2016 and became binding on May 25, 2018, following a two-year transition period. As laws always need to be interpreted as to how they should be implemented in day-to-day life, the Group Privacy unit took the initial step of preparing rules called Binding Interpretations, which apply consistently across the entire Group. Compiled in collaboration with data privacy experts in the national companies, the Binding Interpretations contain specific recommendations and best-practice examples for implementing the GDPR. For example, they explain what a customer consent must entail and how customer data must be deleted, if requested. In light of the GDPR, we have provided our customers with comprehensive information on our website, too. The Group Security Policy contains significant security-related principles valid within the Group, which are based on the international ISO 27001 standard. These policies allow us to guarantee an adequately high and consistent level of security and data privacy throughout our entire Group.

Every year since 2014, Deutsche Telekom has published a transparency report for Germany, which covers the types and amount of information we disclose to security agencies. In doing so, we are fulfilling our statutory duty as a telecommunications company. Since 2016, our national companies have also published such transparency reports.



For further information, please refer to the section “Risk and opportunity management,” page 113 et seq.

In order to ensure even better data privacy and data security within our Group, our corporate units are audited and certified regularly by internal and external professionals. This involves regularly conducting Group-wide internal security checks as well as audits of individual Group units as part of our Security Maturity Reporting to help us evaluate by way of self-assessment how we are faring overall with regard to security in our Group.

We use two surveys – the Group Data Privacy Audit (GDPA) and Online Awareness Survey (OAS) – to measure our employees' awareness of data privacy and security by means of annual random checks. For the GDPA, we survey 50,000 Deutsche Telekom employees on topics related to data privacy and data security. The results are used to calculate the Data Protection Award indicator – which quantifies the level of data protection in the units on a scale from 0 to 100 percent. It is based on what the employees said they thought, did, and knew about data protection. In 2018, the Data Protection Award indicator was 76 percent (excluding T-Mobile US, prior year: 75 percent). The OAS, which we have conducted since 2005, surveys roughly 42,000 employees and provides key data on their awareness of security issues. With academic support, we use the results from this survey to determine the Security Awareness Index (SAI). In 2018, the index was 78.3 (excluding T-Mobile US, prior year: 78.4) of a maximum of 100 points (higher than in any other benchmark company). We also have our processes and management systems as well as products and services certified by external, independent organizations such as TÜV, DEKRA, and auditing firms. The most recent proof that the IT systems at Telekom Deutschland are secure was provided by TÜV Nord in 2017, when it issued a three-year certificate.

Telecommunications companies are required to train their employees on issues related to data protection law when they begin their employment. Deutsche Telekom goes above and beyond these legal requirements: Every two years, we train all of our employees in Germany and place them under an obligation to uphold data privacy and telecommunications secrecy. We have also implemented corresponding requirements in our international companies. Where there is a greater risk of data such as customer or employee information being misused, we also provide online training designed for self-study, give data privacy presentations, and host classroom training courses on specialized topics such as data privacy in call centers. This helps ensure that all employees have an in-depth understanding of the relevant data privacy provisions.

Founded in January 2017, the Telekom Security unit is responsible for internal security matters and also offers security solutions for consumers, business customers, public authorities, and state agencies. In 2018, the unit broadened its cyber defense and threat intelligence capacities, and gained further DAX-listed companies as customers. Following its inauguration in 2017, we welcomed numerous politicians, representatives of interest groups, and customers at our Cyber Defense and Security Operations Center throughout 2018. Guests learned about the latest IT security issues during their visits to the center, which is one of the largest and most advanced in Europe. Around 200

experts work there around the clock to monitor our own and our customers' systems.

We react to new emerging threats and continuously develop innovative processes for defending against attacks. In 2018, Telekom Security once again launched a range of new security solutions for retail customers, businesses, public authorities, and state agencies. We have our security management systems externally certified to standards such as the ISO 27001 for information security management systems (ISMS). Running its own critical infrastructure, Telekom Security also provides customers such as energy providers and power plant operators with consultancy services for other critical areas. In 2018, we hosted the third Telekom Security congress in Bonn, Germany, inviting partners and customers to discuss current developments and discover new security trends and solutions.

We work with research institutes, industry partners, initiatives, standardization bodies, public institutions, and other internet service providers worldwide with a view to fighting cybercrime and enhancing internet security together. For instance, we collaborate with the German Federal Office for Information Security throughout Germany and with the European Union Agency for Network and Information Security at a European level. [SDG 17](#)

Data privacy and security play an important role that starts during the development of our products and services. We review the security of our systems at every step of development using the Privacy and Security Assessment process both for new systems and for existing systems when the technology or method of data processing is modified. We use a standardized procedure to also document the data privacy and data security status of our products throughout their entire life cycle.

Youth protection aspects are also taken into consideration in our product and service design. When we develop services that could be relevant in terms of youth protection in Germany, we consult our Youth Protection Officer for suggestions of restrictions or changes. In 2014, we appointed a Child Safety Officer (CSO) in each of our national companies in Europe. The CSO acts as a central contact for the relevant stakeholders of the community, and plays a key internal role in coordinating issues relevant to youth protection. Since protecting minors when they interact with media is a challenge across many different industries, we cooperate with different youth protection organizations and participate in alliances such as the "Alliance to better protect minors online," which aims to make the internet a safer place for children and young people. [SDG 3](#)

17 PARTNERSHIPS FOR THE GOALS



RELATIONSHIPS

3 GOOD HEALTH AND WELL-BEING



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ASPECT 4: RESPECTING HUMAN RIGHTS

Compliance with human rights is highly important to our Group. This applies both internally within our Company and equally so to our business partners and our approx. 20,000 suppliers in more than 80 countries – whom we explicitly place under the same obligations.

LABOR STANDARDS IN THE SUPPLY CHAIN AND IN THE GROUP SDG 10

There are still places in the world where human rights are not a given. As part of our global procurement activities, we can be exposed to country- and supplier-specific risks. These include, for example, the use of child labor and inadequate local working and safety conditions. Violations cause severe damage to those affected, and can also result in reputational damage and negative financial consequences for companies. ■

As a responsible company, we have made an express commitment to upholding the UN Guiding Principles on Business and Human Rights adopted by the United Nations Human Rights Council in 2011 (Ruggie Principles). The obligation to respect human rights is anchored in our core regulations – i.e., our Guiding Principles and our Code of Human Rights & Social Principles. The latter underscores our commitment to protecting human rights and to the goals of the German National Action Plan on Business and Human Rights adopted by the Federal Government in 2016. At the same time, the code embodies our commitment to complying with the principles laid down by the International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), the Universal Declaration of Human Rights, and the UN Global Compact. We also require our suppliers to comply with all our guidelines related to human rights. Within the Group, our primary focus is on safeguarding the right to conclude collective agreements and on guaranteeing diversity and equal opportunity. ■

The UN Guiding Principles on Business and Human Rights require businesses to systematically identify the impact their operations have on human rights, and to prevent, mitigate, or compensate these where necessary. In order to meet these requirements, we have developed an extensive program to implement the UN Guiding Principles throughout our Group and introduced an ongoing process comprising several interconnected measures and tools. The program includes promoting awareness, a mechanism for lodging complaints, a risk and impact analysis, and reporting.

We primarily use two instruments to review our Code of Human Rights & Social Principles. Firstly, we prepare an annual Human Rights & Social Performance Report. In 2018, all 120 companies surveyed for the report declared that they are in compliance with the requirements of the Code of Human Rights & Social Principles, with the report showing no violations for that year. Secondly, we provide a central point of contact for human rights issues, available at the email address humanrights@telekom.de or through an anonymous whistleblower system. We have summarized all relevant contact information on our whistleblower portal Tell me!. We look into all tip-offs received and introduce countermeasures, provided the information is identified as plausible. In 2018, nine tip-offs relating to human rights issues were received either directly via the central point of contact or through the (anonymous) whistleblower system. Not all of these tip-offs were deemed plausible. Whenever necessary, we carry out review processes at our national companies to assess employer-employee relationships. To do so, we compile five human rights-related key performance indicators, such as employee satisfaction, then assess these using a traffic light system. ■ In addition, we conduct an annual formal review of compliance with the Employee Relations Policy. The results are discussed with the regional managers in our national companies. If necessary, we agree upon measures such as the Human Rights Impact Assessment, which provides a means of evaluating the effects business operations have or could potentially have on human rights, and the organization's ability to prevent, mitigate, or remedy such effects. In 2018, we carried out such an assessment at T-Systems Malaysia and T-Systems Singapore, and conducted an Employee Relations Policy review at Magyar Telekom. We also launched a special human rights training course for employees throughout the entire Group in 2018.

The public increasingly expects companies to take responsibility for their entire value chain and fully utilize the opportunities open to them to influence specific issues. We have been working to improve sustainability throughout our supply chain for many years. We derive our sustainability strategy in procurement from our CR strategy; it is anchored in the purchasing processes used throughout our Group. The heads of the CR and Procurement units are jointly responsible for implementing sustainable procurement practices. They report to the CHRO and CFO, respectively. An escalation process calls for decisions to be made at Board of Management level in severe cases. The Sustainable Procurement working group supports international procurement units in meeting sustainability requirements. Our sustainability principles for procurement are laid down in the Global Procurement Policy; the associated Procurement Practices provide specific instructions for procurement in Germany and serve as recommendations for our national companies. We train our employees throughout the Group using an e-learning tool. In addition, a buyer handbook has been available since 2016 to provide an overview of which CR criteria must be considered at which point of the procurement process. SDG 8



909 EMPLOYEES



For further information, please refer to the section "Risk and opportunity management," page 113 et seq.



For further information about employee satisfaction, please refer to the "Employees" section, page 97 et seq.



For further information, please refer to the passages entitled "Collaboration with employees' representatives and trade unions" and "Diversity and equal opportunity" in this section under Aspect 2: "Employee concerns," pages 80 and 81.



RELATIONSHIPS

Basic ethical, social, and environmental principles as well as fundamental human rights are set out in our Supplier Code of Conduct, which is part of our General Terms and Conditions for Purchasing and must therefore be recognized by all of our suppliers. When selecting a supplier after issuing an invitation to tender, sustainability factors are given a weighting of 10 percent.

We cannot guarantee that all our suppliers will conform to the principles of our Supplier Code of Conduct. We review compliance regularly to minimize risks and further develop suppliers, working closely with them on these issues. We do so using a four-phase approach. The Supplier Code of Conduct is an integral part of all supplier agreements, and as such binding on all of our suppliers (phase 1). As the business relationship proceeds, we ask strategically relevant or high-risk suppliers to enter more detailed information about their practices into the EcoVadis information system. We go one step further with certain suppliers that exhibit a higher CR risk, and conduct on-site social audits (phase 2). Our focus here is not only on our direct suppliers but also, wherever possible, on downstream suppliers. We also boost the effectiveness of our audits by collaborating with sixteen other companies in the Joint Audit Cooperation (JAC). In 2018, we completed a total of 117 social audits – 29 at our direct and 88 at our indirect suppliers. As in previous years, we concentrated our auditing activities on suppliers in Asia, in particular in China and their neighboring countries such as India, Malaysia, South Korea, and Thailand, as well as in Brazil, Mexico, and Eastern Europe. Audited suppliers included manufacturers in the areas of IT hardware, software and services, as well as networks and devices. [SDG 10](#)

We use the information provided by the companies themselves and audit findings to classify and rate suppliers, primarily those that offer several material groups, according to CR criteria (phase 3). As part of our multi-award-winning Supplier Development Program (phase 4), we have developed solutions in cooperation with our suppliers for areas such as environmental protection, working hours regulations, and health protection over the past few years. In 2018, we placed our supplier program as an industrial approach under the umbrella of the ICT sector's Global e-Sustainability Initiative (GeSI), where it is being continued as the Sustainable Development Program (SDP). In this way, we hope to help make the global supply chains for ICT products more sustainable, even beyond our own value chain. In the second half of 2018, we initiated the GeSI SDP as a pilot project with four suppliers. Other ICT companies, their suppliers, and sub-suppliers will join the program as of 2019. We expect to see these companies obtain similar results to those achieved by the participants of our previous supplier program, whom we were able to help derive social, environmental, and even quantifiable economic benefits – with better working conditions reducing the number of employee absences, boosting their motivation, and increasing productivity. All this also improves product quality, which in turn reduces the number of complaints about our products. The environmental improvements include reduced consumption of resources such as water. [SDG 17](#)

We use the Sustainable Procurement ESG KPI to measure and manage our sustainability performance in procurement. This KPI represents the procurement volume attributable to suppliers who have accepted our Supplier Code of Conduct and have been checked on the basis of the information they have disclosed, for example, via EcoVadis or during a social audit, with regard to social and environmental criteria. This calculation relates to our procurement volume throughout the entire Group (from 2018 without T-Mobile US). At around 81 percent, the share of the procurement volume subjected to a risk assessment in 2018 was on a par with the prior year and in line with the level forecast. Our goal continues to be attaining at least 80-percent coverage by 2020.

ASPECT 5: FIGHTING CORRUPTION

Corruption and unfair business practices violate national and international law. We reject every form of corruption, which is why we focus on corruption avoidance measures.

ETHICAL BUSINESS PRACTICES AND COMPLIANCE [SDG 16](#)

We feel it is highly important that all staff and executive bodies in our Group act with integrity and comply with our values, rules of conduct, and applicable laws at all times. The goal of our compliance activities is to prevent violations and improper business behavior and to integrate compliance into our business processes early on and enduringly. Our customers need to be able to trust that our actions meet the highest standards for compliance and integrity around the world. This is essential if we are to be seen as a reliable partner.

We have expressed our commitment to complying with ethical principles and current legal standards. We have anchored this pledge in our Guiding Principles and our Code of Conduct. The Code of Conduct is valid throughout the Group and will be introduced in all of our national companies.

Group Compliance Management, our central compliance organization, also plays a key role in establishing corporate governance structures and a corporate culture that focus on integrity. It promotes a compliance culture and establishes a set of values centering around the issue of compliance at our Company, and encourages managers and employees to internalize these values. Our understanding of compliance therefore far exceeds simply conducting business legally, i.e., in line with laws and internal regulations, and aims to ensure everyone in our Group behaves with integrity.



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We have introduced a comprehensive compliance management system that addresses both of these aspects as a way to reduce risks and make sure conduct throughout the Group abides by the regulations in place. All our activities comply both with legal and statutory requirements and with our own policies and internal data privacy regulations. Responsibility for the compliance management system lies with the Board of Management department for Data Privacy, Legal Affairs and Compliance. In addition, one person at management or Board of Management level in each Group company is in charge of compliance. Our Chief Compliance Officer is responsible for the Group-wide design, advancement, and implementation of the compliance management system. Compliance officers implement the compliance management system and our compliance goals locally at the level of our operating segments and national companies.

We take many different actions and measures to prevent and fight corruption. Our compliance management system is based on the Compliance Risk Assessment (CRA), which we use to identify and assess compliance risks and introduce suitable preventative measures. We have established an annual process for this purpose throughout the Group that we use to identify responsibilities and define clear assessment criteria that are documented in a traceable manner. The companies that will take part in the CRA are selected according to the level of maturity of their compliance management system (maturity-based model). In the reporting year, the CRA included 72 companies and covered almost 98 percent of the workforce (according to the headcount figures for the fully consolidated companies as of September 2018). The individual Group companies are responsible for conducting the CRA, with support and advice given from the central compliance organization. After the management/managing boards in the national companies have been informed of the CRA findings, these findings are used to outline the compliance program for the following year: Measures and responsibilities are defined and management approves the program. These activities are monitored closely to ensure the measures are carried out. We have our compliance management system regularly certified, with particular attention paid to anti-corruption measures. In 2016, 10 German companies were examined. During 2017 and 2018, 15 international companies received certification, 3 of these in the reporting year.

We regularly provide risk-oriented and target group-specific compliance and anti-corruption training. We have set up the Ask me! advice portal to address all kinds of issues relating to compliance. The portal contains reliable information for employees on laws, internal policies, and rules of conduct relevant to their daily activities.

Despite the best preventative measures, we are not always able to prevent breaches of law or violations of regulations at the Company. The Tell me! whistleblower portal is available to employees and external parties for reporting breaches or suspected breaches of the law or of internal policies and regulations. In

2018, 137 compliance-related tip-offs were submitted via the Tell me! portal (prior year: 146 tip-offs). Over the course of the year, 46 of these were confirmed to be cases of misconduct and dealt with accordingly. We systematically pursue all tip-offs, including those that reach us via other channels, within the scope of the legal framework available to us, and implement commensurate sanctions. We have introduced a Group-wide reporting process to control and monitor these activities. This primarily includes reporting on Group-wide compliance cases and the status of the compliance program.

By signing our Supplier Code of Conduct, our suppliers undertake to refrain from any kind of corruption or conduct that could be interpreted as such. We expect, and work to ensure, that our suppliers observe these obligations, principles, and values, and take all necessary measures to prevent and penalize active and passive corruption. Since 2014, we have offered our suppliers regular e-learning training courses on compliance, besides providing them with a compliance guideline. We select our business partners based on compliance criteria and conduct risk-oriented compliance business assessments. [SDG 17](#)

INNOVATION AND PRODUCT DEVELOPMENT

[SDG 9](#)

OUR FOCUS FOR INNOVATION – EXPLORE. DEVELOP. DELIVER.

Digitalization is the major change in our time. And this ongoing change challenges everyone, the users, the customers, and the providers. Intelligent robots and smart factories, self-driving cars, or artificial intelligence are increasingly finding their way into our daily lives; the real and virtual world are merging in the Internet of Things.

The new organization within the Board of Management department Technology and Innovation (VTI) helps ensure Deutsche Telekom can react faster and more flexibly to these changes. After the Technology and Innovation Board department was set up in 2017, the first step involved joining all relevant functions under a common leadership to ensure a tighter integration of innovation, network, and IT. To develop our products faster and provide them more efficiently, the following core elements were implemented in 2018: focusing the individual units on a single purpose (Explore. Develop. Deliver.), reducing organizational hierarchy levels, and rolling out more flexible, more competence-oriented structures. At VTI people work on comprehensive technology and provide innovation in the long run. VTI sees itself as a customer's advocate that satisfies today's customer needs while seeking future requirements at the same time. The ambition is to be the central product developer for Deutsche Telekom's markets and customers and to drive relevant innovation in the technology space.

17 PARTNERSHIPS FOR THE GOALS



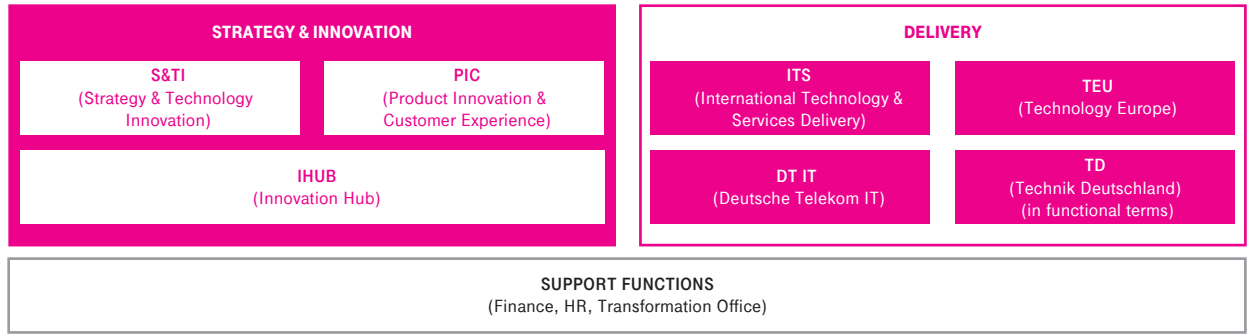
RELATIONSHIPS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



FINANCE

Reorganization of the Technology and Innovation Board department



To further strengthen and optimize VTI, the following key steps were implemented in the reporting year:

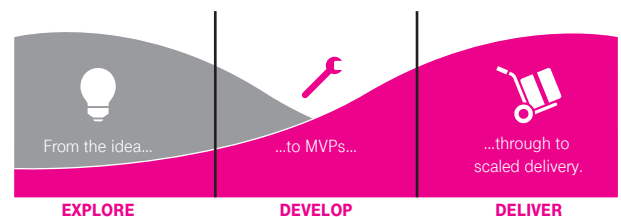
- Creating the new unit **Strategy & Technology Innovation (S&TI)** to combine all research and technology topics
- Creating the new unit **Product Innovation & Customer Experience (PIC)** to put more emphasis on product and customer experience
- Establishing the new **Innovation Hub (IHUB)** for more flexible innovation development
- Optimizing structures within **International Technology & Services Delivery (ITS)**
- Starting a cultural transformation

VTI consistently combines research, development, and innovation with the ability to deliver.

VTI OPERATING MODEL – FROM IDEA TO MARKETABLE PRODUCT

The operating model describes the responsibilities within the organization, processes, and interfaces as well as interaction between the VTI units. Every unit is given a purpose and focus along the value chain (Explore. Develop. Deliver.).

The operating model of the Technology and Innovation Board department



The model ensures that collaboration between the units works smoothly, highlights the particular responsibilities, and forms the basis for more flexibility as well as allowing projects to be set up swiftly and effectively. This will help develop new products and services more easily and more efficiently than ever before. Project teams can work together with the necessary specialists from other units. If requirements change, staffing for projects can be adjusted easily. Innovative methods are applied and prototypes developed in agile projects. In this respect, VTI acts mainly in the area of jointly defined strategic priorities such as 5G, Edge, campus networks, home, or smart city, while, however, also focusing on new fields.

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Phase 1: Explore – identify promising innovation ideas

Innovation needs exploration giving ideas the scope they need to develop into innovative products and services. This approach aims to translate the needs of customers into products and experiences that really matter to them. The first step toward developing valuable solutions involves listening closely to the customer. But we also use partnerships and start-ups as a channel for innovations and new ideas. The main steps during exploration are: ideation, filtering the ideas in line with the strategy, identifying opportunities for new products, selection of the most promising ideas, start of validation. [SDG 9](#)

Phase 2: Develop – bring opportunities swiftly to market maturity and prove market relevance

Our teams must be agile and flexible in how they manage and budget innovation projects. In this phase, innovation leads and developers from our Innovation Hub (IHUB) work together closely to devise a minimum viable product (MVP). An MVP is the first minimum viable product in the development process. It already runs on a platform and is tested by customers in this development phase. An MVP is assessed according to the following criteria:

- **Delightful:** We can “wow” our users.
- **Valuable:** People like using it or buying it.
- **Usable:** People can figure out how to use it.
- **Feasible:** We can build and deliver it.

If these criteria are not fulfilled, the Fail Fast. Fail Cheap. principle applies, i.e., we would prefer to take a decision about possibly abandoning innovation projects early on and thereby save resources, rather than putting it off for too long.

Phase 3: Deliver – scale profitable products

Following a decision in the Develop phase that an MVP will be transferred to production for several markets, the International Technology & Service Delivery unit takes over and pushes forward with platform operation and the further development and scaling of the products. The handover from the Develop to the Deliver phase takes place gradually in cross-unit teams and ensures a smooth transition with regard to expertise, customer relationships, and processes.

INNOVATION MANAGEMENT

Innovation cycles are getting shorter and shorter. As a result, we must be agile and flexible in how we manage and budget our innovation projects. We orient ourselves to best-practice approaches used by innovative start-ups and successful companies, and to the latest findings from research and academia.

PORTFOLIO AND INNOVATION BOARD

Established 2013, the Portfolio & Innovation Board (PIB) plays a central role in managing our innovations. It ensures that we prioritize correctly by identifying and selecting key areas of innovation for our Group and deciding on the method of implementation. Our efforts are guided primarily by our innovation priorities and we create full transparency across the Group regarding our investments in innovation.

CORPORATE INNOVATION FUND

Our Corporate Innovation Fund (CIF) is managed centrally by the PIB. Similar to a venture capital approach, the CIF offers all business and product ideas generated within the Group a flexible and results-oriented form of funding for a specific project phase. The provision of additional innovation budget allows us, for example, to fund new innovation projects at short notice and with little red tape. Such financing is granted independently of annual planning periods, and therefore intensifies our focus on market and customer requirements. Innovation can take place anywhere across Deutsche Telekom, as long as the proposed business and product ideas fit within our Group’s central innovation focuses.

INVESTMENT COMMITTEE

We established the Investment Committee to speed up investment decisions on our innovation priorities. Its objective is to act like an (internal) venture capitalist. The Investment Committee allocates funding according to success, orienting itself to the approach used in the start-up industry and among venture capital investors whereby raising new funding from capital investors is dependent on the venture’s performance. This gives us the flexibility we need when developing innovation topics and focuses efforts on success. Funding is only made available for the next project phase when specific outcomes that are relevant to our customers are achieved.

COLLABORATION AND CULTURE

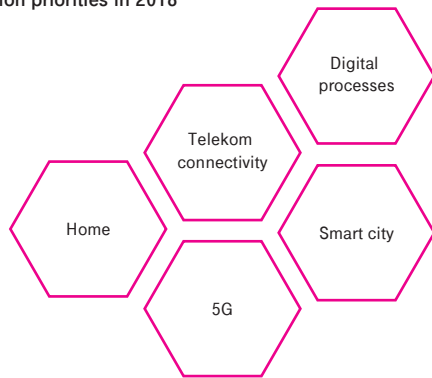
Close collaboration between all VTI units and with the segments across the Group is the key to successful innovation. We involve the segments with market responsibility in the development process right from the get-go. This joint effort ensures that we do not miss the mark during this phase. Having the customer in mind and anticipating their needs and wishes, we are striving to speed up the process of innovation and ensure prompt and more reliable implementation. We embody a new, results-oriented corporate culture, a “maker culture,” that is built around customer centricity, agility, and speed, embracing digitalization and simplicity in the way we work.



INNOVATION PRIORITIES

Where does innovation come from? Everywhere. That is why it is important to ensure our innovation activities take place at an intra-Group level and are aligned strategically. Our four interrelated innovation areas – products for consumers and business customers, network/infrastructure, and processes/service – provide a consistent framework that can be applied across the Group. In addition, for our innovations to be successful we must focus on just a handful of areas – but we have to choose the right ones. In the reporting year we have further developed our innovation priorities in close coordination with the operating segments.

Innovation priorities in 2018



- **Home:** In the connected home our customers experience the convergence of the next generation. To further improve the customer experience, we are enhancing the voicification of our services – integrating local partners for smart speakers and much more. The aim is to make the lives of customers easier at home and on the go by enabling a seamless, consistent, and convenient interplay of all Deutsche Telekom services, partner services, and devices.
- **Telekom connectivity:** By seamlessly managing the different access technologies from Wi-Fi through 5G and combining them with modern data analytics and machine learning processes, we create a unique connectivity experience. Our customers should be able to use their digital services and content anytime, anywhere – simply, securely, and in top quality.
- **Digital processes:** By integrating artificial intelligence we will ensure that our products and services remain competitive in the future. Artificial intelligence turns, for instance, voice control, which simply compares entered words against a list of keywords, into a smart assistant. By integrating artificial intelligence into customer service, we free up capacity to focus on further improving customer care.

- **Smart city:** Deutsche Telekom aims to be a trustworthy, reliable, and long-term partner for municipalities on the road to digitalization. The aim is to deliver future-proof connections and IT solutions for the benefit of residents and visitors, thus helping meet the environmental and economic challenges.
- **5G:** With 5G, we are creating the basis for the real-time communication of the future. Wireless broadband technology, for example, is key to innovative applications in the virtual and immersive internet of the future with self-driving cars, robotics, Industry 4.0, and ever-more realistic virtual reality.

In the reporting year, we already presented several promising product and service innovations as part of our innovation priorities:

When it comes to **connectivity**, we presented new home networking products for an even better customer experience at IFA 2018. The **Speedport Pro** was made available, which bundles the required bandwidth with up to 1,000 Mbit/s in the fixed network and LTE for mobile communications, turning it into our new flagship router in the German market. The inner workings of the router are manufactured from recycled plastic and we use environmentally friendly recyclable PaperFoam packaging. **SDG 12** **Speed Home WiFi** is our new mesh Wi-Fi solution. With up to five other devices it enables a comprehensive Wi-Fi network to be set up with the very latest mesh technology. The devices improve Wi-Fi reception by communicating with each other. The wireless connection in the mesh network transmits even Ultra HD movies perfectly. The **Speedport Smart 3** is now also available with the mesh update. As a new service, we are offering the revamped **DSL Help app** that enables our customers to analyze and improve their home network themselves. This is just one of the ways in which we ensure customers benefit from the best connectivity and the best customer experience.

In the reporting year, initial pilot projects were launched in our national companies for the simultaneous use of **LTE and Wi-Fi network technologies** (bonding). Behind this solution lies a combination of LTE and Wi-Fi, paving the way for high bandwidths and speeds beyond LTE (up to 100 Mbit/s) in real-world usage scenarios. We are also working on a pilot in Germany to develop “**zero-touch**” **connectivity**, i.e., connectivity management is activated as soon as the device is started up, which improves connectivity for our customers outside of the Connect smartphone app – take the wide range of screenless consumer IoT hardware available, for example.

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To make our customer service even more customer-friendly and efficient, voice control functions along with chatbots including artificial intelligence are being tested within our “**Digital processes**” innovation topic. The use of **chatbots** makes the customer service more effective and more efficient: They are available around the clock, complete routine work without any waiting time for the customer, and provide our service agents with more time to deal with complex issues. They cannot and should not replace human agents when it comes to our customers’ complex issues. Our chatbot **Tinka** at T-Mobile Austria came out on top in a study on chatbots in DAX 30 and MDAX enterprises. The study looked at aspects including the conversational behavior and usability of twelve chatbots. With a resolution rate of just under 70 percent, Tinka was chosen as the winner. We are also using chatbots in Germany. Our **Digital Service Assistant** is now built into our website and integrated into the **My Magenta** app where it already covers a host of use cases – with others set to follow.

With the “**Smart city**” innovation topic, Deutsche Telekom is driving forward the intelligent design of urban areas, enabling municipalities to save energy and money with intelligent lighting concepts, efficient waste management, smart parking solutions, and air quality monitoring, while also improving the quality of life of local residents. In the reporting year we set up a new initiative jointly with the German Association of Towns and Municipalities (Deutscher Städte- und Gemeindebund): the **Digital Cities & Regions** executive program. The partners develop smart, tailor-made solutions with the aim of promoting digitalization in cities and communities. [SDG 11](#)

As part of our **5G** innovation topic, we are laying the groundwork for the digital world of tomorrow. In the reporting year, we presented, for example, the T-Systems’ solution for **augmented-reality maintenance**. Maintenance employees wearing special glasses receive information about the machinery they are working on, including guidelines about how to ideally complete the repair. For example, a warehouse worker can see where a specific spare part is stored on a shelf, or a mechanic can see helpful information on their smart glasses that can help them repair a particular component. The first pilot projects got underway in 2018 – testimony to the high level of interest expressed by our business customers. We also pressed ahead with the **5G prototyping initiative** in the reporting year, launched by our tech incubator, **hub:raum**. Collaboration with selected start-ups has already begun. The 5G prototyping initiative gives start-ups from all across Europe the opportunity to come into contact with the brand-new 5G technology and infrastructure of Deutsche Telekom to foster the development of ideas and new applications. [SDG 9](#)

THREE-PRONGED INNOVATION STRATEGY

To tap into even greater innovation capacity, we not only rely on our own developments but also successfully integrate new ideas from outside Deutsche Telekom. We take a three-pronged approach to innovation to set ourselves apart from the competition and generate growth:

- In-house developments
- Partnerships, and
- Start-up funding.

FEEL THE FUTURE – OUR PRODUCT AND SERVICE INNOVATIONS

Below are a few examples of developments in the reporting year:

- We enabled the feature **voice redundancy for hybrid lines** (hybrid voice redundancy) for our consumers in Germany. This will allow them to still set up a VoIP connection over the LTE network should the DSL connection fail.
- We rolled out **supervectoring** in Germany. This technology supports transmission speeds of up to 250 Mbit/s (downstream) and 40 Mbit/s (upstream), providing bandwidths required for services such as Ultra HD. Supervectoring prepares our customers for future applications, such as virtual reality or higher-contrast video formats.
- In November 2018, we added content from another 18 partners to our streaming service **StreamOn**. StreamOn Gaming is a new addition to our already successful music and video streaming service. As young customers in particular have a high affinity for mobile gaming, StreamOn Gaming is included in all Young rate plans.
- At IFA 2018, we opened **MagentaTV** up to new target audiences. The TV service can now also be subscribed to as an over-the-top (OTT) offering, independently of a Deutsche Telekom internet access line. The MagentaTV OTT offering can be used with apps for iOS and Android. The content available is identical with that offered by the familiar MagentaTV service. The exclusive MagentaTV series are also available.
- We also extended the availability of the digital parking service **Park and Joy**. More than 30 cities altogether benefit from parking via a smartphone, which displays vacant parking spaces and navigates the driver directly to each space. [SDG 13](#)



8 DECENT WORK AND ECONOMIC GROWTH



- For business customers, we presented **TechBoost**, a Deutsche Telekom start-up program that provides selected technology start-ups with EUR 100,000 of credit for the Open Telekom Cloud. These technology start-ups are thus supported with powerful technology and can reap the benefits of a partnership with Deutsche Telekom, which provides them with access to Germany's business customers – and to sustainable success. [SDG 8](#)
- We also presented **Industrial Machine Monitoring** for our business customers. With this service, businesses can automatically monitor their machinery and receive reliable status information in real time. This complete package provides small and mid-sized enterprises with a simple entry route to the Internet of Things.
- The **Open Telekom Cloud** now offers greater convenience and functionality for our business customers. In March, we rolled out a new release for our Infrastructure-as-a-Service offering. Users benefit from two new functions in the area of platform services as well as numerous enhancements of existing features for greater ease of use and functionality.
- We are making the **Internet of Things** available throughout Germany, Europe, and North America. The rollout of Narrow-band IoT (NB-IoT) was pushed forward in ten countries, including countrywide in the Netherlands, Austria, the United States, and Slovakia. Alongside Vodafone, Deutsche Telekom is worldwide a leading provider of NB-IoT, well ahead of all the other network operators.
- The market launch of the new **IoT wireless standard LTE-M** was also prepared. To this end, we teamed up with our incubator hub:raum to launch a prototyping program in which 18 solution partners from 11 countries and 13 sectors were chosen from 150 applicants and qualified for further collaboration. The first LTE-M test networks went live in Austria, Germany, Poland, and the Netherlands in late 2018.
- Deutsche Telekom and Inmarsat in cooperation with their technology partner Nokia reached a decisive stage in the development of the **European Aviation Network (EAN)**. EAN is the world's first network designed for European airspace and combines S-band satellite communication with an LTE-based terrestrial network. With around 300 base stations in all 28 European Union member states plus Switzerland and Norway, the supplementary ground component of the EAN is the first pan-European integrated LTE network.

With our central research unit, **Telekom Innovation Laboratories (T-Labs)**, we operate our own research and development facilities at locations in Berlin, Budapest, Vienna, and Beer Sheva in Israel. Based on strategic Group targets, over 300 international experts and scientists from disparate disciplines – with close ties to our Technology and Innovation Board department and our operating segments – develop minimum viable products for partners at Deutsche Telekom. At the interface between science and entrepreneurship, the T-Labs together with industrial partners, international universities, research institutions, and start-ups conduct research and development work to solve specific customer issues, to decisively strengthen the innovation capacity at Deutsche Telekom, and to tap into new future topics. Based in Berlin, T-Labs has been an affiliated institute (An-Institut) of Technische Universität Berlin since 2004 and forged close ties to the university. In the reporting year, T-Labs focused on the following topics:

- **Blockchain:** In close collaboration with customers, technology partners, and other telecommunications providers, T-Labs is developing a new blockchain-based decentralized ecosystem in which various distributed ledger technologies are made available via an operating stack and technology-independent interfaces. Enterprises can themselves develop decentralized apps (dApps) with this solution without the need for any detailed knowledge of the underlying complex basic technologies. The core functionalities of this ecosystem include identity management, payment, storage, and smart contracts. An initial validation of the approach took place in hackathons in Munich, Berlin, Seattle, and Frankfurt, providing valuable input for further development along with initial positive market and user feedback.
- **Intelligence:** We develop solutions which, with help from machine learning methods, facilitate and optimize Deutsche Telekom-specific use cases. These included in 2018 improvements in the areas of network planning/optimization (IP traffic) for DT Technik, traffic management and parking space usage for the 5G program within VTI and T-Systems (Park and Joy), as well as in the context of campus networks and intelligent industry robots navigating within these networks. The Intelligence team together with partner universities in Germany, Austria, Hungary, and Israel is making its own mark, contributing significantly to the research community in the area of artificially intelligent machines and data science.

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■ **Experiences:** As part of the Group program Smart Cities/ Internet of Things (IoT), the Smart City Lab is devising an urban platform based on open standards for smart, cross-segment data usage. The platform was showcased successfully at the Mobile World and Smart City World Congress. Based on the Cloud TV user interface technology (operator app) for smart TVs, two MVPs were implemented simultaneously on the roadmap of the national companies in Hungary, Slovakia, Macedonia, and Montenegro. For the Magenta VR portal, the VR/360-degree tile-based streaming technology was tested successfully in two live basketball broadcasts. This technology only transmits the currently visible image section from the 360-degree sphere, and effectively uses the bandwidth for transmission, thus achieving much more noticeable quality improvements in VR headsets. The Experience Group at T-Labs plans to intensify its research into AR/VR technologies and smart user interfaces.

INNOVATIONS FROM PARTNERSHIPS

We draw on the expertise and abilities of our partners in order to implement the digital transformation successfully. For example, we rely on the tremendous innovative energy coming out of Silicon Valley, Israel, Germany, and other innovation hotspots across the globe. Some examples of successful partnerships are described below:

- Pan-European cooperation with **PayPal**: A Europe-wide partnership with Braintree (a PayPal service) allows our German and international subsidiaries to offer their customers the best customer experience in the digital payment process. The payment function constitutes a key component of the One app (a smartphone service app) launched throughout Europe, and was already rolled out in five countries in 2018. The partnership successfully helps achieve the Group goals of cost efficiency, digitalization, and best customer experience. PayPal's top-class platform also supports seamless integration of future services in the areas of e-commerce and new payment methods such as Google Pay or Apple Pay.
- At the start of 2018, Deutsche Telekom invested in **Axonize**, an Israeli start-up specializing in Microsoft Azure-based IoT services. This strategic investment is the result of a strict selection process and collaboration with units from across the Group, from Partnering through to Product and Platform Management in the IoT unit at T-Systems. Ultimately, it was the bundled features for service providers, including service orchestration and management across various applications, as well as the extremely short development time frames for new use cases, that were the catalyst for the investment decision and partnership. Deutsche Telekom uses the features provided by Axonize as a module for its own IoT platform, Connected Things Hub, which forms the basis for solutions such as Building Monitoring & Analytics/Smart Building. The Connected Things Hub is already a strong platform for a growing ecosystem of established sensor and solutions partners, as well as innovative start-ups.

■ With partners **OpenAsApp**, **smapOne**, and **blue-zone**, this year we laid the foundations for expanding Telekom Deutschland GmbH's Mobile Solutions portfolio. These mobile-centric solutions help our business customers to digitalize their business processes. Many work steps can now be completed simply using a smartphone. This means the focus is on enterprises with field staff, i.e., sales/marketing or support employees. OpenAsApp allows, for instance, existing business data contained in an Excel file to be mobilized in a single app. These business apps can be created swiftly and then distributed without the need for any programming skills. SmapOne offers an innovative solution for simple, mobile data entry. Polumana, the solution from blue-zone AG, is an application for managing field staff, including access to corporate data in real time, and route planning.

START-UP FUNDING SDG 9

As Deutsche Telekom's leading start-up program, the tech incubator **hub:raum** brings together external start-ups with relevant business units in our Group to offer jointly innovative products to our consumers and business customers. To this end, **hub:raum** offers the start-ups seed financing from its own investment fund and targeted innovation programs aimed at Deutsche Telekom's strategic growth areas and technologies.

Since founding **hub:raum** in 2012, we set up a strategic investment portfolio of over 25 companies and work together closely with around another 300 start-ups from Europe and Israel in areas such as the real-time gigabit society (e.g., 5G and edge cloud), smart data economy (e.g., AI and process automation), and the Internet of Things (e.g., NB-IoT and Industry 4.0).

The **hub:raum** Campus at the Berlin location was upgraded, among other things, with one of the first 5G networks in Europe and edge cloud infrastructure. Besides coworking office space and mentoring, start-ups now also have exclusive access to our Group's networks, product platforms, and test data to help their business develop faster. Initial results include implementation of 30 projects on the new infrastructure in the **hub:raum** edge and 5G prototyping programs in 2018, which will also be continued in 2019. As part of the IoT innovation programs, over 36 implementation projects with solutions for NB-IoT and LTE-M networks as well as our Group's Industrial IoT portfolio also got off the ground. Some of these start-ups are described in more detail here:

- **Texel VR** is one of the most recent investments made by **hub:raum**. The start-up with headquarters in Israel and the United States enables events such as sporting events and concerts to be experienced live via virtual reality – using a video and VR solution, viewers can watch events in real time together with friends. And all without having to leave your couch. Viewers in different locations can take part in an event together virtually – even though they may be on different networks – and share special moments with one another.



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



RELATIONSHIPS

11 SUSTAINABLE CITIES AND COMMUNITIES



RELATIONSHIPS

- The NB-IoT innovation program produced the product partnership with **BS2 Sicherheitssysteme**. The company has developed a digital early warning system for bridges, tunnels, buildings, and other infrastructure objects on the basis of Deutsche Telekom's machine network (NB-IoT). Various sensors detect warning signals in objects long before any problems become visible, by monitoring critical factors such as temperature, air humidity, and corrosion. This IoT solution makes structures smarter, safer, and more sustainable. Damage can also be reduced and repair work and costs minimized. [SDG 11](#)
- At present, RPA (Robotic Process Automation) software like that from **CloudStorm** underpins any kind of corporate automation strategy. It delivers efficiency and allows humans and machines to work alongside and with each other so that each can focus on what they do best. As such, the software helps make businesses more profitable. This innovative approach was decisive in hub:raum's decision to add CloudStorm as another investment to its portfolio.

DEUTSCHE TELEKOM CAPITAL PARTNERS

Our investment management group, Deutsche Telekom Capital Partners (DTCP), set up in early 2015, continues to do well. DTCP manages around USD 1.6 billion and advises over 60 portfolio companies on behalf of Deutsche Telekom and other institutional investors. DTCP invests in venture, growth equity, and special situations in the United States, Europe, and Israel, and provides consultancy services in the technology, media, and telecommunications industries. DTCP's investments have a strong financial motivation. The group aims to acquire shares in companies, to see them grow, and to sell the shareholdings again at a profit. By focusing on financial return, DTCP can also invest in very successful companies which help the Group progress strategically.

In 2018, DTCP already opened its second venture and growth equity fund and secured, alongside Deutsche Telekom, international financial investors. The incorporation of external capital constitutes an important step in DTCP's further development – the fund's investments made in 2018 in Fastly, Dynamic Signal, and Pipedrive are just a few examples of the quality of the transactions made.

The strategic investment fund Telekom Innovation Pool (TIP) was further developed for investments that are primarily strategically motivated. Advised by DTCP, Deutsche Telekom makes investments here and promotes business start-ups that have a strategic focus and clearly collaborate with the Group's business managers. Particularly in the fields of blockchain and artificial intelligence, long-term innovations for the Deutsche Telekom Group are actively pursued here. From the Deutsche Telekom Venture Funds (DTVF) portfolio, which DTCP also manages, the bulk of the active (non-strategic) equity investments were sold to generate liquidity for the Group.

PATENT PORTFOLIO

Patents are gaining more and more significance in the telecommunications industry. Our patent strategy has to keep pace with the constant evolution of market players and fields of activity. On the one hand, our Group's scope for action must be maintained. On the other hand and alongside our own research and development activities, we want to pave the way to open innovation through collaboration projects and partnerships. [SDG 9](#) National and international patent rights are vital for these types of activity. We are strongly dedicated to generating and maintaining our own patents. In the reporting year, Deutsche Telekom held around 7,800 patent rights in total. We continue our intense efforts to develop and streamline our patent portfolio. This secures the value of the rights we hold and ensures they are in line with our Group's strategic objectives. We have put in place a professional patent law management process to keep our IPR assets safe.

EXPENDITURE AND INVESTMENT IN RESEARCH AND DEVELOPMENT

Research and development (R&D) expenditure includes pre-production research and development, such as the search for alternative products, processes, systems, and services. By contrast, we do not class as research and development expenditure the costs of developing system and user software which is designed to improve productivity and make our business processes more effective. R&D expenditure in the Deutsche Telekom Group amounted to EUR 57.7 million in 2018. As the parent company, Deutsche Telekom AG bears part of the Group's research and development expenditure, the amount in this case being EUR 33 million (2017: EUR 27 million). However, this figure cannot be viewed in isolation from our three-pronged innovation strategy comprising in-house developments, partnerships, and start-up funding.

Our Group's investments in internally generated intangible assets to be capitalized were also up year-on-year at EUR 284.2 million compared with EUR 235.7 million for the previous year. These investments predominantly relate to internally developed software, mainly in our Group Headquarters & Group Services segment and our Systems Solutions operating segment. About 3,100 employees worked in the Group's R&D units in 2018 (2017: approx. 3,000).

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Expenditure and investment in research and development

millions of €

	2018	2017	2016	2015	2014
Research and development expenditure	57.7	57.7	84.1	108.1	95.6
Investments in internally generated intangible assets to be capitalized	284.2	235.7	129.5	101.3	93.2

EMPLOYEES SDG 8

OPPORTUNITIES AND CHALLENGES OF DIGITALIZATION

Digitalization will completely revolutionize our lives and the way we work. Even now, we are already beginning to see new forms of collaboration, unprecedented business models, and greater automation of activities. That's why it is vital that we equip our managers and employees with digital skills, because people are the keys to our success, both today and tomorrow. It's also why we need to be an attractive employer to talented individuals. We must create working environments and use technologies that enable us to network among ourselves. Leadership will change, too, to become more participative and virtual. Decision-making will become ever faster. Digitalization opens the door to a host of amazing opportunities and we intend to make the best possible use of them.

The topics mentioned here guide our strategic priorities in HR. In 2018, we continued to work on the following key areas:

OUR HR PRIORITIES

1. Talent strategy and planning
2. Performance management and leadership
3. Working in the digital age
4. Skills management and innovative training opportunities

Below we describe details of example projects and initiatives designed with these priorities in mind.

OUR HR WORK BASED ON THE HR PRIORITIES

1. TALENT STRATEGY AND PLANNING

When it comes to transforming the Group, our workforce plays a crucial role. It is hugely important to us to have the right people in the right jobs and to further develop their individual skills.

Recruitment. We want to be the magnet for global digital talent. In Germany alone, we recruited over 2,000 new employees in 2018, particularly in the ICT environment. A quick digital recruiting process with a positive candidate journey is the key to success here. We offer a global careers website as a platform to search for jobs. A further example of digitalization in the recruitment process are game-based assessments. They are a new generation of psychometric tests in the form of online games that are currently being tested as part of a pilot in the context of our hiring process for the Start up! trainee program. We also use digital tools that rank final university grades based on algo-

rithms and therefore make a fair comparison. Our recruiting strategy also aims to encourage more women talents to join our company by addressing specific target groups. This allows us to support the Deutsche Telekom diversity culture. Since 2017, women students of STEM subjects from across all of Europe have been able to apply for our Women's STEM Award. We are also involved in Femtec, a career program for female STEM students, and the Global Digital Women network. SDG 5

Employer brand. Through our global employer promise, we also want to continue strengthening our employer brand in growing job markets and make Deutsche Telekom the employer of choice for IT talents. We also consistently use digital contact points as well as personalized methods to network in particular with IT talents and thus get closer to our target group and address them personally. Our largest, Europe-wide LinkedIn recruiting campaign to date successfully supported one of our largest recruiting projects in the IoT business. Our Global Online Challenge Platform allows us to reach IT students and graduates all over the world who enjoy virtual simulation games in order to win this talent target group over. Our CMD+O project in 2018 in Munich and Cologne created an open workspace for students and young professionals and provided a straightforward way for us to make contact with our target group.

Succession and talent management. We know that good employees are not only recruited from outside the Company. Many people with key skills and huge potential already work within our Group. In order to proceed in a structured manner, we will take a global approach to succession planning. A digital process allows us to plan and develop candidates on an ongoing basis, and we always have an overview of potential successors to management positions. Additionally, the Global Talent Pool is a platform and database that generates complete transparency over our global talents and their respective profiles. Talents can use the Global Talent Pool group on YAM, our social network, to plan the next steps of their career, identify strategic project assignments, and find interesting job vacancies. To prepare our global talents for new positions we also exclusively offer a portfolio of digital development opportunities, including CV consulting, career meetings, e-training modules, and mentoring. This system makes it easier to fill vacancies, improves the visibility of talented employees, and promotes rotation. Once again, we supported international networking with our Talent Summit conference where around 350 talents convened to share experiences and network with executives.



2. PERFORMANCE MANAGEMENT AND LEADERSHIP

Lead to win. The working world is becoming increasingly dynamic, agile, and innovative. In order to keep pace with these changes, we updated our “Lead to win” performance management model. Essentially, it is now decoupled from remuneration, fosters intense and ongoing exchange on performance and development, and includes more feedback elements. The employee is also given more personal responsibility when using optional elements and supporting instruments for self-reflection.

levelUP! In the age of digitalization, managers must possess skills and methods that differ greatly from those needed in the analog world. That's why we support our executives with levelUP! – an innovative digital further training service for successful leadership in the digital age. levelUP! comprises modules that can be flexibly combined and uses mainly interactive learning formats. In 2017 and 2018, more than 1,400 executives at Deutsche Telekom participated in this successful program.

Practicing diversity. For over a decade, we have sustainably and comprehensively practiced and promoted diversity throughout the Group. In 2015, we launched a campaign on unconscious bias, which is now running at international level. The goal is to raise employee awareness of this issue and bring fresh stimulus for greater diversity within the Company. We took part in the German Diversity Day with several campaigns. Gender equality remains a particular concern of ours. Back in 2010, Deutsche Telekom set itself the target of filling 30 percent of management positions across the Group with women. We aim to meet this target by 2020. Across the globe, the proportion of women in middle and upper management stood at 25.4 percent at the end of 2018. Following the introduction of the Act on Equal Participation of Women and Men in Executive Positions in the Private and the Public Sector (Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst), we extended the target to include the Board, the two levels directly beneath the Board, and our internal supervisory boards in Germany. Since 2015, via our Supervisory Board Readiness Program, we have trained almost 60 women to take on national and international supervisory board mandates. The annual Keep the Readiness program gives the women participants the opportunity to also take part in follow-up training on new corporate governance topics and challenges. The supervisory boards in our entities in Germany comprised 40 percent women as of December 2018. In our fully consolidated European subsidiaries, this figure stood at 26 percent. We are constantly working on the topic of equal opportunities through our involvement in the Chefsache initiative and memberships in schemes such as the Diversity Charter and the Technology-Diversity-Equal Chances Competence Center.

SDG 5

Achieving a good work-life balance. Alongside offering traditional support in the form of childcare facilities and family care options, we are also moving increasingly to an HR policy oriented to different life phases that offers flexible working conditions for greater self-determination, and, in doing so, exploits the opportunities provided by digitalization. After concluding the general collective agreement with ver.di in 2017, we rolled out mobile working across the Group as a new way of working. This allows our employees to work from home or on the move, provided the nature of the task lends itself to this. In addition, flexible working hours, the opportunity to go part-time with a guaranteed option to return to full-time work, and the lifetime work accounts all give employees greater freedom to structure their day flexibly and achieve a better work-life balance.

Employee satisfaction. According to data collected by the Group-wide employee survey of 2017 (excluding T-Mobile US), our commitment index score – our measure of employee satisfaction – was good at 4.1 (on a scale of 1.0 to 5.0). We also conduct regular pulse surveys to obtain feedback from our employees. 72 percent of employees took part in the pulse survey in November 2018, of which 70 percent stated they were satisfied with our Company. We have several initiatives in place to further improve the corporate culture and employee satisfaction. We expect the results from the next employee survey in 2019 to once again indicate a high level of satisfaction among our employees.

Employee satisfaction (commitment index)^a

	2017	2015
GROUP (excluding T-Mobile US) ^b	4.1	4.1
Of which: Germany	4.1	4.1
Of which: international	4.1	4.0

^a Commitment index according to the most recent employee surveys in 2017 and 2015.
^b T-Mobile US conducts its own employee survey.

Employee health. Our health management strategy is designed to maintain our employees' health and performance. We view occupational health and safety legislation as minimum requirements. In addition, we practice a corporate culture that encourages employees to take personal responsibility for their health. Managers make an important contribution in this respect. Our commitment to this topic has won us numerous accolades.

SDG 3

For further information on occupational health and safety, please refer to the section “Corporate responsibility and non-financial statement,” page 76 et seq.

3 GOOD HEALTH AND WELL-BEING



EMPLOYEES

5 GENDER EQUALITY



EMPLOYEES

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3. WORKING IN THE DIGITAL AGE

What does the transformation of the working world mean for our employees? The innumerable opportunities inspire our HR work, culminating in a range of measures on “people,” “places,” and “technologies.”

People. The transformation of corporate organization and culture is accelerating, driven by the pace of digitalization. Transformation is not an end in itself, but an expression of the relentless demand for adapted, more flexible work forms and operating structures. The automation of transactional and repetitive activities creates new options for “human” value creation, while social media and digital platforms unlock new ways of working across hierarchical divides. We gave agility a framework in this reporting year. The All About Agile project pools all Group activities concerning agile working, supports units in becoming more agile, and provides opportunities to share information. Six dimensions of agility were defined in this project and, based on these recommendations for action, how-to guides were developed that comprehensively support the employees and managers in the digital transformation. The success story continues: 4,746 Group employees were able to extensively demonstrate their design thinking abilities in projects as part of the third Magenta MOOC (Massive Open Online Course) under the slogan Tap into Design Thinking. [SDG 4](#)

Places. The workplace of the future will also undergo transformation. Our Future Work program offers modern, open office environments and shared work zones to promote flexible working, a trust-based leadership culture, and mobile working. The range of events on the new ways of working (Neues Arbeiten) was continued in 2018 in order to improve employee networking and to strengthen collaboration at our locations.

Technologies. Digitalization can make many things easier in our daily work routine. The Digital@Work program with its extensive training portfolio was launched following the rollout of modern, cloud-based solutions that was concluded in 2018. Through this program, we met our aim of training more than 7,500 employees using digital collaboration tools as early as the end of 2018. Our Mitarbeiter staff app was also developed further in 2018 and is constantly being equipped with additional features that will significantly reduce the amount of paper-based processes and laborious forms to be filled out. Mobile solutions not only make everyday work easier, they also promote modern and flexible working. We are aware that we must promote virtual collaboration if we are to maximize performance. In addition, most employees worldwide now have access to the following options for collaboration between units and across national borders: video and web conferencing services, live broadcasts and chat services, as well as knowledge-sharing via secure data rooms.

4. SKILLS MANAGEMENT AND INNOVATIVE

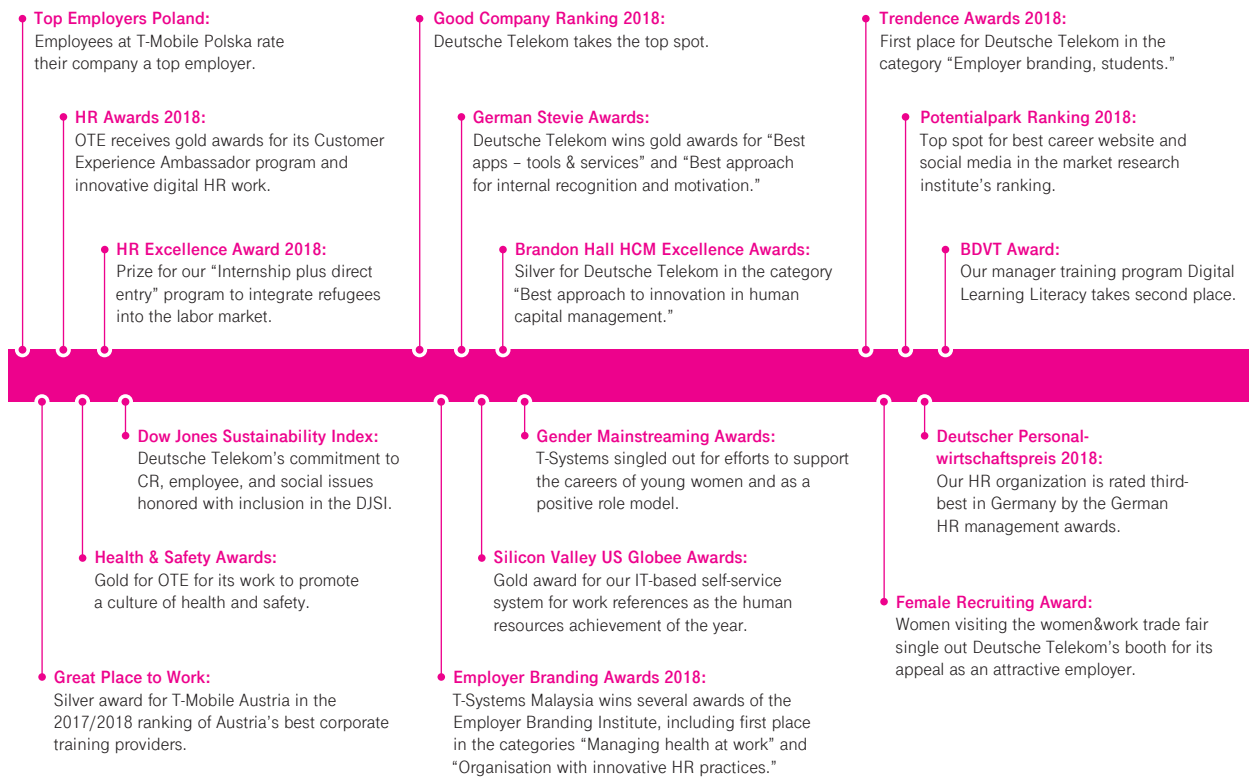
TRAINING OPPORTUNITIES [SDG 4](#)

Skills-up! Our employees and their skills are a key factor to our business success. Following a successful pilot project in four business units, we have reached an agreement with our employees’ representatives to implement a strategic skills management program in the Group in order to ensure competitiveness and employment. In addition to qualitative HR planning based on revised task descriptions and skills profiles as well as identifying retraining measures, the aim is to recognize skills gaps at an early stage and derive tailored training programs.

The 80/20 model. The 80/20 model is yet another innovative program to improve employee motivation and collaboration across departments. It gives employees the freedom – on a voluntary basis and in agreement with the superior – to dedicate 20 percent of their working hours to Group-wide projects. The model allows skills gaps to be closed, while giving employees the opportunity to apply their skills in other areas, irrespective of their department. Introducing this level of flexibility not only promotes the general success of the Company but also creates a new and innovative way of working in which employees’ skills are valued and managers receive targeted support.



Major HR awards in 2018



HEADCOUNT DEVELOPMENT

The Group's headcount fell by 0.8 percent compared with the end of the prior year. Development across the segments was varied. The number of employees in our Germany operating segment declined by 3.4 percent as a result of efficiency enhancement measures, fewer new hires in the operational units, and the take-up of socially responsible instruments in connection with the staff restructuring. The total number of employees in our United States operating segment increased by 2.1 percent year-on-year at December 31, 2018, compared to December 31, 2017, due primarily to increases in customer support, back office, and network employees, partially offset by a decrease in customer acquisition employees. In our Europe operating segment, staff levels grew by 1.5 percent compared

with the end of the prior year. This growth was mainly attributable to our national companies in Austria, where we took over employees of UPC Austria, and in Croatia, due in part to the expansion of our service activities there. The number of employees in our Systems Solutions operating segment decreased by 1.2 percent compared with the end of 2017, due mainly to restructuring measures. In our Group Development operating segment, the number of employees grew slightly compared with the end of 2017. The headcount in the Group Headquarters & Group Services segment was down 3.9 percent compared with the end of 2017. The decline in staff levels caused by ongoing restructuring measures at Vivento was partially offset by the addition of employees at the Technology and Innovation unit.

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WORKFORCE STATISTICS

Headcount development

	Dec. 31, 2018	Dec. 31, 2017	Change%	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014	
FTEs IN THE GROUP	215,675	217,349	(0.8)	218,341	225,243	227,811	
Of which: Deutsche Telekom AG	19,259	21,428	(10.1)	22,571	26,205	28,569	
Of which: civil servants (in Germany, with an active service relationship)	13,507	15,482	(12.8)	15,999	18,483	19,881	
Germany operating segment ^a	62,621	64,798	(3.4)	66,410	67,927	68,754	
United States operating segment	46,871	45,888	2.1	44,820	44,229	39,683	
Europe operating segment ^a	48,133	47,421	1.5	46,808	48,920	53,499	
Systems Solutions operating segment ^a	37,467	37,924	(1.2)	37,472	37,850	46,244	
Group Development operating segment ^a	1,976	1,967	0.5	2,572	2,768	0	
Group Headquarters & Group Services ^a	18,606	19,351	(3.9)	20,258	23,548	19,631	
BREAKDOWN BY GEOGRAPHIC AREA							
Germany	98,092	101,901	(3.7)	104,662	110,354	114,749	
International	117,582	115,448	1.8	113,679	114,888	113,061	
Of which: other EU member states	61,249	59,952	2.2	59,456	60,710	63,032	
Of which: rest of Europe	2,471	2,620	(5.7)	2,581	2,945	3,127	
Of which: North America	47,245	46,332	2.0	45,364	44,803	40,346	
Of which: rest of world	6,618	6,543	1.1	6,278	6,431	6,556	
NATURAL ATTRITION	%	5.1	4.7	4.0	4.4	4.2	
Of which: Germany	%	1.9	1.7	1.4	1.3	1.4	
Of which: international	%	9.8	9.2	8.1	9.3	8.6	
PRODUCTIVITY TREND^b							
Net revenue per employee	thousands of €	350	346	1.0	331	306	275

^a Since January 1, 2017, we have reported on the Group Development operating segment and within the Group Headquarters & Group Services segment on the Board of Management department Technology and Innovation. Comparative figures have been adjusted retrospectively. For further information, please refer to the section "Group organization," page 31 et seq. and the disclosures in Note 35 "Segment reporting" in the notes to consolidated financial statements, page 226 et seq.

^b Based on the average number of employees.

Personnel costs

billions of €

	2018	2017	Change %	2016	2015	2014	
Personnel costs in the Group	16.4	15.5	6.0	16.4	15.8	14.7	
Of which: Germany	9.2	8.5	8.2	9.8	9.4	9.1	
Of which: international	7.3	7.0	4.3	6.6	6.4	5.6	
Special factors ^a	1.2	0.6	n. a.	1.6	1.2	0.9	
Personnel costs in the Group (adjusted for special factors)	15.2	14.9	2.0	14.8	14.6	13.8	
Net revenue	75.7	74.9	0.9	73.1	69.2	62.7	
ADJUSTED PERSONNEL COST RATIO	%	20.1	19.9	20.3	21.2	22.0	
PERSONNEL COSTS AT DEUTSCHE TELEKOM AG UNDER GERMAN GAAP		2.5	2.7	(7.1)	3.5	2.9	2.8

^a Expenses for staff-related measures.

FORECAST¹

STATEMENT BY THE BOARD OF MANAGEMENT ON THE EXPECTED DEVELOPMENT OF THE GROUP


We successfully continued our growth course again in 2018. We already set ourselves apart by having the best and most modern networks and we want to continue building on this technology leadership. Over the coming years, we will also focus more on convergent offers, in line with the expectations of our customers. This goes hand in hand with our Leading European Telco strategy – with the aim of becoming Europe's leading telecommunications provider. This is closely related to our financial targets for the period up to 2021: As communicated at our Capital Markets Day in May 2018, we are aiming for the following compound annual growth rates (CAGR) for the period from 2017 to 2021:

- Revenue: 1 to 2 percent
- Adjusted EBITDA: 2 to 4 percent
- Free cash flow: approx. 10 percent

For 2019, we expect to post the following year-on-year growth trends, assuming a comparable consolidated group and constant exchange rates:

- Revenue is likely to increase again slightly in 2019.
- For 2019, we expect adjusted EBITDA AL (after leases) of around EUR 23.9 billion. Adjusted EBITDA in the reporting year came in at EUR 23.3 billion; on a like-for-like basis, i.e., adjusted for comparability with the EBITDA AL forecast for 2019, adjusted EBITDA stood at EUR 23.2 billion

- Free cash flow AL (after leases) is expected to grow to around EUR 6.7 billion in 2019. Free cash flow in 2018 was EUR 6.2 billion; on a like-for-like basis, i.e., adjusted for comparability with the free cash flow AL forecast for 2019, free cash flow stood at EUR 6.0 billion.

Application of the IFRS 16 "Leases" accounting standard became mandatory for the first time as of January 1, 2019. This will impact in particular on EBITDA and free cash flow in the future. The planning for the coming years, and thus the forecast statements made in this section, already take this new financial reporting standard into account. However, the figures for the 2018 financial year have still been prepared in accordance with accounting standard IAS 17. To enable approximate comparability between the figures for the 2018 financial year and the forecasts for 2019 and beyond, the pro-forma figures and forecasts for EBITDA and free cash flow are based on the new "after leases" indicators. 

ECONOMIC OUTLOOK

In its economic forecast from January 2019, the International Monetary Fund (IMF) expects global economic growth of 3.5 percent in 2019 and of 3.6 percent in 2020. We expect growth in our core markets to slow down, even though the stable economic trend is expected to continue. The economies in Germany, the United States, and the countries of our Europe operating segment are recording positive growth rates, driven by positive trends in both private consumer and investment spending. The labor markets are also benefiting.



For further information on the new performance indicators, please refer to the section "Management of the Group," page 38 et seq.; for more details on the financial reporting standards, please refer to the section "Summary of accounting policies" in the notes to the consolidated financial statements.

Forecast on the development of GDP and the unemployment rates in our core markets for 2019 and 2020

%

	GDP for 2019 compared with 2018	GDP for 2020 compared with 2019	Unemployment rate in 2019	Unemployment rate in 2020
Germany	1.0	1.3	4.9	4.7
United States	2.5	1.8	3.5	3.5
Greece	2.0	1.9	18.2	16.9
Romania	3.2	2.9	4.2	4.1
Hungary	3.4	2.7	3.3	3.2
Poland	3.7	3.2	2.9	2.8
Czech Republic	2.8	2.6	2.5	2.6
Croatia	2.7	2.5	7.6	6.6
Netherlands	1.9	1.7	3.6	3.6
Slovakia	4.0	3.3	6.3	6.0
Austria	2.0	1.8	4.6	4.4

Source: Consensus Economics, European Commission, Federal Ministry for Economic Affairs and Energy, HSBC; January 2019.

¹ The forecasts contain forward-looking statements that reflect management's current views with respect to future events. Words such as "assume," "anticipate," "believe," "estimate," "expect," "intend," "may," "could," "plan," "project," "should," "want," and similar expressions identify forward-looking statements. These forward-looking statements include statements on the expected development of revenue, EBIT, EBITDA after leases, adjusted EBITDA after leases, ROCE, cash capex, and free cash flow after leases. Such statements are subject to risks and uncertainties, such as an economic downturn in Europe or North America, changes in exchange and interest rates, the outcome of disputes in which Deutsche Telekom is involved, and competitive and regulatory developments. Some uncertainties or other imponderabilities that might influence Deutsche Telekom's ability to achieve its objectives are described in the section "Risk and opportunity management," page 113 et seq. of the combined management report, and the "Disclaimer," page 280, at the end of the Annual Report. Should these or other uncertainties and imponderabilities materialize or the assumptions underlying any of these statements prove incorrect, the actual results may be materially different from those expressed or implied by such statements. We do not guarantee that our forward-looking statements will prove correct. The forward-looking statements presented here are based on the future structure of the Group, without regard to significant acquisitions, disposals, business combinations, or joint ventures that may arise at a later date. These statements are made with respect to conditions as of the date of this document's publication. Without prejudice to existing obligations under capital market law, we do not intend or assume any obligation to update forward-looking statements.

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MARKET EXPECTATIONS

GERMANY

The German market for telecommunications services saw slight growth in 2018 of 0.3 percent. A further small increase of 0.4 percent is expected for 2019 (source: EITO, European Information Technology Observatory). The negative trends resulting from regulatory effects and the decline in traditional fixed-network telephony will be offset by growing demand for mobile data volumes and faster connectivity in the consumer and business customer area. The trend of slight revenue growth in the German mobile market recorded in 2018 is therefore expected to continue in 2019 (source: EITO).

For the wider ICT market, which covers IT services as well as telecommunications, EITO forecasts growth of 1.7 percent for 2019. This increase is primarily attributable to growth in the IT market, which stood at 2.5 percent in 2018 and was mainly driven by strong demand in two areas: services for business customers (e.g., outsourcing, project business, consulting) and software-based services (virtualization and cloud business, e.g., in the form of Software as a Service, Platform as a Service, or Infrastructure as a Service).

Innovative integrated products and attractive supplementary services – such as TV and music options – are becoming increasingly important for our competitive position with consumers, while cloud services, security applications, and solutions for Industry 4.0 are gaining in significance with business customers. We are also setting ourselves apart from other providers with our download and upload bandwidths, the mobile data volumes we include in our rate plans, and innovations in our rate plans.

The mobile communications market in Germany is dominated by three providers, each with its own network infrastructure, who deploy 4G/LTE technology – and in future also 5G – to ensure that the majority of the population has access to high-speed mobile internet. By contrast, the fixed-network broadband market hosts a large number of players with differing infrastructures – from national through to regional providers. We are assuming that competition from cable network operators will remain intense and that the number of providers who have their own DSL and fiber-optic networks will increase.

UNITED STATES

The U.S. economy's positive momentum in 2018 impacted the country's ICT market, for which overall spending grew by 5.0 percent in 2018 (source: EITO). Much of the growth was due to greater expenditures on software, IT and business services, as well as telecommunications equipment. Spending on smartphone and mobility infrastructure significantly impacted the latter. Slightly lower levels are forecasted for 2019 (+3.7 percent), due to lower growth of IT equipment revenues. Growth in the telecommunications segment remains solid, with market revenues increasing by 2.6 percent in 2018 and a forecasted 2.5 percent in 2019.

The U.S. mobile market, in particular, continues to be characterized by intense competition among the major mobile carriers. This has resulted in relatively strong price competition and corresponding pressures on ARPU. According to Analysys Mason, industry ARPU (excluding IoT) declined by 0.5 percent in 2018 and is projected to decline by 1.1 percent in 2019. Recent changes by service providers, such as the removal of overage charges, the move toward unlimited data plans, and Equipment Installment Plans (EIPs) have contributed to the reported decline in ARPU (source: Federal Communications Commission). Nevertheless, Analysys Mason expects total mobile revenues to grow thanks to an increasing number of mobile connections, rising data usage, and an expected boom in the number of IoT connections. With respect to data usage, monthly data usage per mobile connection rose to an average of 5.9 GB per subscriber per month in 2018, an increase of approximately 58 percent from 2017. In 2019, monthly data usage is expected to average 8.8 GB per subscriber per month, an increase of 48 percent.

Leading industry associations such as GSMA expect the United States to lead global migration to 5G. GSMA expects almost half of all mobile connections to be running on 5G networks by 2025. T-Mobile US aims to achieve nationwide 5G coverage by 2020, utilizing the 600 MHz spectrum holdings it acquired in April 2017.

EUROPE

We expect the traditional communications markets in the Europe operating segment to remain stable overall over the next two years, for both mobile communications and the fixed network (including traditional TV services). Continuing declines in voice services can be offset by data services in both submarkets, as well as by traditional TV services (excluding OTT) in the fixed network. For 2019 and 2020, Analysys Mason expects annual growth in fixed-network business of 2 percent in both the broadband and TV markets, while the significance of voice services will likely continue to diminish, shrinking by around 7 percent and 6 percent, respectively, per year. In the mobile markets, data services are expected to grow by 7 percent in 2019 and 5 percent in 2020, driven mainly by the use of mobile video services. Analysys Mason expects the overall data volume in the countries of the Europe operating segment to grow by 46 percent in 2019 and by another 36 percent the year after. We are already seeing preparatory investments in 5G networks in almost all markets of our Europe operating segment, which will further improve the coverage of large parts of the population with high-speed mobile internet. By contrast, the relevance of traditional voice services also continues to wane in mobile communications: Analysts forecast a revenue decline of around 6 percent per annum in this area. Demand for convergent offers comprising fixed-network and mobile services (FMC) also continues unabated in the markets of our Europe operating segment. We expect the number of convergent households to grow by more than 20 percent over the next two years. This means that by 2019, more than 30 percent, and by 2020, almost 40 percent of all broadband lines in the consumer market would be part of a convergent offer.

According to Oxford Economics, real GDP will continue to rise in all our footprint countries in 2019 by between 2 and 4 percent per annum. This positive economic situation will have a particular impact on the IT markets in our Europe operating segment. EITO forecasts growth of more than 2 percent for the countries of Central and Eastern Europe for 2019.

SYSTEMS SOLUTIONS

Growth in the ICT market is expected to continue apace over the next two years, while cost pressure and intense competition are expected to persist. At the same time, we expect the digital transformation to stoke demand for solutions for cloud services, big data, smart network services such as Industry 4.0, the Internet of Things, and M2M, as well as for the mobilization of business processes and ICT security (cybersecurity).

We estimate that the ICT markets will develop along divergent paths in the two main market segments:

- **Telecommunications:** The highly competitive fixed-network market for large business customers remains challenging. Innovative change, intense competition, constant price erosion, and the interventions of national regulators are all likely to slow down market growth, even though business with both mobile data services and the Internet of Things will continue to grow in the coming years.
- **IT services:** The clear growth in the market for IT services in the reporting year is likely to continue in 2019 and 2020. At the same time, this market is undergoing a radical transformation, e.g., due to ongoing standardization and automation, demand for smart services, and the changes being wrought by cloud services in outsourcing business. Further challenges have arisen in the shape of digitalization, the growing importance of cybersecurity, big data, and increasing mobility. Traditional IT business is likely to decline due to price competition, while cloud services, mobility, and cybersecurity may reach double-digit growth. In view of this, we continue to plan to step up investments in growth markets – especially in digitalization, cloud services, cybersecurity, and smart network solutions for the healthcare sector, the public sector (smart city), and the automotive industry.

GROUP DEVELOPMENT

Our companies T-Mobile Netherlands and Deutsche Funkturm (DFMG) dominate the development of our Group Development operating segment.

- The high price and competitive pressure in the Dutch mobile market will continue over the coming years. One of the main trends contributing toward this is the growing bundling of fixed-network and mobile products into convergence offers (FMC). What is more, both the strong discount segment, comprising mobile providers' secondary brands, and MVNOs will continue to make for lively competition.
- With some 29,000 locations, DFMG is the biggest provider of passive wireless infrastructure for mobile communications and broadcasting in Germany. We expect demand for cell sites to rise steadily over the next few years, due to the fact that network operators plan on the one hand to close gaps in coverage, and on the other to increase the density of mobile networks to meet the growing demand for mobile data services.

EXPECTATIONS FOR THE GROUP

Expectations up to 2020. For the next two years, we expect profitable growth to continue. Revenue and adjusted EBITDA after leases (EBITDA AL) are expected to rise at Group level in 2019: a good basis to achieve our financial ambitions by 2021 as communicated at our Capital Markets Day in May 2018.

We expect our financial performance indicators to develop as follows in 2019 and 2020:

- **Revenue** should increase slightly year-on-year in 2019 and continue to rise in 2020. This forecast is based on a slight increase in revenue in the Germany operating segment and the rigorous implementation of the Un-carrier strategy in our United States operating segment, which is expected to bring with it sustained customer growth over the next two years. For 2020, we expect all operating segments to make a positive contribution to the revenue growth of our Group.
- **Adjusted EBITDA AL** is expected to come in at around EUR 23.9 billion in 2019 and to rise further in 2020 due to the expected upward revenue trend and planned cost savings over the same two-year period. All operating segments will contribute to the Group's growth in both forecast years.

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- **EBITDA AL** is expected to increase in 2019 compared with the prior year, and to rise further in 2020. EBIT is also expected to increase in 2019 and 2020 on account of the aforementioned expected upward revenue trend and planned cost savings.
- **Return on capital employed (ROCE)** is expected to increase in 2019 and 2020. This confirms that we are well on track for ROCE to be higher than the expected weighted average cost of capital (WACC) and hence to fulfill our promise made at the 2018 Capital Markets Day.
- Our investments – in terms of **cash capex** (before spectrum investments) – are expected to amount to around EUR 12.7 billion in 2019. Over the next two years, too, we want to continue investing heavily in building out our network infrastructure in Germany, the United States, and Europe in order to safeguard our technology leadership in the long term. A year-on-year increase in 2019 is expected to be driven by the United States operating segment. Excluding the United States operating segment, investments for the Group reached a record high in 2018, and we therefore expect them to decline slightly. Capital expenditure for the Group in 2020 is likely to remain on a par with the prior year.
- **Free cash flow after leases (free cash flow AL)** (before dividend payments and spectrum investment) is expected to reach around EUR 6.7 billion in 2019 and grow strongly in operational terms in 2020. Free cash flow is to make a contribution toward keeping our relative debt – measured as the ratio of net debt to adjusted EBITDA – within the target corridor of 2.25 to 2.75x in 2019 and 2020. The target corridor has shifted from 2.00 to 2.50x to 2.25 to 2.75x on account of the application of the IFRS 16 accounting standard.
- At the end of 2018, the rating agency Standard & Poor's (S&P) gave us a rating of BBB+, CreditWatch negative, Fitch of BBB+ with a stable outlook, and Moody's of Baa1 with a negative outlook. We are therefore still a solid investment-grade company. S&P also announced that it would likely lower Deutsche Telekom AG's rating to BBB in the event of a successful business combination between T-Mobile US and Sprint. Maintaining an investment grade rating within the A- to BBB range will enable us to retain unrestricted access to the international financial markets and is thus a key component of our finance strategy.

Our debt issuance program puts us in a position to place issues on the international capital markets at short notice, while our commercial paper program enables us to issue short-term papers on the money market. Our finance strategy continues to include a liquidity reserve that, at any given time, covers at least our capital market maturities over the next 24 months.

Repayment of bonds and loans in the amount of EUR 4.8 billion and EUR 4.6 billion will fall due in 2019 and 2020, respectively. In order to refinance our maturities and maintain the liquidity reserve, we plan to issue new bonds in various currencies. A successful business combination between T-Mobile US and Sprint would result in the early repayment of intragroup loans of USD 8 billion by T-Mobile US to Deutsche Telekom AG, which would significantly influence the refinancing requirements. The precise nature of implementation of these financing transactions is thus dependent firstly on the approval of the business combination of T-Mobile US and Sprint, and secondly on trends in the international financial markets. We will also cover part of our liquidity requirements by issuing commercial paper.

We intend to continue leveraging economies of scale and synergies through suitable partnerships or appropriate acquisitions in our footprint markets. There are no plans, however, for expansion into emerging markets. We will continue to subject our existing partnerships and equity investments to regular strategic reassessments with a view to maximizing the value of our Company.

Our expectations for the period until 2020 for the Group and the operating segments as regards our financial and non-financial performance indicators are shown in the following tables. They assume a comparable consolidated group and constant exchange rates. The forecast statements made already take into account the accounting standard IFRS 16, which has been applied since January 1, 2019, and, for EBITDA, adjusted EBITDA and free cash flow, we forecast the new "after leases" indicators. The pro-forma figures for 2018 provide an approximate reconciliation to the "after leases" indicators for EBITDA, adjusted EBITDA, and free cash flow, so as to enable approximate comparability with the forecasts. If the economic situation should deteriorate or any unforeseen state or regulatory interventions arise, the expectations expressed here may change accordingly. All trends denote year-on-year changes. To indicate the intensity and trends of our forecasts, we apply the following assessment matrix: strong decrease, decrease, slight decrease, stable trend, slight increase, increase, strong increase.

Financial performance indicators

		Results in 2018	Pro forma for 2018 ^a	Expectations for 2019 ^{b, c}	Expectations for 2020 ^{b, c, f}
NET REVENUE					
Group	billions of €	75.7	76.4	slight increase	increase
Germany	billions of €	21.7	21.7	slight increase	slight increase
United States (in local currency)	billions of USD	43.1	43.1	increase	increase
Europe	billions of €	11.9	12.1	slight increase	slight increase
Systems Solutions	billions of €	6.9	6.9	stable trend	slight increase
Group Development	billions of €	2.2	2.7	increase	increase
PROFIT (LOSS) FROM OPERATIONS (EBIT)					
EBITDA AL					
EBITDA AL (ADJUSTED FOR SPECIAL FACTORS)					
Group	billions of €	23.3	23.2	23.9	increase
Germany	billions of €	8.6	8.5	8.7	increase
United States (in local currency)	billions of USD	11.9	11.9	12.4	increase
Europe	billions of €	3.9	3.9	4.0	slight increase
Systems Solutions	billions of €	0.4	0.4	0.5	increase
Group Development	billions of €	0.9	0.9	1.0	increase
ROCE					
	%	4.7		increase	increase
CASH CAPEX (BEFORE SPECTRUM INVESTMENT)					
Group	billions of €	12.2	12.4	12.7	stable trend
Germany	billions of €	4.2	4.2	stable trend	slight decrease
United States (in local currency)	billions of USD	5.2	5.2	increase	stable trend
Europe	billions of €	1.9	1.9	decrease	stable trend
Systems Solutions	billions of €	0.5	0.5	strong decrease	stable trend
Group Development	billions of €	0.3	0.4	strong increase	strong increase
FREE CASHFLOW AL (BEFORE DIVIDEND PAYMENTS AND SPECTRUM INVESTMENT)					
billions of €					
		6.2	6.0	6.7	strong increase
RATING					
Standard & Poor's, Fitch		BBB+		from A- to BBB	from A- to BBB
Moody's		Baa1		from A3 to Baa2	from A3 to Baa2
OTHER					
Dividend per share ^{d, e}	€	0.70		Dividend follows EPS (adjusted for special factors) growth, minimum of € 0.50	Dividend follows EPS (adjusted for special factors) growth, minimum of € 0.50
EPS (adjusted for special factors)	€	0.96		increase	increase
Equity ratio	%	29.9		25 to 35	25 to 35
Relative debt ^g		2.4x		2.25 – 2.75x	2.25 – 2.75x

The "Pro forma for 2018" figures provide an approximate reconciliation to the "after leases" indicators used for management purposes from 2019 onwards to enable approximate comparability for EBITDA, adjusted EBITDA, and free cash flow. The "Expectations for 2019" and "Expectations for 2020" are based on the currently applicable International Financial Reporting Standards (IFRSs), i.e., taking into account IFRS 16 "Leases." For more information on the standards, please refer to the section "Summary of accounting policies" in the notes to the consolidated financial statements, page 153 et seq.

^a Changes in the organizational structure and major changes in the composition of the consolidated group included up to the date of preparation of the consolidated financial statements and the combined management report (e.g., the acquisition of UPC Austria in Austria or the acquisition of Tele2 Netherlands in the Netherlands).

^b On a comparable basis.

^c Possible implications from the planned transaction with Sprint in the United States are not included in the expectations.

^d The indicated expectation regarding the dividend per share refers to the respective financial year indicated.

^e Subject to approval by the relevant bodies and the fulfillment of other legal requirements.

^f Free cash flow AL for 2020 does not take into account the zero bond repayment.


^g Relative debt for 2019 and 2020 already includes the implications of IFRS 16 (previous relative debt: 2.00 to 2.50x).

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Non-financial performance indicators

		Results in 2018	Pro forma for 2018 ^a	Expectations for 2019	Expectations for 2020
GROUP					
Customer satisfaction (TRI*M index)		67.7		slight increase	slight increase
Employee satisfaction (commitment index) ^b		4.1		stable trend	stable trend
FIXED-NETWORK AND MOBILE CUSTOMERS					
GERMANY					
Mobile customers	millions	44.2	44.2	increase	increase
Fixed-network lines	millions	18.6	18.6	decrease	slight decrease
Of which: retail IP-based	millions	15.4	15.4	strong increase	stable trend
Retail broadband lines	millions	13.6	13.6	slight increase	increase
Television (IPTV, satellite)	millions	3.4	3.4	strong increase	strong increase
UNITED STATES					
Branded postpaid	millions	42.5	42.5	increase	increase
Branded prepay	millions	21.1	21.1	slight increase	stable trend
EUROPE					
Mobile customers	millions	50.5	50.5	slight increase	increase
Fixed-network lines	millions	9.1	9.1	stable trend	stable trend
Of which: IP-based	millions	7.4	7.4	increase	stable trend
Broadband customers	millions	6.4	6.4	increase	increase
Television (IPTV, satellite, cable)	millions	4.8	4.8	increase	increase
SYSTEMS SOLUTIONS					
Order entry	billions of €	6.8	6.8	increase	stable trend
ESG KPIs					
Energy Intensity ESG KPI	MWh/terabyte	163		strong decrease	strong decrease
Carbon Intensity ESG KPI	t CO ₂ /terabyte	41		strong decrease	strong decrease
Sustainable Procurement ESG KPI	%	81		stable trend	stable trend

^a Significant changes in the organizational structure and in the composition of the consolidated Group included up to the date of preparation of the consolidated financial statements and the combined management report.

^b Commitment index as per the 2017 employee survey. 

In both 2019 and 2020, we intend to achieve a moderate improvement in **customer loyalty/satisfaction** – which is measured using the **TRI*M index** performance indicator.

Having already achieved a high level of 4.1 – on a scale of 1.0 to 5.0 – on the **commitment index** in the 2017 employee survey, and in view of the results of the pulse surveys conducted in 2018, we expect the positive response of our employees regarding our Company to remain stable in the next employee survey, which is scheduled for 2019. 

Our planning is based on the exchange rates in the following table.

Exchange rates		
Croatian kuna	HRK	7.42
Polish zloty	PLN	4.26
Czech koruna	CZK	25.64
Hungarian forint	HUF	318.84
U.S. dollar	USD	1.18



For further information on the development of the non-financial performance indicators of our operating segments, please refer to "Expectations for the operating segments" in this section.



For more detailed information on our ESG KPIs and our expectations, please refer to the section "Corporate responsibility and non-financial statement," page 76 et seq.

The following table contains a summary of our model calculations and analyses of the key external factors that may have an effect:

Factors that may affect results

Premises	Current trend	Impact on results
ECONOMY		
Macroeconomic trends in Europe (incl. Germany)	steady	○
Macroeconomic trends in the United States	steady	○
Inflation in Europe (incl. Germany)	steady	○
Inflation in the United States	steady	○
Development of the U.S. Dollar exchange rate	steady	○
Development of exchange rates of European currencies	steady	○
REGULATORY/STATE INTERVENTION		
Regulation of mobile communications in Europe (incl. Germany)	steady	○
Regulation of the fixed network in Europe (incl. Germany)	steady	○
Taxes (in Europe/the United States)	steady	○
MARKET DEVELOPMENT		
Intensity of competition in the telecommunications sector in Europe (incl. Germany)	steady	○
Intensity of competition in the telecommunications sector in the United States	steady	○
Price pressure in telecommunications markets	steady	○
ICT market	increasing	○
Data traffic	increasing	○

☑ positive ○ unchanged ☒ negative

Expectations for Deutsche Telekom AG. The development of business at Deutsche Telekom AG as the parent company of the Group is reflected particularly in its service relationships with our subsidiaries, the results from our subsidiaries' domestic reporting units, and other income from subsidiaries, associated, and related companies. In other words, our subsidiaries' results from operations and the opportunities and challenges they face are key factors shaping the future development of Deutsche Telekom AG's figures. Accordingly, in addition to our expectations for the Group, the expectations described on the following pages concerning the operating segments' revenue and earnings – such as strong competition, regulatory intervention, market and economic expectations, etc. – have an impact on our expectations concerning the development of Deutsche Telekom AG's future income after taxes.

For the 2018 financial year, we will propose a dividend of EUR 0.70 per dividend-bearing share, which will also serve as a baseline for the dividend going forward. The dividend for the financial years starting 2019 is to reflect relative growth in adjusted earnings per share. Based on the aforementioned expectations for our operating segments and the resulting effects, and taking existing retained earnings into account, Deutsche Telekom AG expects to distribute a dividend of at least EUR 0.50 per dividend-bearing share for the financial years 2019 through 2021, subject to approval by the relevant bodies and the fulfillment of other legal requirements.

EXPECTATIONS FOR THE OPERATING SEGMENTS GERMANY

In our Germany operating segment, we continue to work on our comprehensive transformation program and aim to secure our market position as the leading integrated telecommunications provider in Germany through innovative, competitive offers. We plan to largely complete the IP migration in Germany by the end of 2019 and to continue the infrastructure build-out of our high-performance networks. We will increasingly reduce the complexity of our products and processes through automation and digitalization initiatives and ensure greater end-to-end responsibility so as to offer the best service and best customer experience.

In the fixed network, we want to offer the best customer experience with fiber-optic-based products. We are paving the way for this with our integrated network strategy. We are building an IP-based network with high transmission bandwidths so that we can consistently offer our customers competitive high-speed lines, e.g., by working intensively to further roll out our FTTH network. In addition, we are investing heavily to offer greater coverage and even higher speeds in rural areas as well. For this purpose, we will continue in the future to rely on our hybrid router, which combines the bandwidths of fixed-network and mobile communications, thus enabling much higher transmission speeds. Furthermore, we are working towards further partnerships to provide even more customers with high bit-rate internet access – thereby setting the bar for sustainable broadband infrastructure.

In 2014, we were the first provider in Germany to market a comprehensive and convergent fixed-network/mobile (FMC) product: MagentaEINS. Our success story continues – we are consistently expanding our product family and enhancing its value, e.g., by launching the new mobile rate plan MagentaMobil XL in 2018, which offers customers an unlimited surfing flat rate in Germany. When designing our products, we pay particular attention to consistently high quality, a simple rate plan structure, and the innovative development of our existing service portfolio. In addition, our multiple-brand strategy in mobile communications allows us to address the entire customer spectrum – from discount shoppers through to premium customers, while the Magenta Business program successfully addresses business customers.

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We want to secure an ever larger share of the growing TV market with a focus on entertainment and our exclusive streaming offers (e.g., exclusive series such as “The Handmaid’s Tale” and “Cardinal” on MagentaTV and more than 100 seasons from the FOX+ series catalog). With the launch of MagentaTV in 2018, we offer our customers a unique television experience. To this end, we are investing in our IPTV platform and winning new customers with attractive content and services.

We want to remain the market leader in Germany in terms of revenue over the coming years and extend our lead through rising service revenues. We are responding to our customers’ constantly growing demand for bandwidth and continuing to invest extensively in broadband networks, innovative products, and outstanding customer service. Revenues in our broadband business are constantly growing, while at the same time customer satisfaction levels are rising – we want to continue this growth trend again in 2019. We will improve customer satisfaction by driving forward the further development of mobile services (e.g., “Magenta apps”) and ensuring seamless service across all channels (e.g., web, hotline, shop).

We expect revenue to grow slightly in our Germany operating segment in 2019, despite considerable adverse regulatory effects in our core business and tough competition. The value drivers are the growing broadband and TV revenues, the rising number of IP offerings, and revenue growth in our business customer area, e.g., thanks to the positive trend in IT and cloud business. We want to continue expanding our fiber-optic services, both by means of business models with wholesale products (such as the contingent model) and through further partnerships.

We also expect our growth initiatives in Germany to offset the volume-driven decline in revenue from traditional fixed-network business and to continue consolidating our position as market leader in mobile and fixed-network communications. Thanks to the outstanding quality of our network and the progress being made in fiber-optic rollout, we anticipate greater demand for mobile and broadband products as well as growth in the number of broadband, TV, IP, high-speed, and hybrid lines. Our Mittelstandsinitiative 2.0 (SME initiative 2.0) will drive forward the ICT solutions business for our business customers, bolstered by the digital transformation, and increasingly generate revenues from the IT and cloud environment as well as from M2M/IoT business. Wholesale sales volumes should continue to develop very positively thanks to strong demand for our contingent model.

We expect earnings to increase year-on-year for the next two years in our Germany operating segment. In 2019, we expect adjusted EBITDA AL of around EUR 8.7 billion, driven mainly by profitable revenue growth while at the same time cutting indirect costs, mainly through digitalization and automation. We forecast a slight improvement in the adjusted EBITDA AL margin which will be at around 40 percent in both 2019 and 2020.

Our course is set for innovation and growth: While we will continue to consistently promote investments in new technologies with great intensity in the future, we are reducing investments in legacy systems. The focus of our capital expenditures in the coming years will thus fall on our network infrastructure and our mobile network (e.g., FTTH, super vectoring, MIMO, 5G). At the same time, we want to further build out our fiber-optic network and close gaps in the network in rural areas. One focus here is business parks and we are driving forward the FTTH build-out accordingly. We want to continue this rollout efficiently and participate in development programs. We expect cash capex to remain stable in 2019 and to decline slightly in 2020.

UNITED STATES

In 2019, T-Mobile US will continue to execute on its Un-carrier promise to deliver the best value experience in the U.S. wireless industry. Key elements of the Un-carrier promise include delivering distinctive value for consumers in all customer segments by eliminating customer pain points and providing excellent 4G/LTE services as well as continuing to build out its 5G network. Additionally, the Un-carrier initiatives focus on attracting and retaining a loyal customer base by offering devices when and how customers want them, and plans that are simple, affordable, and without unnecessary restrictions to deliver the best value in wireless.

Please note that the expectations below are on a stand-alone basis, and do not consider the impacts of completing the proposed business combination with Sprint.

T-Mobile US expects continued increases in branded postpaid customers in 2019 and 2020 while expecting slight increases in branded prepay customers in 2019 with a stable base continuing into 2020. However, competitive pressures and unforeseen changes in the wireless communications industry in the United States may significantly affect the expected ability to attract and retain branded postpaid and prepay customers.

T-Mobile US expects an increase in total revenues in U.S. dollars in 2019 and a further increase in 2020 as a result of continued branded postpaid customer growth momentum.

For 2019 and 2020, T-Mobile US expects a sustained increase – in U.S. dollars – in adjusted EBITDA AL. As a result of the significant growth in customers over the past year, revenue growth is expected to outpace increases in expense as T-Mobile US is able to take advantage of improved scale effects.

However, continued investment in the network will likely impact adjusted EBITDA AL. Competitive pressures may also significantly affect expected revenues and adjusted EBITDA AL in U.S. dollars. Exchange rate fluctuations may significantly affect revenues and adjusted EBITDA AL in euros in 2019 and 2020.

Excluding expenditures relating to spectrum, T-Mobile US expects an increase to cash capex in 2019 in U.S. dollars as it continues to build out its 5G network.

EUROPE

Our aim for the next few years remains to be Europe's leading telecommunications provider. One step on this road has been to position our Europe operating segment accordingly: Over the next two years, we want to become the leading provider of convergent product offers and services based on fixed-network and mobile communications (FMC). We also plan to play a decisive role in shaping the digital transformation by offering intelligent solutions for households, our business customers, and municipalities on the basis of an integrated IP network comprising a range of technologies.

The Europe operating segment is distinguished by its strong portfolio of companies. The majority of our national companies are already integrated and, as well as having a high brand recognition value, are substantially relevant in their respective home markets. We want to systematically transform those companies that are still largely mobile-centric into integrated enterprises. On July 31, 2018, for example, we completed the acquisition of UPC Austria, which will help us grow our national company in Austria into a strong integrated telecommunications provider. We also concluded an agreement with Orange in the reporting year that will enable us to offer comprehensive convergent services in Poland in the future, thanks to the shared use of Orange's fiber-optic network. In addition to this, T-Mobile Polska entered into another wholesale-FTTH agreement with the network operator Nexera. Our company in the Czech Republic began rolling out its own fiber-optic network in 2018, which we will now rapidly expand over the next few years – including with support from partners. On January 15, 2019, OTE concluded an agreement concerning the sale of its entire stake in Telekom Albania Sh.A. (Telekom Albania) to the Bulgarian company Albania Telecom Invest AD for a total value of EUR 50 million. The transaction is subject to the customary closing conditions, including approval from the responsible local authorities and financing, and is expected to be completed in the first half of 2019.

We want to create the best customer experience for our customers. Our convergent product portfolios MagentaOne and MagentaOne Business provide strong offerings with which we can successfully help shape developments in the European markets. As a leader in convergent products, we can offer additional services and thus help to lower the churn rate and create a stable customer base. This stability has a positive influence on the value we have on the markets of our operating segment. In particular, we want to win over households with seamless access to our innovative services, e.g., with SmartHome for intelligent future living. Customers receive a complete solution that lets them control a wide range of devices and equipment – such as heating, lights, smoke detectors, and movement sensors – at home or on the move via a single app. The solution integrates various functions and vendors and can be expanded with different modules. Three of our national companies are already offering SmartHome to customers. In Austria, for instance, our national company's SmartHome offering is based on the Qivicon SmartHome platform. A particular focus is set on the issue of security here, in that we offer a security package for SmartHome applications. We believe that, in this way, we can

increase the overall percentage of households in Europe to more than 50 percent by 2021. As a result, we expect FMC revenues to increase by around 25 percent per annum until 2021.

One of the main factors for the success of FMC is TV business. A key focus is the seamless experience of TV and entertainment services, in particular high-quality and exclusive content. In the future, we will negotiate to acquire exclusive rights to broadcast sports events, such as the Champions League, or the rights to TV movies/series. In addition, we are focusing on offering high-quality content at a local level. We are also working in partnership with OTT players such as Netflix and gradually expanding our offering of OTT services across all screens. We will continue to participate in the production of our own content and channels, as in Greece, for example, with the OTE History channel, or in Slovakia with Tuki TV. Overall, we expect to further increase our revenues from TV business over the next two years.

We want to take a further step towards creating the best customer experience by providing perfect customer service. Digitalization plays a key role in this: In the reporting year, for example, we launched a service app for consumers (OneApp). This app enables us to largely digitalize our interaction with customers, which means we can meet customer needs in a more personalized and efficient way, and position products and innovative services on the market more quickly. It has already been successfully established on the market in five of our national companies and has already attracted 2.3 million users. Rollout to all countries of our segment is to be completed by the end of the first half of 2019. By 2021, we plan to achieve a penetration rate of more than 50 percent. We believe that our customers will reward the significantly improved service. By 2021, we want to achieve first or second place in terms of customer satisfaction, based on the empirically determined TRI*M index (customer survey).

The broadband build-out will remain a key focus of activities in the coming years. Our state-of-the-art network infrastructure supports the digital transformation and enables us to leverage our technology leadership: We therefore plan to take part in further spectrum auctions. Our investments in mobile communications are currently focused on two areas: expanding LTE reach and implementing additional LTE frequency layers in order to increase network capacity. LTE Advanced technology will help make higher transmission rates of 300 Mbit/s and well beyond possible. In 2018, we already covered 97 percent of the population on average in the countries of our Europe operating segment with LTE and are thus well on track: Ultimately, we aim to achieve network coverage of 99 percent in our European footprint by 2021. The next-generation mobile communications standard, 5G, is just around the corner: We plan to begin with the first pilot projects from 2019; 5G will gradually be launched commercially depending on the outcome of spectrum auctions. We have successfully launched Narrowband IoT as 5G technology in eight national companies. One aim of our integrated network strategy is to make further advances in the fiber-optic rollout.

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In Hungary, Romania, Slovakia, Croatia, Macedonia, and Montenegro, we have been investing in the FTTH rollout for a number of years now, and plan to continue doing so in combination with vectoring. In 2018, we also launched the FTTH rollout in the Czech Republic and Greece; previously in Greece, we had a fiber-optic network up to the street cabinets using vectoring technology. The aim now is to supply around 0.75 million new households per year with optical fiber by 2021. Overall, by 2021, we want 30 percent of all households in the four major integrated national companies (Hungary, Greece, Croatia, and Slovakia) to have access to optical fiber.

For our business customers, we will continue to work noticeably on infrastructure over the next two years to enable us to maintain our promise of the best network, and thereby remain the preferred partner for small and medium-sized enterprises (SMEs) as well as for our corporate and industry customers. Thanks to having the right cloud/ICT solutions, we create an even better all-in-one experience, tailored to any business model. By 2021, we want to generate revenue of EUR 500 million with convergent solutions for SMEs (FMCC business, +10 percent per year) and EUR 1.3 billion for corporate customers (ICT business, +7 percent per year). Digitalization and the digital experience remain key to our success in European cities and municipalities, as well as in all customer contact – from providing information and buying online, through to self-service.

In our Europe operating segment, we expect to win more customers over the next two years, mainly thanks to the good performance of our convergence brand MagentaOne. Consequently, we expect the number of TV and broadband customers to increase in 2019 and 2020. The number of mobile customers is expected to increase slightly year-on-year in 2019 on a like-for-like basis, and to increase again in 2020. We expect fixed-network voice telephony to be replaced more and more by mobile communications, hence we forecast fixed-network lines to develop stably in 2019 and 2020.

Changes in legislation, for example regarding taxes and duties, national austerity programs, and the decisions of regulators may have a negative impact on our revenue and earnings in the next two years. Changes in exchange rates could also affect our earnings on a euro basis.

Based on these assumptions and parameters, we expect revenue in our Europe operating segment to increase slightly in 2019 on a comparable basis, i.e., based on the pro-forma figures for 2018 (for instance, the inclusion of the UPC Austria acquisition for a full twelve months); this is assuming constant exchange rates and based on specific assumptions about regulation, new market players, spectrum auctions, and unchanged organizational structure. 2020 will then see a continuation of this moderate revenue growth trend.

Vigorous competition in the markets of our operating segment could potentially put pressure on our margins. To be ready for such an eventuality, we want to increase our productivity and exploit the benefits of digitalization, for instance by automating processes, with the aim of realizing cost-cutting potential. We expect adjusted EBITDA AL to increase year-on-year in 2019 to around EUR 4.0 billion, and to continue to increase slightly in 2020.

In order to expand our technology leadership, we continue to invest in our integrated networks and plan to maintain our high level of investments over the next few years. However, cash capex will decrease against the prior year in 2019. It is expected to level out in 2020.

SYSTEMS SOLUTIONS

Part of our Group strategy is the ambition to be a leading partner for business customer productivity. Secure and reliable ICT solutions drive forward the integrated digitalization of our business customers in the Internet of Things. Our horizontal platforms and vertical solutions facilitate continuous operation of traditional systems as well as the transformation to digital business applications, which can be operated according to specific requirements. Partner products and services are an integral part of our portfolio, which offers our customers vendor-independent managed services.

Under the program to transform our Systems Solutions business launched at the start of 2018, we have realigned our organization and processes, developed a new strategy for our portfolio, and created three product clusters. Overall, ten portfolio units and an emerging business unit will now be responsible for both our traditional IT and telecommunications business and our growth areas:

- **“Telecommunications (TC)” cluster:** Fixed-network and mobile services form the basis and the core of our business customer segment. We are investing in new technologies and driving forward the technology revolution so as to guarantee our customers corresponding added value and global availability.
- **“Traditional information technology (IT)” cluster:** Dedicated SI solutions, managed infrastructure services, and private cloud offerings secure our customers' existing infrastructure and form the starting point for the transformation into new business areas. Efficiency enhancement measures help us stabilize our margins in these business areas, while price pressure remains high.
- **“Growth business” cluster:** SAP, digital solutions, public cloud, security, Internet of Things, classified ICT, health, and road charging – our investments in these growth areas offer our customers the best solutions on future-proof platforms. Focusing on scalable business models and global partnerships with specialized vendors enables attractive margins and our continued investment in these areas.

Following a sharp increase in order entry in 2018, we are continuing to drive forward expansion of the growth business, while at the same time stabilizing the core telecommunications and traditional IT business, with the aim of achieving a significant shift in the revenue mix towards growth areas by 2022.

We are among the top providers in the European IT market. Our consistently very high levels of customer satisfaction are a core element in maintaining this position in the long term as well as in playing a leading role in digitalization.

Overall, we forecast growth in order entry for the Systems Solutions operating segment in 2019 and stable revenue. Adjusted EBITDA AL is expected to amount to around EUR 0.5 billion. Following high levels of investment in the growth areas in the reporting year, we expect a sharp decrease in cash capex. For 2020, we expect order entry to remain stable against the prior year, a moderate increase in revenue, an increase in adjusted EBITDA AL, and stable cash capex.

GROUP DEVELOPMENT

We expect revenue to increase for our Group Development operating segment in 2019, and again in 2020. Adjusted EBITDA AL is set to increase in 2019 to around EUR 1.0 billion; for 2020 we expect a further increase.

We will continue to deal with intense competition in the Netherlands through our strategy, which is expected to also take effect in 2019, following the stabilization of EBITDA in 2018. The main elements of this strategy are a repositioning of the core brand T-Mobile, expansion of the products and services on offer through T-Mobile Thuis (fixed network), and efficient management of costs. In addition, the acquisition of Tele2 Netherlands by T-Mobile Netherlands was consummated on January 2, 2019, after the European Commission approved the transaction on November 27, 2018 without conditions. This marks an important component of our long-term strategy. This business combination will create a sustainable provider of convergent fixed-mobile products and services on the Dutch market, which will be better positioned to challenge the FMC duopoly of KPN and Vodafone-Ziggo. The value contributions from the acquisition in the Netherlands are included in our outlook.

Network investments, which remain at a high level, will help safeguard the strategy of T-Mobile Netherlands over the coming years. We expect investments at DFMG to grow sharply in 2019 and 2020, mainly due to the further build-out of cell sites in Germany.

GROUP HEADQUARTERS & GROUP SERVICES

At Group Headquarters & Group Services, we will stay focused over the next two years on our ongoing efficiency enhancement measures, with which we are further optimizing our structures, especially within Group Services. We will also continue to focus on implementing our cost-cutting measures – primarily by optimizing the reallocation of human resources and enhancing the value of our real estate portfolio by means of innovative space and workplace concepts. By cutting costs, we can help improve our earnings, while also putting ourselves in a position to offer our services to the operating segments more cost effectively.

Our Technology and Innovation Board department will again step up investments in technology development in Germany and in expanding centralized production platforms as part of the Pan-IP program in 2019 and 2020. On the one hand, we expect this to reduce overheads and investments, driven by IT operating costs and by the ongoing standardization of the IT infrastructure and platforms. On the other, the establishment of the centralized production platforms will incur rising costs and investments for Pan-IP. Overall, we expect the cost level to improve over the next two years.

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RISK AND OPPORTUNITY MANAGEMENT SDG 16

- We have an effective early warning system for risks in place
- We identify our opportunities and specify them during the planning process

BOARD OF MANAGEMENT'S ASSESSMENT OF THE AGGREGATE RISK AND OPPORTUNITY POSITION

The assessment of the aggregate risk position is the outcome of the consolidated analysis of all material risk categories or individual risks. The aggregate risk position did not change fundamentally in 2018 compared with the previous year. Our major challenges particularly include the regulatory factors, intense competition, and strong price erosion in the telecommunications business. As it stands today, Deutsche Telekom's Board of Management sees no risk to the Group's continued existence as a going concern. As of the reporting date and the time of preparing the statement of financial position, there were no risks that jeopardize Deutsche Telekom AG's and key Group companies' continued existence as a going concern.

We are convinced that we will also be able to master challenges and exploit opportunities in the future without having to take on any unacceptably high risks. We strive to achieve a good overall balance between opportunities and risks, with the aim of increasing added value for our Company and our shareholders by analyzing and seizing new market opportunities.

RISK AND OPPORTUNITY MANAGEMENT SYSTEM

As one of the world's leading providers in the telecommunications and information technology industry, we are subject to all kinds of uncertainties and change. In order to operate success-

fully in this ongoing volatile environment, we need to anticipate any developments at an early stage and systematically identify, assess and manage the resulting risks. It is equally important that we recognize and exploit opportunities. We therefore consider a functioning risk and opportunity management system to be a central element of value-oriented corporate governance.

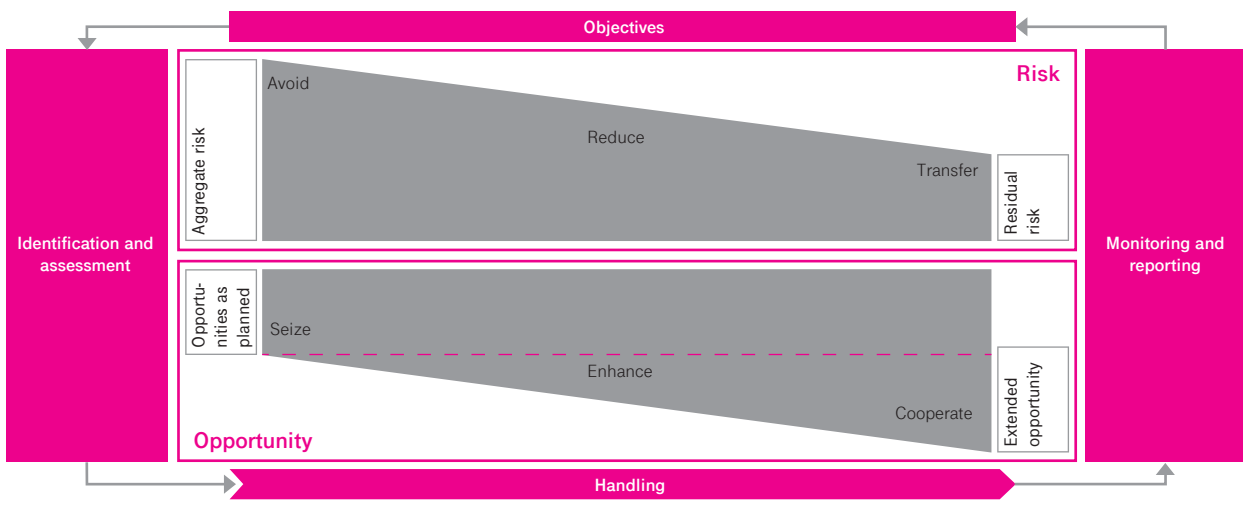
A risk and opportunity management system of this kind is not only necessary from a business point of view; it is also required by laws and regulations, in particular § 91 (2) of the German Stock Corporation Act (Aktiengesetz – AktG). The Audit Committee monitors the effectiveness of the internal control system and the risk management system as required by § 107 (3) sentence 2 AktG.

Our Group-wide risk and opportunity management system covers strategic, operational, financial, and reputational risks as well as the corresponding opportunities for our fully consolidated entities. The aim is to identify these risks and opportunities early on, monitor them, and manage them in accordance with the desired risk profile.

We base our system on an established standard process (see the following graphic). Once risks and opportunities have been identified, we move on to analyze and assess them in more detail; the effects of risks and opportunities are not offset against each other. We then decide on the specific course of action to be taken, for example, in order to reduce risks or seize opportunities. The respective risk owner implements, monitors, and evaluates the associated measures. All steps are repeatedly traversed and modified to reflect the latest developments and decisions.



Risk and opportunity management system



Our risk and opportunity management system is based on the globally applicable risk management standard of the International Standards Organization (ISO). ISO standard 31 000 "Risk management – Principles and guidelines" is regarded as a guideline for internationally recognized risk management systems.

Our Internal Audit unit reviews the functionality and effectiveness of our risk management system at regular intervals. The external auditor mandated by law to audit the Company's annual financial statements and consolidated financial statements in accordance with § 317 (4) of the German Commercial Code (Handelsgesetzbuch – HGB) examines whether the risk early warning system is able to identify at an early stage risks and developments that could jeopardize the Company's future. Our system complies with the statutory requirements for risk early warning systems and conforms to the German Corporate Governance Code.

In addition, our Group Controlling unit specifies a series of Group guidelines and processes for the planning, budgeting, financial management, and reporting of investments and projects. These guidelines and processes guarantee both the necessary transparency during the investment process and the consistency of investment planning and decisions in our Group and operating segments. They also provide the Board of Management and the Board of Management Asset Committee with support in reaching their decisions. This process also includes the systematic identification of strategic risks and opportunities.

ORGANIZATION OF THE RISK AND OPPORTUNITY MANAGEMENT SYSTEM

The Group Risk Governance unit (formerly Group Risk Management) defines the methods for the risk and opportunity management system that is applied Group-wide and for the associated reporting system, in particular the Group risk report. Our Germany, United States, Europe, Systems Solutions, and Group Development operating segments as well as the Group Headquarters & Group Services segment are connected to the central risk and opportunity management system of the Group via their own risk and opportunity management systems. The Group risk report, which primarily aggregates the contents provided by our segments, is approved by the Board of Management on a quarterly basis and presented to the Audit Committee of the Supervisory Board of Deutsche Telekom. The relevant risk owners in each of the operating segments and the Group Headquarters & Group Services segment are responsible for identifying, assessing, and continuously monitoring risks. Management takes potential opportunities into account in the annual planning process and continuously develops them further during business operations.

RISK IDENTIFICATION AND REPORTING

Each operating segment produces a quarterly risk report in accordance with the standards laid down by the central risk management and based on specific materiality thresholds. These reports assess risks, taking into account their extent in terms of impact on results of operations or financial position, as well as their probability of occurrence, and they identify action to be taken and suggest or initiate measures. The assessment additionally includes qualitative factors that could be important for our strategic positioning and reputation, and that also determine the aggregate risk. We base our assessment of risks on a period of two years. This is also the length of our forecast period.

The Group risk report, which presents the main risks, is prepared for the Board of Management on the basis of this information. The Board of Management informs the Supervisory Board. The Audit Committee of the Supervisory Board also examines this report at its meetings. If any unforeseen risks arise outside regular reporting of key risks, they are reported ad hoc.

IDENTIFICATION AND ASSESSMENT OF OPPORTUNITIES IN THE ANNUAL PLANNING PROCESS

The systematic management of risks is one side of the coin; securing the Company's long-term success by means of integrated opportunities management is the other. That is why identifying opportunities and subjecting them to a strategic and financial assessment is an essential part of our annual planning process. It allows us to factor those opportunities into our forecasts for financial and non-financial performance indicators.

The short-term monitoring of results and the medium-term planning process help our operating segments and Group Headquarters identify and seize the opportunities in our business throughout the year. While short-term monitoring of results mainly targets opportunities for the current financial year, the medium-term planning process focuses on opportunities that are strategically important for our Group. In this context we distinguish between two types of opportunity:

- External opportunities, i.e., those with causes over which we have no influence, for example, the revocation of additional taxes in Europe.
- Internal opportunities, i.e., those that arise within the Company, for example by focusing our organizational structure on innovation and growth areas and products, or through business partnerships and collaborations from which we expect to reap synergies.

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We are constantly enhancing the efficiency of our planning process so as to gain greater scope for action. This puts the organization in a position to identify and seize new opportunities and generate new business. The preliminary plans of our operating segments form the basis for a concentrated planning phase during which members of the Board of Management, business leaders, senior executives, and experts from all business areas intensively discuss the strategic and financial focus of our Group and our operating segments, and from all of which they ultimately produce an overall picture. The identification of opportunities from innovation and their strategic and financial assessment play a major role throughout this process. This "brainstorming" may result in opportunities being rejected, passed back to the respective working groups for revision, or adopted and transferred to the organization.

RISK ASSESSMENT AND RISK CONTAINMENT

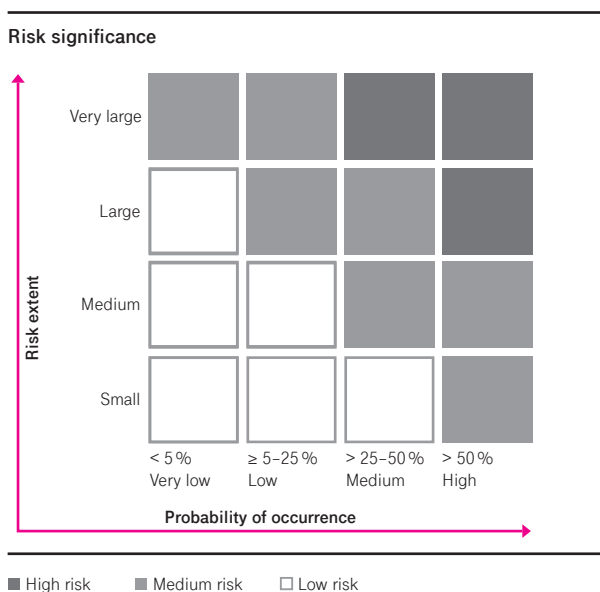
ASSESSMENT METHOD

Risks are assessed on the basis of "probability of occurrence" and "risk extent." The following assessment yardsticks apply:

Probability of occurrence	Description
< 5 %	very low
≥ 5 to 25 %	low
> 25 to 50 %	medium
> 50 %	high

Risk extent	Description
Small	Limited negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA risk < € 100 million
Medium	Certain negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA risk ≥ € 100 million
Large	Significant effects on business activities, results of operations, financial position, and reputation; individual EBITDA risk ≥ € 250 million, and/or affects more than one Group entity
Very large	Damaging negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA risk ≥ € 500 million, and/or affects more than one Group entity

By assessing risks according to the aspects of probability of occurrence and risk extent, we classify them as low, medium, and high risks, as shown in the following graphic. From the 2019 financial year, the risks and opportunities will no longer be assessed in terms of their risk extent using the performance indicator EBITDA, but rather using EBITDA AL (after leases).



We report all risks classified as "high" and "medium." Exceptions are possible, for example, risks from prior years that we can continue to list for the sake of reporting continuity although they are classified as "low" in the current reporting period.

It should be noted that risks with an extent currently assessed as being small may in the future have a stronger impact than risks currently assessed as having a larger extent. This may be due to uncertainties that cannot be assessed at present and over which we have no influence. Uncertainties of this kind also give rise to risks that are currently unknown to us or that we presently consider to be insignificant and that may affect our business activities in the future.

RISK CONTAINMENT MEASURES

Group insurance management. To the extent possible and economically viable, we take out adequate Group-wide insurance cover for insurable risks. DeTeAssekuranz – a subsidiary of Deutsche Telekom AG – acts as an insurance broker for Group Insurance Management (part of Group Headquarters & Group Services). It develops and implements solutions for the Group's operational risks using insurance and insurance-related tools and places them on the national and international insurance markets.

Taking out insurance cover is an essential option for our external risk transfer. The coverage of risks in our Group insurance programs requires the transfer of risk for the purpose of protecting the Group's financial position. That means that the possible extent of the risk must have reached a volume "relevant for the Group" or the risks have to be bundled and managed at Group level to protect the Group's interests (opportune reasons/cost optimization/risk reduction).

For further information on the new performance indicators, please refer to the section "Management of the Group," page 38 et seq.

Business Continuity Management (BCM). BCM is a process within operational security and risk management that helps protect business processes from the consequences of damaging incidents and disruptions. It ensures the continuation of business processes through ongoing analysis, assessment, and management of relevant risks for people, technology, infrastructure, supply and service relationships, and information. The aim is to identify potential threats at an early stage and to keep the impact and duration of a disruption of critical business processes to an acceptable minimum by ensuring appropriate resilience in the organization plus the ability to effectively cope with threats. [SDG 9](#)



To this end, BCM identifies critical business processes and business processes requiring protection, including any supporting processes, process steps, and assets (people, technology, infrastructure, information, and supply and service relationships). Appropriate precautionary measures are also defined. In particular, Security Management works in coordination with the relevant units and process owners to analyze the possible consequences of external and internal threats with relevance for security, such as natural disasters, vandalism, or sabotage. Once the extent of potential losses and probability of occurrence have been assessed, preventive measures can be put in place and contingency plans developed.

The risk owners initiate and execute further measures to mitigate the risks. A wide range of measures are available, depending on the risk type. A few examples of these measures are:

- We tackle market risks with comprehensive sales controlling and intensive customer management.
- We manage interest and currency risks by means of systematic risk management and hedge them using derivative and non-derivative financial instruments.
- We also take a whole array of measures to deal with operational risks: For example, we constantly implement operational and infrastructural measures in order to improve our networks; continually enhance our quality management system, the associated controls, and quality assurance; and offer our employees systematic training and development programs.
- We deal with risks from the political and regulatory environment through an intensive, constructive dialog with policy-makers and the authorities.
- We minimize risks in connection with legal proceedings by ensuring suitable support for those proceedings and by designing contracts appropriately in the first place.
- The Group Tax unit identifies potential tax-related risks at an early stage and systematically records, assesses and monitors them. It takes any measures necessary to minimize tax-related risks and coordinates them with the Group companies affected. The unit also draws up and communicates policies for avoiding tax risks.

RISKS AND OPPORTUNITIES

In the following section, we present all risks and opportunities of significance to the Group that, as things currently stand, could affect the results of operations, financial position, and/or reputation of Deutsche Telekom and, via the subsidiaries' results, the results of operations, financial position and/or reputation of Deutsche Telekom AG. We describe the majority of the risks before the measures for risk containment are taken. If any remaining risks have been identified despite such measures for risk containment, they are labeled as such. If risks and opportunities can be clearly allocated to an operating segment, this is presented accordingly in the following.

In order to make it easier to understand and see their effects, we have allocated the individually assessed risks to the following categories:

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Corporate risks

	Probability of occurrence	Risk extent	Risk significance	Change against prior year
INDUSTRY, COMPETITION, AND STRATEGY				
Economic risks, Germany	low	small	low	↔
Economic risks, United States	low	medium	low	↔
Economic risks, Europe	low	medium	low	↔
Risks relating to the market and environment, Germany	high	small	medium	↔
Risks relating to the market and environment, United States	medium	large	medium	↔
Risks relating to the market and environment, Europe	medium	medium	medium	↔
Risks relating to innovations (substitution)	medium	medium	medium	↔
Risks relating to strategic transformation and integration	medium	very large	high	↘
REGULATION	see page 119 et seq.			
OPERATIONAL RISKS				
Personnel, Germany and Systems Solutions	medium	small	low	↔
Risks relating to IT/NT network operations, Germany	low	large	medium	↔
Risks relating to IT/NT network operations, United States	very low	very large	medium	↔
Risks relating to IT/NT network operations, Europe	very low	large	low	↔
Risks relating to existing IT architecture, United States	medium	medium	medium	↔
Future viability of the IT architecture, United States	medium	large	medium	↔
Procurement	low	small	low	↔
Data privacy and data security	high	medium	medium	↔
BRAND, COMMUNICATION, AND REPUTATION				
Brand and reputation (reporting in the media)	low	small	low	↔
Sustainability risks	very low	small	low	↔
Health and environment	low	medium	low	↔
LITIGATION AND ANTI-TRUST PROCEEDINGS				
see page 125 et seq.				
FINANCIAL RISKS				
Liquidity, credit, currency, interest rate risks	low	medium	low	↔
Tax risks	see page 128			
Other financial risks	see page 128			

↗ improved ↔ unchanged ↘ deteriorated

RISKS AND OPPORTUNITIES FROM INDUSTRY, COMPETITION, AND STRATEGY

Risks and opportunities relating to the macroeconomic environment. As an international corporation, we operate in a large number of countries, using a range of currencies. A substantial economic downturn could reduce the purchasing power of our customers and adversely affect our access to the capital markets. Exchange rate fluctuations could impact on our earnings.

Despite the positive overall economic development in the past year, economic uncertainties have increased worldwide. Leading institutes and organizations have revised their growth forecasts downwards and expect global economic growth to slow down. The main risks for future economic development are:

- Uncertainties from international trade conflicts
- The vulnerability of emerging economies to higher interest rates in the United States and capital outflows
- A disorderly Brexit
- Political uncertainties, especially in Europe

These risks are offset by opportunities, especially from the unabated strong growth in the United States and in most countries of our Europe operating segment. There are no signs of a recession in the United States in 2019. We merely expect the rate of growth to slow as a result of falling fiscal impetus. The economic momentum will also fade in Europe. Falling demand for exports should be offset, at least in part, by ongoing stability in the domestic economy in Europe. Accordingly, we only expect a slowdown in growth here; the upturn should continue and unemployment should fall further. This is all the more true as the expansive monetary policy of the European Central Bank (ECB) stimulates domestic demand and investment activity in the eurozone.

Risks relating to the market and environment. The main market risks we face include the steadily falling price level for voice and data services in the fixed network and in mobile communications. In addition to price reductions imposed by regulatory authorities, this is primarily attributable to ongoing intensive competition in the telecommunications industry.

Competitive pressure is expected to continue, especially in the fixed network in Germany and Europe. In the broadband market, the trend of disproportionate growth in the market shares of regional network operators, particularly in Germany, continues to establish itself. They build out their own infrastructure and thus increase their market coverage. Increasingly this is done with fiber-optic infrastructure, thereby increasing their customer numbers and expanding their own value added. There is still strong competition to gain new customers by cutting prices and offering introductory discounts.

The risk significance for the risk cluster relating to the market and environment in Germany was raised from “low” to “medium” following the announcement by Vodafone Deutschland in early May 2018 of its plans to acquire Unitymedia from Liberty Global. The planned takeover would give Vodafone an extremely large share of the cable TV market and establish its dominance in the housing market. This could have a negative impact on our revenues in the retail and wholesale area.

We expect ongoing price pressure for mobile voice telephony and mobile data services, which could adversely affect our mobile service revenue. Among the main reasons for this price pressure are data-centric, aggressively priced offers. Providers that do not have their own infrastructure (MVNOs) market such offers over the internet, for instance, while there is also the risk that smaller competitors will take unforeseen, aggressive pricing measures. Technological innovations such as the use of pure eSIMs in smartphones could put further pressure on prices by increasing the willingness of customers to switch providers.

Another competitive risk lies in the fact that, both in the fixed network and in mobile communications, we are increasingly faced with competitors who are not part of the telecommunications sector as such, but are increasingly moving into the traditional telecommunications markets. This mainly relates to major players in the internet and consumer electronics industries. As a result, we are exposed to the risk of a further loss of share of value added and falling margins due to increasingly losing direct customer contact to competitors.

T-Mobile US has multiple wireless competitors, some of which have greater resources and compete for customers based principally on service/device offerings; price; network coverage, speed, and quality; and customer service. Market saturation in the United States will continue to cause the wireless industry's customer growth rate to be moderate in comparison with historical growth rates, or possibly negative, leading to ongoing competition for customers. T-Mobile US expects that its customers' appetite for data services will place increasing demands on

its network capacity. The scarcity and cost of additional wireless spectrum, and regulations relating to spectrum use, may adversely affect T-Mobile US' business strategy and financial condition and operating results. T-Mobile US faces intense and increasing competition from other service providers as industry sectors converge, such as cable, telecommunications services and content, and satellite television. Joint ventures, mergers, acquisitions, and strategic alliances in the wireless sector have resulted in and are expected to result in larger competitors competing for a limited number of customers.

The business combination of T-Mobile US and Sprint is contingent upon approval by various U.S. Government authorities that may choose to impose additional conditions, delay, or even block the proposed business combination. Although we firmly believe that the business combination will generate synergies and further benefits, we cannot rule out the possibility that these cannot be realized to the extent anticipated or within the planned time frame. In the event the authorities do not approve the business combination, the resulting incremental risk exposure for Deutsche Telekom would relate primarily to the failure of the expected positive effects – i.e., the synergies and further benefits for our U.S. business – to materialize.

Our Systems Solutions operating segment also faces challenges. Continued strong competition and persistent price erosion are adversely affecting traditional ICT business. In addition, the technological shift toward cloud solutions and digitalization in the IT sector is prompting new, strongly capitalized, competitors to enter the market. The introduction of IP technology in telecommunications business is enabling price reductions, which poses a risk of revenue losses and declining margins at T-Systems.


Opportunities relating to the market and environment. The telecommunications and IT market is extremely dynamic and highly competitive. The economic conditions affect our actions and impact on our Company indicators. We generally expect the situation to develop as described in the section “Market expectations.” In the following section, we present the risks and opportunities that we believe will allow us to achieve market growth and that could be significant for us in terms of our future financial position and results.

Risks relating to innovations (substitution). Innovation cycles are getting shorter and shorter. This confronts the telecommunications sector with the challenge of bringing out new products and services at shorter and shorter intervals. New technologies are superseding existing technologies, products, or services in part, in some cases even completely. This could lead to lower prices and revenues in both voice and data traffic. These substitution risks could impact our revenue and earnings, in particular in the Europe and United States operating segments. We deal with the impact of substitution risks by offering package rates, for example: We offer new and existing customers integrated solutions from our product portfolio.




See the section
“Forecast,”
page 102 et seq.

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Opportunities relating to innovations. In addition to the risks described, ever-shorter innovation cycles enable us to drive the digital transformation of our society and to provide our consumers and business customers with highly innovative products and solutions. That is why our innovation and product development activities are decisive when it comes to identifying opportunities and making the most of them in an increasingly competitive environment. In order to guarantee this, and do justice to the growing convergence of networks and IT, we have combined all relevant functions under joint management in our Board of Management department Technology and Innovation, in order to enable closer integration of the areas of innovation, networks, and IT. 


Risks relating to strategic transformation and integration. We are in a continuous process of strategic adjustments and cost-cutting initiatives. If we are unable to implement these projects as planned, we will be exposed to certain risks. In other words, the benefit of the measures could be less than originally estimated, take effect later than expected, or not at all. Each of these factors, individually or in combination, could have a negative impact on our business situation, financial position and results of operations.

The risk significance for this risk cluster has been raised from “medium” to “high” in connection with the rollout of the new mobile communications standard, 5G, the outcomes of the planned auctions for 5G spectrum bands and the associated award conditions, as well as regulatory requirements and the limited number of telecommunications hardware providers.

Opportunities relating to strategic transformation and integration. The IP transformation (all IP) offers many opportunities. A logical network is being created that speaks a single language and, in technical terms, functions largely independently of the services transmitted. This will enable efficiency gains, e.g., by reducing the complexity of maintenance and operation, switching off service-specific legacy platforms, and saving energy.  In addition, all IP will generate growth potential in the short to medium term by improving the customer experience of existing services (e.g., better voice quality, more customer self-service, greater configuration flexibility) and, in the medium to long term, by providing an indispensable basis for convergence products and the Internet of Things (IoT), and by shortening the time to market for new products.

But the all-IP network can do more. It is the network infrastructure cloud underpinning not only the virtualization of functions and services, but also joint production across borders (Pan-Net). This will also create opportunities for enhancing efficiency and for growth. The idea of developing services only once and then marketing them in different countries simultaneously promises more than just synergies – it is a chance to get those services to market faster and more cost-effectively.

5G is the next-generation mobile telecommunications network. Not only are we involved in a large number of different organizations and forums, we are also working intensively in collaboration with research institutions and industry to develop this future standard, which will address an array of challenges facing telecommunication networks. These include purely technical requirements, such as achieving a substantial increase in capacity, bandwidth, and availability, and lower latency. 

In addition, there are fundamental issues, such as M2M communication on a large scale in the Internet of Things (IoT) and the growing need for reliability, security, and guaranteed resource allocation in industrial applications. 5G thus offers not only the immediate opportunity of cost-effectively managing rapidly increasing demands in existing business models going forward, but also opportunities for further business models by marketing network capabilities (e.g., network access, localization, security, identity, storage location, temporary storage, real-time processing) to relevant partners. We are already working on implementing the first use cases such as campus networks and mobile edge computing, in which data is processed in a decentralized manner (at the edges of the network). Together with other technologies like the Narrowband Internet of Things (NB-IoT) and artificial intelligence (AI), 5G and edge computing provide the underpinnings for the further digital transformation of society. 

In addition, we are driving forward the transformation of our IT using agile development. This approach allows us to exploit new opportunities for efficient IT production, through the modular provision of components as well as through accelerated development. Furthermore, agile development makes it possible to reduce big bang risks in the delivery of major software releases.

RISKS AND OPPORTUNITIES RELATING TO REGULATION

In the following section, we describe the main regulatory risks and opportunities that, as things currently stand, could affect our results of operations and financial position, and our reputation.

Regulatory risks arise from telecommunications-specific statutory regulations at the European and national level, and from the consequent powers of national authorities to regulate or intervene in the market and limit our freedom as regards product design and pricing. Deregulation can give rise to regulatory opportunities. Regulatory intervention, which we can only anticipate to a limited extent, may exacerbate existing price and competitive pressure. There are concerns that regulation in Germany and other European countries may also impact revenue and earnings trends in the medium to long term.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



RELATIONSHIPS



For further information on our innovation activities, please refer to the section “Innovation and product development,” page 89 et seq.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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13 CLIMATE ACTION



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Areas in which national regulators may intervene

European and national laws and regulations grant national regulators extensive powers of intervention. A case in point at the European level is the **EU Regulation concerning the single market for electronic communications**, which was enacted 2015. It comprises provisions on **international roaming, net neutrality, and disclosure obligations**, which restrict our product-design options, mainly as regards retail products. The Body of European Regulators for Electronic Communications (BEREC) has published guidelines for implementing this regulation. Risks arise from how the national regulators interpret both the regulation and these guidelines. In Germany, for example, the Federal Network Agency has wide-ranging powers under law to require products to be adjusted in order to enforce the regulation and to impose fines in cases of non-compliance.

Our Group companies in Germany and abroad continue to be subject to comprehensive **regulation of wholesale products**, obligating us to make our network and services available to our competitors. The national regulators regularly check and determine the corresponding terms, conditions and prices of these wholesale offerings. The key wholesale products subject to regulation are **unbundled local loop lines, bitstream products, leased lines, termination rates**, and the associated services. In addition, European and national consumer protection regulations apply. In Germany, for instance, the **Transparency Regulation** came into force on June 1, 2017, the main objective of which is to enhance transparency and cost control with telecommunications services for consumers. In this context, the Federal Network Agency introduced a system that enables consumers to measure the bandwidths available on their fixed-network and mobile lines.

In addition to the requirements of telecommunications law, our media products are also subject to special **European and national regulations under media law**. The latter include, in the broader sense, copyright law, regulations concerning the responsibility for published content, requirements in relation to ensuring the protection of minors in the media, and requirements in relation to the content and user interfaces of media distribution platforms. Barring any changes to its shareholder structure (the Federal Republic and KfW being its major shareholders), to the legal situation, or to the prevailing opinions of media regulators, it is unlikely that Telekom Deutschland will be granted a license to broadcast radio and television programs.

Changes in regulatory policy and legislation

Deregulation of retail products in Germany. Previously, the Federal Network Agency had notified the European Commission of its draft analysis of retail markets and its plans to abolish additional regulation of product bundles for retail customers. Telephone lines with no broadband component in the product bundle were to remain regulated for retail customers. On July 13, 2018, the Federal Network Agency withdrew the draft market analysis. Currently, it is not possible to make any specific statements as to the content of the final market analysis. The regulation of wholesale products will remain unaffected.


Amendment to the German Telecommunications Act following a Federal Constitutional Court ruling. As the result of an amendment to the Act, which entered into force on December 7, 2018, Deutsche Telekom will in future be able to claim the payment of higher rates in some cases also retroactively – at least from major competitors – in the event of a successful complaint against a Federal Network Agency rate ruling. Previously, this was only possible under very restrictive circumstances. The change to the law became necessary following a Federal Constitutional Court ruling which judged the previous regulation to be unconstitutional.

EU legal framework for telecommunications. In early June 2018, a political agreement was reached between the European Parliament and the Council in the form of the European Electronic Communications Code. The aim is to reform central EU regulation of the telecommunications sector, primarily price and access regulation, spectrum policy, sector-specific rules on consumer protection, and the universal service regime. The new rules took effect as of December 20, 2018. The Member States will then have 24 months to transpose the requirements into national law. Individual rules will enter into force at an earlier date – in particular those governing the regulation of retail customer rate plans for voice calls and text messages within the EU – and take effect as of May 15, 2019 as part of a directly applicable EU Regulation. The agreement provides for less regulation of “very high capacity networks” and more stable regulatory conditions over the long term in cases where competitors invest jointly, as is the case with open co-investment models. In addition to establishing co-ownership and co-financing, co-investment models also include long-term agreements on access-based network usage that comply with specific requirements designed to safeguard competition. Fiber-to-the-building/home (FTTB/FTTH) networks, in particular, could benefit from the new rules. At the same time, the new legal framework gives the regulatory authorities new powers to impose access obligations on all networks independent of whether a company has significant market power (symmetrical regulation). In terms of spectrum policy, the new EU regulatory framework aims to increase the level of harmonization in certain areas and thus improve legal certainty when awarding mobile spectrum, for example, by including a minimum license term of 15 years with an option to extend for a further five years. With respect to consumer protection, apart from a few exceptions, fully harmonized obligations are in place at European level – thus negating the need for additional national regulations – whereas obligations in individual areas are becoming more stringent. Transparency obligations are being extended greatly, while the regulations on contract terms and changes of provider are being tightened up further. Universal service is being completely overhauled, with the removal of many services that are hardly used anymore. In future, to enable the use of services including video telephony, telecommunications connections will have to be broadband in order to meet universal service requirements. In addition, as described above, since May 15, 2019, the charges for international voice calls and sending text messages within the EU have been limited (to EUR 0.19/minute and EUR 0.09/SMS (net) for five years).

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The revision of the EU legal framework for telecommunications forms part of a bouquet of new EU legislation on the single market for electronic communications that provides for amendments to the regulations governing media services – mainly due to the growing importance of internet offerings – which are competing with the TV services previously focused on (for example, under copyright law, laws for the protection of minors from harmful media, and the liability of internet service providers (in particular hosting) for third-party content). At the national level, too, specific amendments (e.g., to the German Interstate Treaty on Broadcasting) are being discussed in response to the phenomena of digitalization and convergence.


Awarding of spectrum

Risks could arise from the fact that inappropriate auction rules and frequency usage requirements, excessive reserve prices, or disproportionately high annual spectrum fees could jeopardize our planned acquisition of spectrum. By contrast, we see an opportunity in particular in the fact that such spectrum award procedures enable mobile network operators to obtain the optimum amount of spectrum for their future business. We would thus be equipped for further growth and innovation. The upcoming award procedures mainly relate to the auctioning of additional spectrum in the 0.7 GHz, 1.5 GHz, 3.4 GHz/3.8 GHz, and 24 GHz and over ranges. In addition, spectrum licenses, especially in the 2.1 GHz range, will expire between 2019 and 2021 in some countries and need to be renewed. Award procedures are currently at the preparation stage in Germany, Croatia, Macedonia, Austria, and the United States. 

OPERATIONAL RISKS AND OPPORTUNITIES

Personnel – Germany and Systems Solutions. In 2018, we once again used socially responsible measures to restructure the workforce in the Group, mainly by means of severance payments, partial and dedicated retirement, internal retraining measures, and employment opportunities in public service for civil servants offered by Telekom Placement Services. We will continue this restructuring in the coming year. If it is not possible to implement the corresponding measures as planned or at all (for example, due to limited interest in severance payments), this may have negative effects on our financial targets. To avoid the risk of high potentials leaving the Group as a result of the staff reduction instruments, we make sure that the arrangement is voluntary on both sides in each individual case.

The right of civil servants to return to Deutsche Telekom also carries risks: When Group entities that employ civil servants are disposed of, it is generally possible to continue to employ them at the Group entity to be sold, provided the civil servant agrees or submits an application to be employed at the respective unit in future. However, there is a risk that they may return to us from a sold entity, for instance after the end of their temporary leave from civil servant status, without the Company being able to offer them jobs. Currently 1,497 civil servants are entitled to return from outside the Group to Deutsche Telekom in this way (as of December 31, 2018).

Risks relating to IT/NT network operations.  We have an increasingly complex information/network technology (IT/NT) infrastructure, which we constantly expand and upgrade to ensure the best customer experience and consolidate our technology leadership. Outages in the current and also future technical infrastructure cannot be completely ruled out and could in individual cases result in revenue losses or increased costs. After all, our IT/NT resources and structures are the key organizational and technical platform for our operations. The ongoing convergence of IT and NT harbors risks. In order to counter these holistically, our network, innovation, and IT activities are combined under the Board department Technology and Innovation.

Risks could arise in this area relating to all IT/NT systems and products that require internet access. For instance, faults between newly developed and existing IT/NT systems could cause interruptions to business processes, products, and services, such as smartphones and MagentaTV. In order to avoid the risk of failures, e.g., due to natural disasters or fires, we use technical early warning systems and duplicate IT/NT systems. The Computer Emergency Response Team (CERT) at T-Systems is in charge of protecting our corporate customers' servers. In cloud computing, all data and applications are stored at a data center. Our data centers have security certification and meet strict data protection provisions and the EU regulations. All data relating to companies and private persons is protected from external access. Constant maintenance and automatic updates keep the security precautions up to date at all times. On the basis of a standardized Group-wide Business Continuity Management process, we also take organizational and technical measures to prevent damage from occurring or, if we cannot, to mitigate the subsequent effects. We also have insurance cover for insurable risks.

Opportunities relating to IT/NT network operations. The utilization of large data volumes (big data) from our networks can improve and speed up decision-making processes by enhancing transparency. It does so by shifting the basis for decisions from hypotheses to facts and, for example, enabling correlations to be recognized.

Our Systems Solutions operating segment covers innovative business areas in the digital transformation of business processes, such as the Internet of Things and cybersecurity. These business areas could develop faster than expected. As a pioneer of the digital transformation, we have an opportunity not only to participate in, but also actively shape, the market trend through a variety of projects in the fields of healthcare and mobility solutions. In the ramp-up phase of these new business models based on M2M communication and big data, our partner-oriented approach is a highly promising way of contributing our core competencies – in data communication, big data, cloud computing, and cybersecurity – to various projects. What is more, we already have initial references in areas of the Internet of Things market, e.g., predictive maintenance. 



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For information on spectrum auctions that were completed in 2018 or are still ongoing, please refer to the section "The economic environment," page 43 et seq.



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As the previous technology and development partner for toll collection business in Europe, we already have a strong competitive position. We have earned valuable references in European toll collection projects in Belgium and Austria and through the planned launch of a Europe-wide toll collection system (Toll4Europe). This will help to give us an edge over our competitors.

Risks relating to the existing IT architecture in the United States. T-Mobile US relies upon its systems and networks and the systems and networks of other providers and suppliers, to provide and support services. T-Mobile US' business, like that of most retailers and wireless companies, involves the receipt, storage, and transmission of customers' confidential information, including sensitive personal information, payment card information, and confidential information about their employees and suppliers, as well as other sensitive information about T-Mobile US, such as business plans, transactions, and intellectual property. Cyberattacks, such as denial of service and other malicious attacks, could disrupt T-Mobile US' internal systems, networks, and applications, impair its ability to provide services to customers, and have other adverse effects on its business. [SDG 16](#)

Future viability of the IT architecture in the United States. In order to grow and remain competitive with new and evolving technologies in the industry, T-Mobile US will need to adapt to future changes in technology, continually invest in its network, enhance existing offerings, and introduce new offerings to address its current and potential customers' changing demands. If T-Mobile US is unable to take advantage of technological developments on a timely basis, then it may experience a decline in demand for its services or face challenges in implementing or evolving its business strategy. T-Mobile US is currently implementing a customer billing system, which involves a third-party-supported platform. The implementation may cause major system or business disruptions, or T-Mobile US may fail to implement the billing system in a timely or effective manner.

Opportunities relating to the IT architecture in the United States. To be successful, T-Mobile US must provide its customers with reliable, trustworthy service and information security. T-Mobile US is making significant investments in its IT infrastructure and wireless network. If this results in a significant improvement in processes, then the savings made could be higher than previously assumed.

Procurement. Deutsche Telekom cooperates with a variety of suppliers of technical (information and communication technology) and non-technical products and services. Products and services that might involve a higher risk include software and hardware, network technology components, and all products and services provided directly to end customers.

Supply risks cannot be entirely ruled out. Delivery bottlenecks, price increases, changes in the prevailing economic or political conditions, or suppliers' product strategies may have a negative impact on our business processes and our results. Additional risks may also result from the dependence on individual suppliers or from individual suppliers defaulting. This is especially true for Chinese telecommunications suppliers. We employ organizational, contractual, and procurement strategy measures to counteract such risks.

Data privacy and data security. [SDG 16](#) The General Data Protection Regulation – which introduced more stringent data privacy requirements across the EU – entered into force on May 25, 2018. For our Company, the new regulation did not entail any fundamental changes, given that new procedures such as the Privacy Impact Assessment – for evaluating and documenting the risks posed by data processing – were already well established in our organization. Still, we used the introduction of the General Data Protection Regulation as an opportunity to thoroughly re-assess data privacy in a three-phase project. In the first phase (2016), we specified the legal framework, setting it down in binding interpretations for our Group. The second phase was completed in 2017: We launched implementation projects in all our European Group companies and evaluated our IT systems and processes in relation to the General Data Protection Regulation. In 2018, readiness checks were performed in the third phase. In this phase, all affected entities of the Group were asked whether they had implemented all relevant requirements. In addition, spot checks for compliance with the General Data Protection Regulation were carried out at 28 entities. In this way, we will ensure that data privacy is implemented in a consistent manner across the Group using common requirements and processes. That will enhance efficiency, promote data privacy in Group-wide projects, and improve international collaboration.



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STRUCTURE

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The General Data Protection Regulation is a milestone on the way to a true single European market in which the same rules apply to all players. The newly adopted rules assure Europe a high level of data protection and, at the same time, will pave the way for new digital business models. The fundamental demand for a level playing field for all market players in the EU has thus been met. In addition, the new data protection legislation closes a major regulatory gap when it comes to service providers outside of the EU. The General Data Protection Regulation will also apply to non-European market players (e.g., Google, Facebook, and Apple) targeting customers in the EU, and will thus enhance the overall competitive situation. Regrettably, lawmakers also missed some opportunities: For instance, until such time as the ePrivacy Directive has been revised, data stored by telecommunications providers will remain subject to stricter, dedicated regulations. Telecommunications providers in Europe thus still have a competitive disadvantage in some areas – one that the new proposed regulations that have thus far been made public will only partially alleviate. As telecommunications providers' data processing options are substantially restricted compared with what is possible under the General Data Protection Regulation, it is unlikely that big-data applications in the field of telecommunications will be able to realize their full potential. According to the current draft of the planned ePrivacy Regulation, which is to replace the ePrivacy Directive, it will be possible to process metadata only with the customer's approval. The draft ePrivacy Regulation does not provide for the possibility of processing for compatible purposes using pseudonyms. Big data applications in particular, however, depend on large volumes of data for reliable results. Solutions based purely on consent will have limitations. That will rule out various service models that may be useful to consumers, but cannot be implemented with anonymized data, such as services for finding parking spaces and avoiding accidents, tailored TV programming, or telemonitoring services in the healthcare field. However, proposals put before the Council of Ministers in the second half of 2018 under the Austrian Presidency to bring the ePrivacy Regulation more closely in line with the General Data Protection Regulation are moving in the right direction. In particular, the proposal to incorporate processing for compatible purposes using pseudonyms into the ePrivacy Regulation would be an important step towards innovation-friendly regulation while at the same time maintaining a high level of data privacy. It is important, therefore, that the proposed legislation continues to pursue this balanced approach in 2019.

IT security continues to pose major challenges. In addition to preventive measures such as integrated security in business processes and measures to raise security awareness among employees, we counter these challenges with increased focus on the analysis of threats and cyber risks. This is where our early warning system comes in: It detects new sources and types of cyberattack, analyzes the behavior of the attackers while maintaining strict data privacy, and identifies new trends in the field of security. Along with the honeypot systems, which simulate vulner-

abilities in IT systems, our early warning system includes alerts and analytical tools for spam mails, viruses, and Trojans. We exchange the information we obtain from all these systems with public and private bodies to detect new attack patterns and develop new protection systems.

Cybercrime and industrial espionage are on the rise. We are addressing these risks with comprehensive security concepts. In order to create greater transparency and thus be in a stronger position to tackle these threats, we are relying more and more on partnerships, e.g., with public and private organizations. By means of the Security by Design principle we have made security an integral part of our development process for new products and information systems. In addition, we carry out intensive and obligatory digital security tests. [SDG 17](#)

We are continually striving to accelerate our growth through IT security solutions. To this end, we have combined our security units within T-Systems. We want to leverage this end-to-end security portfolio to secure market shares and score points with security concepts on the back of megatrends like the Internet of Things and Industry 4.0. We are also continuing to gradually expand our partner ecosystem in the area of cybersecurity. 

RISKS AND OPPORTUNITIES ARISING FROM BRAND, COMMUNICATION, AND REPUTATION

Negative media reports. An unforeseeable negative media report on our products and services or our corporate activities and responsibilities can have a huge impact on the reputation of our Company and our brand image. Social networks have made it possible that such information and opinions can spread much faster and more widely. Ultimately, negative reports can impact on our revenue and our brand value. In order to avoid this, we engage in a constant, intensive and constructive dialog, in particular with our customers, the media, and the financial world. For us, the top priority is to take as balanced a view as possible of the interests of all stakeholders and thereby uphold our reputation as a reliable partner.

Sustainability risks and opportunities. For us, comprehensive risk and opportunity management also means considering the opportunity and risks arising from ecological or social aspects or from the management of our Company. To this end, we actively and systematically involve all relevant stakeholders in the process of identifying current and potential risks and opportunities. We also participate in a number of working groups and committees. In parallel with our ongoing monitoring of ecological, social, and governance issues, we systematically determine our stakeholders' positions on these issues. The key tools we use here are: our year-round open online materiality survey for all stakeholders; our bi-monthly NGO report, which systematically analyzes press publications of the NGOs relevant for us; our involvement in working groups and committees, countless national and international business associations and

17 PARTNERSHIPS FOR THE GOALS



RELATIONSHIPS



For further information on the organization of this strategic area of operation, please refer to the section "Group strategy," page 35 et seq.



For an overview of the Magenta Security portfolio along with the latest information on products and upcoming events – such as Deutsche Telekom's annual Magenta Security Convention – please refer to <https://security.telekom.com> (German only).

We provide regular updates on the latest developments in data protection and data security on our website at www.telekom.com/en/corporate-responsibility/data-protection-data-security.

social organizations, e.g., GeSI, BDI, Bitkom, Econsense, and BAGSO; stakeholder dialog formats organized by us; and our various publications, such as the press review and newsletter. We also integrate the biggest sustainability risks in our internal compliance assessment, thereby recording the associated positioning and development of measures in the various business areas. [SDG 17](#)

17 PARTNERSHIPS FOR THE GOALS



RELATIONSHIPS



For further information on sustainability, please refer to the section "Corporate responsibility and non-financial statement," page 76 et seq.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



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8 DECENT WORK AND ECONOMIC GROWTH



RELATIONSHIPS

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We have identified the following as our main sustainability management issues:

- **Reputation.** [SDG 16](#) How we deal with sustainability issues also entails both opportunities and risks for our reputation. A high level of service quality is one of the most important factors for improving customer perception. Customer satisfaction has been embedded in our Group management as a non-financial performance indicator to underline the importance of this issue. Transparency and reporting help to promote the trust of other external stakeholders in our Group. Our annual and CR reports also serve this purpose. However, issues such as business practices, data privacy, and work standards in the supply chain and conduct in relation to human rights also entail reputational risks: If our brands, products, or services are connected with such issues in negative media reports, this can cause substantial damage to our reputation. As part of our sustainability management activities, we continuously review such potential risks and take measures to minimize them. This includes systematically incorporating them in the Group's internal compliance management system, so as to determine the relevance of the risks in relation to sustainability issues and their effect on reputation across units. We also ascertain how our products and services make a positive contribution to sustainability in order to enhance our reputation.
- **Climate protection.** [SDG 13](#) We pursue an integrated climate strategy, which means focusing not only on the risks that climate change poses for us and our stakeholders, but also on the opportunities it presents. By 2030, ICT products and services will have the potential to save up to ten times as much in CO₂ emissions in other industries as the ICT sector itself generates (according to the GeSI SMARTer2030 study). This creates an opportunity to save 20 percent of global CO₂ emissions in 2030 and to keep worldwide emissions at 2015 levels with simultaneous economic growth. The additional revenue potential here amounts to USD 6.5 trillion, USD 2.0 trillion of which is for the ICT industry alone. Further, ICT solutions can save a total of USD 4.9 trillion in costs. To give a specific example: The broadband rollout in Germany has the potential to save an aggregate amount of 19 million metric tons of CO₂ between 2012 and 2020. What is more, the economic momentum triggered by rolling out broadband can create an aggregate number of 162,000 new jobs and increase GDP by EUR 47 billion between 2015 and 2020. We are supporting this trend by evaluating our product portfolio to identify sustainability benefits. In addition, we want to continuously improve the ratio of the emissions that our products and services save to those generated by our own value chain. In

2018, for example, we saved 85 percent more emissions in Germany than we produced.

Climate change risks are already visible in the form of increasingly extreme weather conditions. This is having a direct effect on our stakeholders, e.g., our customers, suppliers, and employees. The risk is assessed in relation to the continuation of operations as part of risk management and is managed at an operational level in the business units. We can take further preventive action in this area by also reducing our own CO₂ emissions, which is one of the reasons we set ourselves the goal of achieving a 20 percent reduction in our Group-wide emissions – leaving aside our United States operating segment – by 2020 (baseline: 2008). Climate protection also carries financial risks, whether from the introduction of a levy on CO₂ emissions or an increase in energy costs. The measures we are taking to counter these risks include measuring our own energy efficiency and finding ways to improve it. In addition, we are developing a new Group climate goal based on Science-Based Targets for the period after 2020, which is set to be adopted in 2019. Further, in 2018, four of our subsidiaries (Magyar Telekom in Hungary, OTE in Greece, T-Mobile Netherlands, and Telekom Albania) covered 100 percent of their electricity requirements with renewable energy, while a further four (T-Mobile Austria, T-Systems Austria, Hrvatski Telekom, and T-Systems Netherlands) almost met this target, thus reducing climate risks. As a member of the Renewable Energy 100, T-Mobile US has already undertaken to cover 100 percent of its electricity requirements with renewable energy from 2021.

- **Suppliers.** [SDG 8](#) We see more sustainability in our supply chain as an opportunity – for our reputation and our business success. Apart from the general risks associated with our global procurement activities, we can be exposed to country- and supplier-specific risks. These include, for example, the use of child labor, the conscious acceptance of environmental damage, or inadequate local working and safety conditions. We reduce these risks by systematically reviewing our suppliers. We conduct these audits within the scope of the Joint Audit Corporation (JAC). The aim of the JAC is to reduce sustainability risks in our supply chain and to improve ecological and social aspects, including the issue of human rights. As such, the audit is compliant with internationally recognized guidelines and standards, such as the ILO Core Labor Standards, the UN Guiding Principles on Business and Human Rights, and the OECD Guidelines for Multinational Enterprises. Our partnerships with suppliers that comply with international sustainability standards ensure a high level of product quality and reliable procurement. We have a special development program in place to help strategic suppliers introduce business practices that are both socially and ecologically acceptable while remaining economically efficient. This program showed measurable successes again in the reporting period and has three major advantages: It has a positive impact on our suppliers' working conditions, enhances their profitability, and makes the economic relevance of sustainability clear for both sides, i.e., for our suppliers and for the Group alike. For

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instance, better working conditions at our suppliers reduces the number of work-related accidents as well as the personnel turnover rate. That, in turn, ensures high product quality and increases productivity, while at the same time lowering costs for recruitment and training. Thus, not only are we strengthening our suppliers' profitability and CR performance, we are also significantly reducing identified risks.

- **Health and environment.** [SDG 3](#) Mobile communications, or the electromagnetic fields used in mobile communications, regularly give rise to concerns among the general population about potential health risks. This issue continues to be the subject of public, political, and scientific debate. Acceptance problems among the general public concern both mobile communications networks and the use of mobile terminals such as smartphones, tablets, and laptops. The discussion also has repercussions for the build-out of mobile communications infrastructure and the use of mobile devices. In the fixed network, it affects the use of traditional IP and DECT (digital cordless) phones and devices that use Wi-Fi technology. There is a risk of regulatory interventions, such as reduced thresholds for electromagnetic fields or the implementation of precautionary measures in mobile communications, e.g., amendments to building law, or also the risk of a labeling requirement for handsets.

Over the past few years, recognized expert organizations such as the World Health Organization (WHO) and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) have repeatedly reviewed the current thresholds for mobile communications and confirmed that – if these values are complied with – the use of mobile technology is safe based on current scientific knowledge. The expert organizations, currently the ICNIRP, regularly review the recommended thresholds on the basis of the latest scientific findings.

We are convinced that mobile communications technology is safe if specific threshold values are complied with. We are supported in this conviction by the assessment of the recognized bodies. Our responsible approach to this issue finds expression in our Group-wide EMF Policy, with which we commit ourselves to more transparency, information, participation, and financial support of independent mobile communications research, far beyond that which is stipulated by legal requirements. We aim to overcome uncertainty among the general public by pursuing an objective, scientifically well-founded, and transparent information policy. We thus continue to see it as our duty to intensify our trust-based dialog with local authorities and to ensure its successful progress. This particularly applies since our longstanding collaboration with municipalities to expand the mobile network was enshrined in law in 2013; previously, this collaboration was based on voluntary self-commitments by the network operators.

LITIGATION

Major ongoing legal proceedings

Deutsche Telekom is party to proceedings both in and out of court with government agencies, competitors, and other parties. The proceedings listed below are of particular importance from our perspective. If, in extremely rare cases, required disclosures on the significance of individual litigation and anti-trust proceedings are not made, we concluded that these disclosures may seriously undermine the outcome of the relevant proceedings.

Prospectus liability proceedings (third public offering, or DT3). This originally relates to around 2,600 ongoing lawsuits from some 16,000 alleged buyers of T-Shares sold on the basis of the prospectus published on May 26, 2000. The plaintiffs assert that individual figures given in this prospectus were inaccurate or incomplete. The amount in dispute totals approximately EUR 80 million plus interest. Some of the actions are also directed at KfW and/or the Federal Republic of Germany as well as the banks that handled the issuances. The Frankfurt/Main Regional Court had issued certified questions to the Frankfurt/Main Higher Regional Court in accordance with the German Capital Investor Model Proceedings Act (Kapitalanleger-Musterverfahrensgesetz – KapMuG) and has temporarily suspended the initial proceedings. On May 16, 2012, the Frankfurt/Main Higher Regional Court had ruled that there were no material errors in Deutsche Telekom AG's prospectus. In its decision on October 21, 2014, the Federal Court of Justice revoked this ruling, determined that there was a mistake in the prospectus, and referred the case back to the Frankfurt/Main Higher Regional Court. On November 30, 2016, the Frankfurt/Main Higher Regional Court ruled that the mistake in the prospectus identified by the Federal Court of Justice could result in liability on the part of Deutsche Telekom AG, although the details of that liability would have to be established in the initial proceedings. Both Deutsche Telekom AG and some of the individual plaintiffs in the model proceedings have brought an appeal before the Federal Court of Justice against this decision. We continue to hold the opinion that there are compelling reasons why Deutsche Telekom AG should not be liable for damages. An adequate contingent liability has been recognized and is shown in the notes to the consolidated financial statements. Adequate provisions for this risk were recognized in the annual financial statements of Deutsche Telekom AG, which are prepared in accordance with German GAAP.

Claims by partnering publishers of telephone directories.

Several publishers that had set up joint ventures with the then DeTeMedien GmbH – formerly a wholly owned subsidiary of Deutsche Telekom AG and now named Deutsche Tele Medien GmbH – to edit and publish subscriber directories filed claims against DeTeMedien GmbH and/or Deutsche Telekom AG at the end of 2013. The plaintiffs are claiming damages or a refund from Deutsche Tele Medien GmbH and, to a certain extent, from Deutsche Telekom AG as joint and several debtor alongside Deutsche Tele Medien GmbH. The plaintiffs base their claims on allegedly excessive charges for the provision of subscriber data in the joint ventures. The amounts claimed by the 81 original



RELATIONSHIPS

plaintiffs totaled around EUR 470 million plus interest at the end of 2014. After an agreement was reached with the majority of the publishers in October 2015 to settle the disputes and a number of claims were since dismissed conclusively, twelve actions are still pending for a remaining amount in dispute of around EUR 89 million plus interest. In ten proceedings, the plaintiffs lodged appeals with the Federal Court of Justice after their claims were dismissed by the court of appeal. In one of these proceedings, the Federal Court of Justice dismissed the appeal in its ruling dated January 29, 2019. Three of the claims have been suspended in the first instance. Five publishers whose civil actions are still pending have been pursuing their claims in parallel since June 2016 through administrative court actions against the Federal Network Agency. Three of these claims were dismissed with legally binding effect.

Claims relating to charges for the shared use of cable ducts.

In 2012, Kabel Deutschland Vertrieb und Service GmbH (today Vodafone Kabel Deutschland GmbH (VKDG)) filed a claim against Telekom Deutschland GmbH to reduce the annual charge for the rights to use cable duct capacities in the future and gain a partial refund of the payments made in this connection since 2004. According to its latest estimates, VKDG's claims amounted to around EUR 624 million along with around EUR 9 million for the alleged benefit from additional interest, plus interest in each case. Claims prior to 2009 are now no longer being asserted by VKDG. After the Frankfurt/Main Regional Court had dismissed the complaint in 2013, the Frankfurt/Main Higher Regional Court also rejected the appeal in December 2014. In the ruling dated January 24, 2017, the Federal Court of Justice reversed the appeal ruling and referred the case back to the Frankfurt/Main Higher Regional Court for further consideration. In its ruling dated December 20, 2018, the Frankfurt/Main Higher Regional Court again rejected the appeal and disallowed a further appeal. In similar proceedings, Unitymedia Hessen GmbH & Co. KG, Unitymedia NRW GmbH, and Kabel BW GmbH filed claims against Telekom Deutschland GmbH in January 2013, demanding that it cease charging the plaintiffs more than a specific and precisely stated amount for the shared use of cable ducts. In addition, the plaintiffs are currently demanding a refund of around EUR 570 million plus interest. The claim was dismissed in the first instance by the Cologne Regional Court on October 11, 2016. In its ruling dated March 14, 2018, the Düsseldorf Higher Regional Court rejected the appeal against this decision. In both proceedings, the plaintiffs have lodged a complaint against the non-allowance of appeal with the Federal Court of Justice. At present the financial impact of both these proceedings cannot be assessed with sufficient certainty.

Claim for damages in Malaysia despite an earlier, contrary, legally binding arbitration ruling. Celcom Malaysia Berhad (Celcom) and Technology Resources Industries Berhad are pursuing actions with the state courts in Kuala Lumpur, Malaysia, against eleven defendants in total, including DeTeAsia Holding GmbH, a subsidiary of Deutsche Telekom AG. The plaintiffs are demanding damages and compensation of USD 232 million plus interest. DeTeAsia Holding GmbH had enforced this amount against Celcom in 2005 on the basis of a final ruling in its favor. The main proceedings in the court of first instance began in January 2018. It is currently not possible to estimate the financial impact with sufficient certainty.

Patents and licenses. Like many other large telecommunications and internet providers, Deutsche Telekom is exposed to a growing number of intellectual property rights disputes. There is a risk that we may have to pay license fees and/or compensation; we are also exposed to a risk of cease-and-desist orders, for example relating to the sale of a product or the use of a technology.

Further, Deutsche Telekom intends to defend itself and/or pursue its claims resolutely in each of these proceedings.

Proceedings concluded

Toll Collect arbitration proceedings. On May 16, 2018, Daimler Financial Services AG, Deutsche Telekom AG, and the Federal Republic of Germany reached an agreement to cease the Toll Collect arbitration proceedings. The settlement was notarized in early July 2018 and confirmed by the arbitral tribunal, bringing the arbitration proceedings to an end. The agreed settlement amount of around EUR 3.2 billion includes services previously provided to the Federal Republic of Germany. Daimler Financial Services AG and Deutsche Telekom AG have both agreed to make final payments of EUR 550 million each. The payments will be made in three tranches by 2020; the first tranche has already been paid.

ANTI-TRUST PROCEEDINGS

Like all companies, our Group is subject to the regulations of anti-trust law. Given this, we have in recent years expanded our compliance activities in this area too. Nevertheless, Deutsche Telekom and its subsidiaries, joint ventures, and associates are from time to time subject to proceedings under competition law or civil follow-on actions. In the following, we describe major anti-trust proceedings and resulting claims for damages.

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Claims for damages against Slovak Telekom following a European Commission decision to impose fines. The European Commission decided on October 15, 2014 that Slovak Telekom had abused its market power on the Slovak broadband market and as a result imposed fines on Slovak Telekom and Deutsche Telekom. Following the decision of the European Commission, competitors filed damage actions against Slovak Telekom with the civil court in Bratislava. These claims seek compensation for alleged damages due to Slovak Telekom's abuse of a dominant market position, as determined by the European Commission. Three claims totaling EUR 215 million plus interest are currently pending. It is currently not possible to estimate the financial impact with sufficient certainty. The fines imposed by the European Commission were paid in January 2015. Slovak Telekom and Deutsche Telekom challenged the European Commission's decision on December 29, 2014 before the Court of the European Union. On December 13, 2018, the court partially overturned the European Commission's decision and reduced the fines by a total of EUR 13 million. The rulings are not yet legally binding and can be challenged by the European Commission or by Slovak Telekom and Deutsche Telekom before the European Court of Justice.

FINANCIAL RISKS

Liquidity, credit, currency, interest rate risks

With regard to its assets, liabilities, and planned transactions, our Group is particularly exposed to liquidity risks, credit risks, and the risk of changes in exchange rates and interest rates. To contain these risks, we use selected derivative and non-derivative hedging instruments (hedges), depending on the risk assessment. As only risks with an impact on cash flows are hedged, derivative financial instruments are used solely for hedging and

never for speculative purposes. The following risk areas – liquidity, credit, currency, and interest rate risks – are evaluated after implementation of risk containment measures. ☰

Liquidity risk. To ensure the Group's and Deutsche Telekom AG's solvency and financial flexibility at all times, our system of liquidity management includes a liquidity reserve, in the form of credit lines and cash, that is sufficient to cover bonds falling due and long-term loans for at least the next 24 months. For medium- to long-term financing, we primarily use bonds issued in a variety of currencies and jurisdictions. These instruments are generally issued via Deutsche Telekom International Finance B.V. and are forwarded within the Group as internal loans.

The following graphic shows the development of the liquidity reserve in relation to maturity dates. As of the end of 2018 and in the preceding quarters, we clearly met our targets for the liquidity reserve to cover at least the maturities due in the next 24 months.

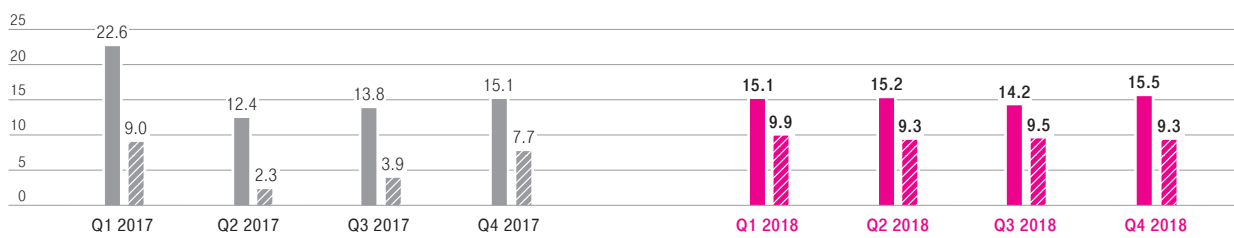
In addition to the reported liabilities to banks, Deutsche Telekom had standardized bilateral credit agreements with 22 banks for a total of EUR 12.9 billion as of December 31, 2018. As of December 31, 2018, EUR 0.6 billion of these credit lines had been utilized. According to the credit agreements, the terms and conditions depend on our rating. The bilateral credit agreements have an original maturity of 36 months and can, after each period of twelve months, be extended by a further twelve months to renew the maturity of 36 months. From today's perspective, our access to the international debt capital markets is not jeopardized.



For the evaluation, please refer to the table on page 117.

Liquidity reserve and maturities in 2018 compared with 2017

billions of €




■ Liquidity reserve (absolute figures)

▨ Maturities in the next 24 months

(Callable bonds of T-Mobile US are included with their original maturity up to the date of the call.)

Credit risks. In our operating business and certain financing activities, we are exposed to a credit risk, i.e., the risk that a counterparty will not fulfill its contractual obligations. To keep this credit risk to a minimum, we conclude transactions with regard to financing activities only with counterparties that have at least a credit rating of BBB+/Baa1; this is linked to an operational credit management system. In addition, we have concluded collateral agreements for our derivative transactions. These ensure that, on a daily basis, we receive compensation payments in the amount of the receivables due from contract banks and that we make compensatory payments in the case of liabilities due. In cases of insolvency, the collateral agreements stipulate that all contracts in force are offset against each other, leaving a net receivable or liability. We continuously monitor accounts receivable in operations in a decentralized manner, i.e., at the individual units. Our business with corporate customers, especially with international carriers, is subject to special solvency monitoring.

Currency risks. The currency risks result from investments, financing measures, and operations. Risks from foreign-currency fluctuations are hedged if they affect the Group's cash flows. However, foreign-currency risks that do not influence the Group's cash flows (e.g., risks resulting from the translation of assets and liabilities of foreign operations into the Group's reporting currency) are not hedged.

Interest rate risks. Our interest rate risks mainly result from interest-bearing liabilities, primarily in the eurozone and the United States. Interest risks are managed as part of our interest rate management activities, with a cap set on the maximum share of gross debt with a variable interest rate. The composition of the liabilities portfolio (ratio of fixed to variable and average fixed-interest period) is managed by issuing primary (non-derivative) financial instruments and, where necessary, also deploying derivative financial instruments. The Board of Management and the Supervisory Board are regularly informed about the situation. 

Tax risks


We are subject to the applicable tax laws in many different countries. Risks can arise from changes in local taxation laws or case law and different interpretations of existing provisions. These risks can impact both our tax expense and benefit as well as tax receivables and liabilities.


Other financial risks

This section contains information on other financial risks that we consider to be immaterial at present or cannot evaluate based on current knowledge.

Rating risk. As of December 31, 2018, Deutsche Telekom AG's credit rating with Moody's was Baa1 with a negative outlook, while Standard & Poor's rated us BBB+ with an outlook of CreditWatch negative, and Fitch confirmed its current rating of BBB+ with a stable outlook. A lower rating would result in interest rate rises for some of the bonds issued by us. The adjustment of the outlook from stable to negative at Moody's and to "CreditWatch negative" at Standard & Poor's followed the announcement of the agreed business combination of T-Mobile US and Sprint.

Sales of shares by the Federal Republic or KfW Bankengruppe. As of December 31, 2018, the Federal Republic and KfW Bankengruppe jointly held approximately 31.9 percent in Deutsche Telekom AG. It is possible that the Federal Republic will continue its policy of privatization and sell further equity interests in a manner designed not to disrupt the capital markets and with the involvement of KfW Bankengruppe. There is a risk that the sale of a significant volume of shares by the Federal Republic or KfW Bankengruppe, or any speculation to this effect, could have a negative impact on the price of the T-Share.

Our **CR strategy** enhances the value of our Company in the long term, which also has a positive effect of reducing business risks. Investors with a long-term horizon acknowledge this approach. In the capital markets, this is evident, for example, in the proportion of T-shares held by investors that base their investment decisions, at least in part, on sustainability criteria. As of September 30, 2018, around 18 percent of all T-Shares were held by SRI (socially responsible investment) investors, and 3 percent were held by investors who manage their funds primarily in accordance with SRI aspects. 

Impairment of Deutsche Telekom AG's assets. The value of the assets of Deutsche Telekom AG and its subsidiaries is reviewed periodically. In addition to the regular annual measurements, specific impairment tests may be carried out, for example, where changes in the economic, regulatory, business, or political environment suggest that the value of goodwill, intangible assets, property, plant and equipment, investments accounted for using the equity method, or other financial assets might have decreased.  These tests may lead to the recognition of impairment losses that do not, however, result in cash outflows. This could impact to a considerable extent on our results, which in turn may negatively affect the T-Share price.

8 DECENT WORK AND ECONOMIC GROWTH



FINANCE



For further information, please refer to Note 40 "Financial instruments and risk management" in the notes to the consolidated financial statements, page 236 et seq.



For further information, please refer to the section "Summary of accounting policies – Judgements and estimates," page 172 et seq.

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OTHER DISCLOSURES

SIGNIFICANT EVENTS AFTER THE REPORTING PERIOD

For information on events after the reporting period, please refer to Note 45 "Events after the reporting period" in the notes to the consolidated financial statements, page 263, and to the notes to the annual financial statements of Deutsche Telekom AG as of December 31, 2018.

ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM

Deutsche Telekom AG's internal control system (ICS) is based on the internationally recognized COSO (Committee of Sponsoring Organizations of the Treadway Commission) Internal Control – Integrated Framework, COSO I, as amended on May 14, 2013.

The Audit Committee of the Supervisory Board of Deutsche Telekom AG monitors the effectiveness of the ICS as required by § 107 (3) sentence 2 AktG. The Board of Management is responsible for defining the scope and structure of the ICS at its discretion. Internal Audit is responsible for independently reviewing the functionality and effectiveness of the ICS in the Group and at Deutsche Telekom AG, and, to comply with this task, has comprehensive information, audit, and inspection rights.

The accounting-related ICS comprises the principles, methods, and measures used to ensure appropriate accounting. It is continuously being refined and aims to ensure the consolidated financial statements of Deutsche Telekom are prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, as well as with the regulations under commercial law as set forth in § 315e (1) HGB. Another objective of the accounting-related ICS is the preparation of the annual financial statements of Deutsche Telekom AG and the combined management report in accordance with German GAAP.

It is generally true of any ICS that regardless of how it is specifically structured there can be no absolute guarantee that it will achieve its objectives. Therefore, as regards the accounting-related ICS, there can only ever be relative, but no absolute, certainty that material accounting misstatements can be prevented or detected.

Group Accounting manages the processes of Group accounting and management reporting. Laws, accounting standards, and other pronouncements are continuously analyzed as to whether and to what extent they are relevant and how they impact on financial reporting. The relevant requirements are defined in the Group Accounting Manual, for example, communicated to the relevant units and, together with the financial reporting calendar that is binding throughout the Group, form the basis of the financial reporting process. In addition, supplementary process directives such as the Intercompany Policy, standardized reporting formats, IT systems, as well as IT-based reporting and consolidation processes support the process of uniform and compliant Group accounting. Where necessary, we also draw

on the services of external service providers, for example, to measure pension obligations. Group Accounting ensures that these requirements are complied with consistently throughout the Group. The staff involved in the accounting process receive regular training. Deutsche Telekom AG and the Group companies are responsible for ensuring that Group-wide policies and procedures are complied with. The Group companies ensure the compliance and timeliness of their accounting-related processes and systems and, in doing so, are supported and monitored by Group Accounting.

Operational accounting processes at the national and international level are increasingly managed by our shared service centers. Harmonizing the processes enhances their efficiency and quality and, in turn, improves the reliability of the internal ICS. The ICS thus safeguards both the quality of internal processes at the shared service centers and the interfaces to the Group companies by means of adequate controls and an internal certification process.

Internal controls are embedded in the accounting process depending on risk levels. The accounting-related ICS comprises both preventive and detective controls, which include:

- IT-based and manual matching
- The segregation of functions
- The dual-checking principle
- Monitoring controls
- General IT checks such as access management in IT systems, and change management

We have implemented a standardized process throughout the Group for monitoring the effectiveness of the accounting-related ICS. This process systematically focuses on risks of possible misstatements in the consolidated financial statements. At the beginning of the year, specific accounts and accounting-related process steps are selected based on risk factors. They are then reviewed for effectiveness in the course of the year. If control weaknesses are found, they are analyzed and assessed, particularly in terms of their impact on the consolidated financial statements and the combined management report. Material control weaknesses, the action plans for eradicating them, and ongoing progress are reported to the Board of Management and additionally to the Audit Committee of the Supervisory Board of Deutsche Telekom AG. In order to ensure a high-quality accounting-related ICS, Internal Audit is closely involved in all stages of the process.

CORPORATE GOVERNANCE STATEMENT IN ACCORDANCE WITH § 289f AND § 315d HGB

The Corporate Governance Statement in accordance with § 289f and § 315d HGB forms part of the combined management report. □



The statement can be found on the Deutsche Telekom website at www.telekom.com under Investor Relations in the Management & Corporate Governance section.

LEGAL STRUCTURE OF THE GROUP

Deutsche Telekom AG, Bonn, is the parent of the Deutsche Telekom Group. Its shares are traded on the Frankfurt/Main Stock Exchange as well as on other stock exchanges. ■

SHAREHOLDERS' EQUITY

Each share entitles the holder to one vote. These voting rights are restricted, however, in relation to treasury shares (at December 31, 2018: around 19 million in total).



For information on the composition of capital stock in accordance with § 289a (1) HGB and § 315a HGB of direct and indirect equity investments, please refer to Note 18 "Shareholders' equity" in the notes to the consolidated financial statements, page 211 et seq., and to the notes to the annual financial statements of Deutsche Telekom AG as of December 31, 2018.

Treasury shares. The shareholders' meeting resolved on May 25, 2016 to authorize the Board of Management to purchase shares in the Company by May 24, 2021, with the amount of share capital accounted for by these shares totaling up to EUR 1,179,302,878.72, provided the shares to be purchased on the basis of this authorization in conjunction with the other shares of the Company that the Company has already purchased and still possesses or are to be assigned to it under § 71d and § 71e AktG do not at any time account for more than 10 percent of the Company's share capital. Moreover, the requirements under § 71 (2) sentences 2 and 3 AktG must be complied with. Shares shall not be purchased for the purpose of trading in treasury shares. This authorization may be exercised in full or in part. The purchase can be carried out in partial tranches spread over various purchase dates within the authorization period until the maximum purchase volume is reached. Dependent Group companies of Deutsche Telekom AG within the meaning of § 17 AktG or third parties acting for the account of Deutsche Telekom AG or for the account of dependent Group companies of Deutsche Telekom AG within the meaning of § 17 AktG are also entitled to purchase the shares. The shares are purchased through the stock exchange in adherence to the principle of equal treatment (§ 53a AktG). Shares can instead also be purchased by means of a public purchase or share exchange offer addressed to all shareholders, which, subject to a subsequently approved exclusion of the right to offer shares, must also comply with the principle of equal treatment.

The shares may be used for one or several of the purposes permitted by the authorization granted by the shareholders' meeting on May 25, 2016 under item 6 on the agenda. The shares may also be used for purposes involving an exclusion of subscription rights. They may also be sold on the stock market or by way of an offer to all shareholders, or withdrawn. The shares may also be used to fulfill the rights of Board of Management members to receive shares in Deutsche Telekom AG, which the Supervisory Board has granted to these members as part of the arrangements governing the compensation of the Board of Management, on the basis of a decision by the Supervisory Board to this effect.

Under the resolution of the shareholders' meeting on May 25, 2016, the Board of Management is also authorized to acquire the shares through the use of equity derivatives.

For information on the treasury shares in accordance with § 160 (1) No. 2 AktG, please refer to Note 9 in the annual financial statements of Deutsche Telekom AG as of December 31, 2018 and to Note 18 "Shareholders' equity" in the notes to the consolidated financial statements.

On the basis of the authorization by the shareholders' meeting on May 25, 2016 described above and corresponding authorizations by the shareholders' meeting on May 12, 2011 and May 24, 2012, 110 thousand shares were acquired in June 2011, 206 thousand shares in September 2011, and 268 thousand shares in January 2013. The total volumes amounted to EUR 2,762 thousand in the 2011 financial year, and EUR 2,394 thousand in the 2013 financial year (excluding transaction costs). This increased the number of treasury shares by 316 thousand and 268 thousand, respectively. Further, 90 thousand shares and 860 thousand shares were acquired in September and October 2015, respectively, for an aggregate amount of EUR 14,787 thousand (excluding transaction costs); these acquisitions increased the number of treasury shares by 950 thousand.

No treasury shares were acquired in the reporting period.

As part of the Share Matching Plan, a total of 2 thousand treasury shares were transferred free of charge to the custody accounts of eligible participants in 2012 and 2013, respectively. A further 90 thousand treasury shares were transferred free of charge in the 2014 financial year. An additional 140 thousand treasury shares were transferred in 2015. In the 2016 financial year, 232 thousand treasury shares were transferred, in the 2017 financial year, 300 thousand. Transfers of treasury shares to the custody accounts of employees of Deutsche Telekom AG are free of charge. In cases where treasury shares are transferred to the custody accounts of employees of other Group companies, the costs have been transferred at fair value to the respective Group company since the 2016 financial year.

A total of 312 thousand shares were reallocated in all months of the reporting year and transferred to the custody accounts of eligible participants of the Share Matching Plan. As of December 31, 2018, disposals of treasury shares resulting from the transfers in the reporting period accounted for less than 0.01 percent, or EUR 798 thousand, of share capital. Gains on disposal arising from transfers of treasury shares amounted to EUR 3,036 thousand. In the reporting year, 81 thousand treasury shares with a fair value of EUR 1,157 thousand were billed to other Group companies. Transfers of treasury shares increased retained earnings by EUR 2,162 thousand and capital reserves by EUR 20 thousand.

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As part of the acquisition of VoiceStream Wireless Corp., Bellevue, and Powertel, Inc., Bellevue, in 2001, Deutsche Telekom AG issued new shares from authorized capital to a trustee, for the benefit of holders of warrants, options, and conversion rights, among others. These options or conversion rights expired in full in the 2013 financial year. As a result, the trustee no longer had any obligation to fulfill any claims in accordance with the purpose of the deposit. The trust relationship was terminated at the start of 2016 and the deposited shares were transferred free of charge to a custody account of Deutsche Telekom AG. The 18,517 thousand previously deposited shares are accounted for in the same way as treasury shares in accordance with § 272 (1a) HGB. This equates to 0.4 percent, or EUR 48 million, of Deutsche Telekom's capital stock. On the basis of authorization by the shareholders' meeting on May 25, 2016, the treasury shares acquired free of charge may be used for the same purposes as the treasury shares acquired for a consideration.

Authorized capital and contingent capital. The shareholders' meeting on May 31, 2017 authorized the Board of Management to increase the share capital with the approval of the Supervisory Board by up to EUR 3,600,000,000 by issuing up to 1,406,250,000 no par value registered shares against cash and/or non-cash contributions in the period ending May 30, 2022. This authorization may be exercised in full or on one or more occasions in partial amounts. The Board of Management is authorized, subject to the approval of the Supervisory Board, to exclude residual amounts from shareholders' subscription rights. Furthermore, the Board of Management is authorized, subject to the approval of the Supervisory Board, to disapply shareholders' subscription rights in the event of capital increases against non-cash contributions when issuing new shares for business combinations or acquisitions of companies, parts thereof, or interests in companies, including increasing existing investment holdings, or other assets eligible for contribution for such acquisitions, including receivables from the Company. However, the value of the new shares for which shareholders' subscription rights have been disappplied on the basis of this authorization – together with the value of the shares or conversion and/or option rights or obligations under bonds issued or sold since May 31, 2017 subject to the disapplication of subscription rights – must not exceed 20 percent of the total share capital; the latter is defined as the amount existing as of May 31, 2017, upon entry of the authorization, or upon the issue of the new shares, whichever amount is lowest. If the issue or sale is carried out in analogous or mutatis mutandis application of § 186 (3) sentence 4 AktG, this shall also constitute the disapplication of subscription rights. Further, the Board of Management is authorized, subject to the approval of the Supervisory Board, to determine the further content of share rights and the conditions under which shares are issued (**2017 authorized capital**). The 2017 authorized capital was entered into the commercial register on July 11, 2017.

As of December 31, 2018, the share capital was contingently increased by up to EUR 1,200,000,000, comprising up to 468,750,000 no par value shares (**2018 contingent capital**).

The contingent capital increase will be implemented only to the extent that

1. the holders or creditors of bonds with warrants, convertible bonds, profit participation rights, and/or participating bonds (or combinations of these instruments) with options or conversion rights, which are issued or guaranteed by Deutsche Telekom AG or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, make use of their option and/or conversion rights or
2. those obligated as a result of bonds with warrants, convertible bonds, profit participation rights, and/or participating bonds (or combinations of these instruments), which are issued or guaranteed by Deutsche Telekom AG or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, fulfill their option or conversion obligations (including in the event that, in exercising a repayment option when the final due date of the bond is reached, Deutsche Telekom AG grants shares in Deutsche Telekom AG completely or partially in lieu of payment of the amount due)

and other forms of fulfillment are not used. The new shares shall participate in profits starting at the beginning of the financial year in which they are issued as the result of the exercise of any option or conversion rights or the fulfillment of any option or conversion obligations. The Supervisory Board is authorized to amend § 5 (3) of the Articles of Incorporation in accordance with the particular usage of the contingent capital and after the expiry of all the option or conversion periods.


MAIN AGREEMENTS INCLUDING A CHANGE OF CONTROL CLAUSE

The main agreements entered into by Deutsche Telekom AG that include a clause in the event of a change of control principally relate to bilateral credit lines and several loan agreements. In the event of a change of control, the individual lenders have the right to terminate the credit line and, if necessary, serve notice or demand repayment of the loans. A change of control is assumed when a third party, which can also be a group acting jointly, acquires control over Deutsche Telekom AG.


On November 2, 2016, Deutsche Telekom AG signed a change agreement to the shareholder agreement with the Greek government from May 14, 2008 on Hellenic Telecommunications Organization S.A., Athens, Greece (OTE). Under this agreement, the Greek government is, under certain circumstances, entitled to acquire all shares in OTE from Deutsche Telekom AG as soon as one (or more) person(s), with the exception of the Federal Republic of Germany, either directly or indirectly acquire(s) 35 percent of the voting rights of Deutsche Telekom AG.

In the master agreement establishing the procurement joint venture BuyIn in Belgium, Deutsche Telekom AG and Orange S.A. (formerly France Télécom S.A.)/Atlas Services Belgium S.A. (a subsidiary of Orange S.A.) agreed that if Deutsche Telekom or Orange comes under the controlling influence of a third party or if a third party that is not wholly owned by the Orange group of companies acquires shares in Atlas Services Belgium S.A., the respective other party (Orange and Atlas Services Belgium S.A. only jointly) may terminate the master agreement with immediate effect.

CHANGES IN THE CONSOLIDATED GROUP

61 German and 213 foreign subsidiaries are fully consolidated in Deutsche Telekom's consolidated financial statements (December 31, 2017: 60 and 186). 9 associates (December 31, 2017: 9) and 6 joint ventures (December 31, 2017: 7) are also included using the equity method. 

BUSINESS COMBINATIONS

In December 2017, T-Mobile Austria agreed to acquire Austria's leading cable operator, **UPC Austria**. The European Commission approved the transaction on July 9, 2018 and the transaction was consummated on July 31, 2018. The UPC Austria group has been fully included in our consolidated financial statements since the acquisition date. 

COMPENSATION REPORT

The "Compensation report" details the compensation system underlying Board of Management compensation as well as the specific remuneration received by the individual members of the Board of Management. It takes into consideration the requirements of the German Commercial Code taking account of the provisions of German Accounting Standard No. 17 (GAS 17), the recommendations of the German Corporate Governance Code (GCGC), and the International Financial Reporting Standards (IFRS).

Changes in the composition of the Board of Management and contract extensions. On January 1, 2018, Dr. Dirk Wössner took over as the Board member responsible for Germany. This position was held by Niek Jan van Damme until December 31, 2017. Also on January 1, 2018, Adel Al-Saleh was appointed as the new Board member responsible for T-Systems. This position was held by Reinhard Clemens until December 31, 2017. On January 1, 2019, former CHRO Dr. Christian P. Illek took over as CFO from Thomas Dannenfeldt, whose term of office ended on December 31, 2018. At its meeting on February 21, 2018, the Supervisory Board extended the term of office of CEO Timotheus Höttges for a further five years effective January 1, 2019. On July 13, 2018, the Supervisory Board resolved to appoint Birgit Bohle to the Board of Management as Labor Director and CHRO for a period of three years effective January 1, 2019. Also effective January 1, 2019, Thorsten Langheim took up his role as head of the new USA and Group Development department. He was appointed to the Board of Management for a period of four years by the Supervisory Board at its meeting on September 4, 2018.

COMPENSATION OF THE BOARD OF MANAGEMENT

Basis of Board of Management compensation. On February 24, 2010, the Supervisory Board resolved on a new system for the compensation of the Board of Management members, taking into account the provisions specified in the German Act on the Appropriateness of Management Board Remuneration (Gesetz zur Angemessenheit der Vorstandsvergütung – VorstAG) that has been in effect since August 5, 2009. The shareholders' meeting of Deutsche Telekom AG on May 3, 2010 approved this system. The compensation of Board of Management members comprises various components. Under the terms of their service contracts, members of the Board of Management are entitled to an annual fixed remuneration and annual variable performance-based remuneration (Variable I), a long-term variable remuneration component (Variable II), as well as fringe benefits and deferred benefits based on a company pension entitlement. The Supervisory Board defines the structure of the compensation system for the Board of Management and reviews this structure and the appropriateness of compensation at regular intervals. It is ensured that Board of Management compensation is oriented toward the sustained development of the Company and that there is a multi-year measurement base for the variable components. Sideline employment generally requires prior approval. Generally, no additional compensation is paid for being a member of the management or supervisory board of other Group entities.



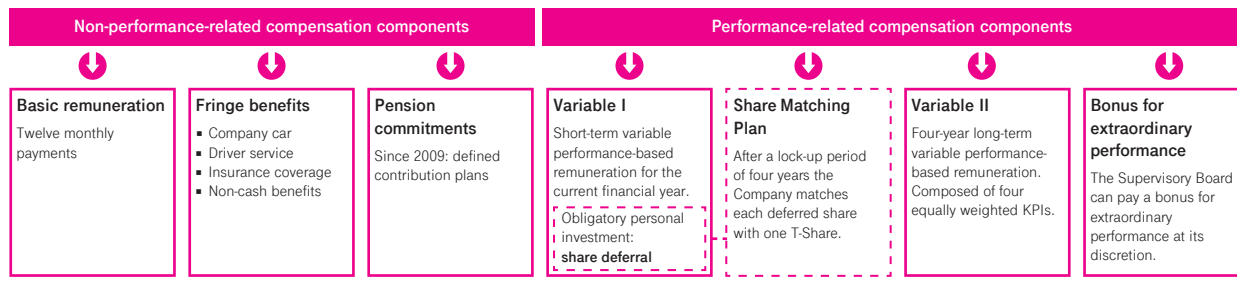
The principal subsidiaries of Deutsche Telekom AG are listed in the notes to the consolidated financial statements in the section "Summary of accounting policies" under "Principal subsidiaries," pages 179 and 180.



For further information, please refer to the section "Highlights in the 2018 financial year," page 26 et seq., and to the section "Changes in the composition of the Group and other transactions" in the notes to the consolidated financial statements, page 176 et seq.

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Compensation of the Board of Management



Non-performance-related compensation components

Basic remuneration

The fixed annual remuneration is determined for all Board of Management members based on market conditions in accordance with the requirements of stock corporation law and is paid on a monthly basis. In the event of temporary incapacity for work caused by illness, accident, or any other reason for which the respective Board of Management member is not responsible, the fixed basic remuneration continues to be paid. The continued payment of remuneration ends at the latest after an uninterrupted period of absence of six months, or for a maximum of three months following the end of the month in which the Board of Management member's permanent incapacity for work is established.

Fringe benefits

In accordance with market-oriented and corporate standards, the Company grants all members of the Board of Management additional benefits under the terms of their service contracts, some of which are viewed as non-cash benefits and taxed accordingly. This mainly includes being furnished with a company car and accident and liability insurance, and reimbursements in connection with maintaining a second household.

Pension commitments

New pension commitment. Since 2009, all Board members have been granted a company pension in the form of a contribution-based promise. Under this arrangement, the Board member receives a one-time lump sum payout upon entering retirement. A contribution is paid into the Board member's pension account for each year of service at an interest rate corresponding to market levels. Annual additions to the pension account have no effect on cash or cash equivalents. The cash outflow is only effective upon the Board member's retirement. As a rule, the date of retirement is the beneficiary's 62nd birthday. For pension agreements signed before December 31, 2011, Board of Management members can also opt to draw early retirement benefits from their 60th birthday, subject to corresponding actuarial deductions. The amount to be provided annually is individualized and decoupled from other remuneration components. The exact definition of the contribution is based on a comparison with peer companies that are suitable for benchmarking and also offer plans with contribution-based promises. The contributions for Thomas Dannenfeldt, Srin

Gopalan, Dr. Christian P. Illek, Dr. Thomas Kremer, Claudia Nemat, and Dr. Dirk Wössner amount to EUR 250,000 each for each year of service rendered.

Legacy pension commitment. As the longest-serving Board member, CEO Timotheus Höttges is the only current Board member to still benefit from a legacy pension commitment under the company pension plan. Benefits from the company pension plan are in direct relation to the beneficiary's annual salary. The Board of Management members receive company pension benefits based on a fixed percentage of their last fixed annual salary for each year of service rendered prior to their date of retirement. The pension payments may be in the form of a life-long retirement pension upon reaching the age of 62 or in the form of an early retirement pension upon reaching the age of 60. Opting for the early retirement pension scheme is connected with actuarial deductions. The company pension is calculated by multiplying a basic percentage rate of 5 percent by the number of years of service as a member of the Board of Management. After ten years of service, the maximum pension level of 50 percent of the last fixed annual remuneration is attained. Following Timotheus Höttges' reappointment to the Board of Management and the adjustment to his basic remuneration, the Supervisory Board decided to dynamically increase his pension entitlements accrued up to December 31, 2018 by 2.4 percent per year using the basic remuneration valid up to December 31 as the measurement base. Future increases in his compensation will thus not lead to higher pension payments.

The pension payments to be made upon retirement increase dynamically, at a rate of 1 percent per year. In addition, the pension agreements include arrangements for pensions for surviving dependents in the form of entitlements for widows/widowers and orphans. In specifically provided exceptional cases, entitlement to a widow's/widower's pension is excluded. The standard criteria for eligibility in the pension arrangements are in line with market conditions. In the event of a permanent incapacity for work (invalidity), the beneficiary is also entitled to the pension fund.

Pension substitute. A “pension substitute” was agreed with Adel Al-Saleh in lieu of a pension commitment due to his U.S. citizenship. The arrangement provides for an annual payment of EUR 250,000 for each full year of service rendered and is reported in the tables under fringe benefits. In determining the amount, the Supervisory Board oriented itself to the level of the contributions for those Board members who have received a contribution-based benefit promise (new pension commitment).

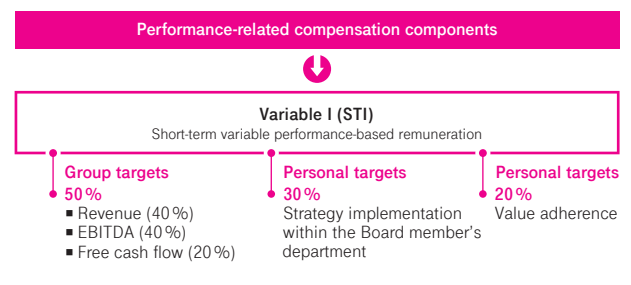
Service cost and defined benefit obligations for each member of the Board of Management with a pension commitment are shown in the following table:

	Service cost 2018	Defined benefit obligation (DBO) Dec. 31, 2018	Service cost 2017	Defined benefit obligation (DBO) Dec. 31, 2017
Thomas Dannenfeldt	277,461	1,493,340	281,578	1,200,998
Srini Gopalan	300,362	610,829	305,625	306,749
Timotheus Höttges	1,117,049	16,269,567	1,129,225	12,183,195
Dr. Christian P. Illek	267,948	1,056,852	272,566	778,582
Dr. Thomas Kremer	241,729	1,795,913	247,956	1,525,513
Claudia Nemat	285,459	2,401,880	291,092	2,077,262
Dr. Dirk Wössner (since January 1, 2018)	296,498	296,528	0	0

Performance-based compensation components

The variable remuneration of the members of the Board of Management is mainly divided into Variables I and II. Variable I contains both short-term and long-term components consisting of the realization of budget figures for specific performance indicators, the implementation of the strategy, and adherence to the Group's Guiding Principles. The payment amount of Variable I is tied to an obligation to invest in shares of Deutsche Telekom AG, which results in a further inflow of shares after four years under the current Share Matching Plan. Variable II is oriented solely toward the long term. This ensures that the variable remuneration is oriented toward the sustained development of the Company and that there is a predominantly long-term incentive effect. The variable compensation elements include clear upper limits, while the amount of compensation is capped overall. The final component of performance-based compensation comprises an option for the Supervisory Board to award a bonus for extraordinary performance. In the event of temporary incapacity for work caused by illness, accident, or any other reason for which the respective Board of Management member is not responsible, claims to variable remuneration are reduced pro rata in line with the uninterrupted period of absence; the uninterrupted period of absence must be more than one month in duration.

Variable I



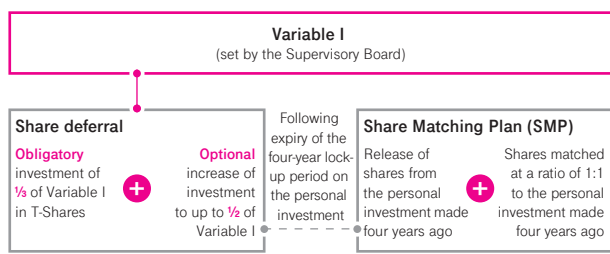
The annual variable remuneration of Board of Management members is based on the achievement of targets set by the Supervisory Board of Deutsche Telekom AG for each member of the Board of Management at the beginning of the financial year. The set of targets is composed of corporate targets (50 percent) related to the unadjusted values – adapted for target-relevant factors – for revenue, EBITDA, and free cash flow, as well as personal targets for the individual members of the Board of Management. The personal targets consist of targets oriented toward the sustained success of the Company concerning the implementation of the strategy in the member's respective department (30 percent) and value adherence (adherence to Guiding Principles), which is an indicator of compliance with value orientation and accounts for 20 percent. The agreement on targets and the level of target achievement for the respective financial year are determined by the plenary session of the Super-

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visory Board. Levels of target achievement exceeding 100 percent are capped at 150 percent of the award amount. Any higher levels of target achievement will not be taken into consideration. To ensure the long-term incentive effect and orientation toward the sustained development of the Company, a third of the variable remuneration set by the plenary session of the Supervisory Board must be invested in shares of Deutsche Telekom AG; these shares must be held by the respective Board member for a period of at least four years.

Share Matching Plan

Share deferral and the Share Matching Plan



In the 2018 financial year, the Board of Management members, as described above, were contractually obliged to invest a third of Variable I in shares of Deutsche Telekom AG. The Supervisory Board made an offer to the Board members to extend the obligatory personal investment in 2018 to up to 50 percent of the Variable I payout. Deutsche Telekom AG will grant one additional share for every share acquired as part of the Board of

Management member’s aforementioned personal investment (Share Matching Plan) on expiration of the four-year lock-up period, provided they are still a member of the Board of Management.

GAS 17 and IFRS 2 require disclosure not only of the total expense related to share-based payment from matching shares in the 2018 financial year and the fair value of the matched shares at their grant date, but also of the number of entitlements to matching shares and their development in the current financial year.

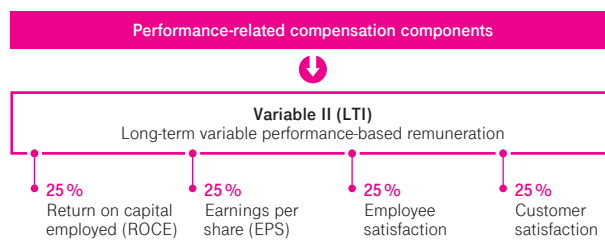
The fair value of the matching shares at grant date shown in the following table does not represent a component of remuneration for the Board of Management members in 2018. It is an imputed value of the entitlements to matching shares determined on the basis of relevant accounting policies. Here, the fair value equates to the share price at grant date less an expected dividend mark-down. The following table is based on expected target achievement for the 2018 financial year and thus on the estimated amount of the personal investment to be made by the respective Board of Management member to establish his or her entitlements to matching shares. The final number of entitlements to matching shares identified for the 2018 financial year may be higher or lower than the amounts estimated here.

The total share-based payment expense for entitlements to matching shares from 2013 to 2018 to be recognized for the financial years 2017 and 2018 pursuant to IFRS 2 is included in the two last columns of the table.

	Number of entitlements granted to matching shares since 2010 at the beginning of the financial year	Number of new entitlements to matching shares granted in 2018	Number of shares transferred in 2018 as part of the Share Matching Plan	Fair value of the entitlements to matching shares at grant date €	Cumulative total share-based payment expense in 2018 for matching shares for the years 2014 through 2018 €	Cumulative total share-based payment expense in 2017 for matching shares for the years 2013 through 2017 €
Adel Al-Saleh (since January 1, 2018)	0	25,384	0	272,620	30,456	0
Thomas Dannenfeldt	73,156	25,196	5,000	270,600	72,360	153,021
Srini Gopalan	22,730	20,683	0	222,134	113,184	26,231
Timotheus Höttges	304,440	50,466	28,195	542,008	588,176	379,393
Dr. Christian P. Illek	50,681	24,208	0	259,998	200,952	99,980
Dr. Thomas Kremer	96,529	20,683	16,734	222,134	232,754	163,949
Claudia Nemat	135,021	25,384	19,559	272,620	280,766	193,826
Dr. Dirk Wössner (since January 1, 2018)	0	20,683	0	222,134	24,817	0

By December 31, 2018, Deutsche Telekom had acquired 565,596 shares for the purpose of awarding matching shares to Board of Management members as part of the Share Matching Plan. In 2018, matching shares were again transferred to individual members of the Board of Management. A total of 69,488 shares were transferred to Board of Management members in 2018 (2017: 118,495).

Variable II



Variable II. The exclusively long-term-oriented Variable II is measured based on the fulfillment of four equally weighted performance parameters (return on capital employed (ROCE), earnings per share (EPS), customer satisfaction, and employee satisfaction). All four parameters are collected on a Group-wide basis. Each parameter determines a quarter of the award amount. Levels of target achievement exceeding 100 percent are capped at 150 percent of the award amount. The assessment period is four years, with the assessment being based on average target achievement across the four years planned at the time the tranche was determined. The award amount is decoupled from other remuneration components and is set for each member of the Board of Management individually.

Compensation for extraordinary performance. At its discretion and after due consideration, the Supervisory Board may also reward extraordinary performance by individual or all Board of Management members in the form of a special bonus.

Arrangements in the event of termination of a position on the Board of Management. Service contracts for members of the Board of Management concluded since the 2009 financial year include a severance cap in case of premature termination without good cause allowing a compensation payment that, in line with the recommendations of the German Corporate Governance Code, is limited to a maximum of two years' remuneration (severance cap) and may not exceed the remuneration due for the remaining term of the service contract.

The service contracts for members of the Board of Management at Deutsche Telekom AG do not include any benefits in the event of the termination of a position on the Board of Management as a result of a change of control.

Board of Management member service contracts generally stipulate a post-contractual prohibition of competition. Pursuant to these provisions, members of the Board of Management are prohibited from rendering services to or on behalf of a competitor for the duration of one year following their departure. As compensation for this restricted period, they receive either a payment of 50 percent of the last fixed annual remuneration and 50 percent of the most recent Variable I on the basis of 100 percent target achievement, or 100 percent of the last fixed annual remuneration.

Board of Management compensation for the 2018 financial year. In reliance on legal requirements and other guidelines, a total of EUR 24.6 million (2017: EUR 21.3 million) is reported in the following table as total compensation for the 2018 financial year for the members of the Board of Management. The Board of Management compensation comprises the fixed annual remuneration as well as other fringe benefits, non-cash benefits and remuneration in kind, short-term variable remuneration (Variable I), fully earned tranches of long-term variable remuneration (Variable II), and the fair value of the matching shares. This was calculated on the basis of the estimated amount of Variable I at the grant date and the resulting number of entitlements to matching shares.

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Total compensation. The compensation of the Board of Management is shown in detail in the following table:

		Non-performance-based compensation		Performance-based compensation			Total compensation
		Fixed annual remuneration	Other remuneration	Short-term variable remuneration	Long-term variable performance-based remuneration (Variable II)	Long-term variable performance-based remuneration (fair value of matching shares)	
Adel Al-Saleh (since January 1, 2018)	2018	900,000	1,072,507 ^a	817,425	0	272,620	3,062,552
	2017	0	0	0	0	0	0
Thomas Dannenfeldt	2018	860,000	24,708	866,980	649,000	270,600	2,671,288
	2017	860,000	24,631	835,490	572,000	190,686	2,482,807
Sriini Gopalan	2018	700,000	20,000	695,750	0	222,134	1,637,884
	2017	700,000	1,139,610	654,500	0	156,533	2,650,643
Timotheus Höttges	2018	1,450,000	31,655	1,770,098	1,583,560	542,008	5,377,321
	2017	1,450,000	29,061	1,749,968	1,135,680	381,941	4,746,650
Dr. Christian P. Illek	2018	850,000	34,596	814,344	608,438	259,998	2,567,376
	2017	700,000	35,741	685,850	0	156,533	1,578,124
Dr. Thomas Kremer	2018	700,000	63,667	691,900	649,000	222,134	2,326,701
	2017	700,000	63,620	654,500	572,000	156,533	2,146,653
Claudia Nemat	2018	900,000	78,552	822,825	796,500	272,620	2,870,497
	2017	900,000	78,567	804,600	702,000	192,109	2,677,276
Dr. Dirk Wössner (since January 1, 2018)	2018	700,000	2,423,865 ^b	691,350	0	222,134	4,037,349
	2017	0	0	0	0	0	0
	2018	7,060,000	3,749,550	7,170,672	4,286,498	2,284,248	24,550,968
	2017 ^c	5,310,000	1,371,230	5,384,908	2,981,680	1,234,335	16,282,153

^a Other fringe benefits for Adel Al-Saleh include a one-time sign-on-bonus of EUR 800,000 and a "pension substitute" in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the disclosures relating to pension commitments).

^b Includes a compensation payment of EUR 2,400,000 as recompense for forgone share-based remuneration claims with the previous employer. Dr. Dirk Wössner was obligated to invest the net payout amount in shares of Deutsche Telekom AG. Upon expiry of a lock-up period, he can freely dispose of these shares.

^c Board of Management members who left the company before or at the end of 2017 are no longer included in the prior-year figures.

The amounts shown in the "Long-term variable performance-based remuneration (Variable II)" column had been pledged to the eligible Board of Management members in the 2015 financial year.

No member of the Board of Management received benefits or corresponding commitments from a third party for his or her activity as a Board of Management member during the past financial year.

Former members of the Board of Management. A total of EUR 8.1 million (2017: EUR 11.3 million) was included for payments to and entitlements for former members of the Board of Management as well as any surviving dependents.

Provisions (measured in accordance with IAS 19) totaling EUR 198.6 million (December 31, 2017: EUR 195.4 million) were recognized for current pensions and vested rights to pensions for this group of persons and their surviving dependents.

Other. The Company has not granted any advances or loans to current or former Board of Management members, nor were any other financial obligations to the benefit of this group of people entered into.

Table view in accordance with the requirements of the German Corporate Governance Code

The following tables are based on model tables 1 and 2 recommended by the German Corporate Governance Code, which present the total compensation granted for the reporting year and the remuneration components allocated.

Benefits granted for the reporting year

Compensation of the Board of Management

€

	Timotheus Höttges			
	Function: Chairman of the Board of Management (CEO)			
	since Jan. 1, 2014			
	2017	2018	2018 (min.)	2018 (max.)
Fixed remuneration	1,450,000	1,450,000	1,450,000	1,450,000
Fringe benefits	29,061	31,655	31,655	31,655
Total fixed annual remuneration	1,479,061	1,481,655	1,481,655	1,481,655
One-year variable remuneration	1,342,000	1,342,000	0	2,013,000
Multi-year variable remuneration	1,723,941	1,884,008	0	4,026,000
Of which: 2017 Variable II (4-year term)	1,342,000			
Of which: 2018 Variable II (4-year term)		1,342,000	0	2,013,000
Of which: 2017 Share Matching Plan (4-year term)	381,941			
Of which: 2018 Share Matching Plan (4-year term)		542,008	0	2,013,000
Total	4,545,002	4,707,663	1,481,655	7,520,655
Service cost	1,129,225	1,117,049	1,117,049	1,117,049
TOTAL COMPENSATION	5,674,227	5,824,712	2,598,704	8,637,704

	Dr. Christian P. Illek			
	Function: Human Resources			
	since Apr. 1, 2015			
	2017	2018	2018 (min.)	2018 (max.)
Fixed remuneration	700,000	850,000	850,000	850,000
Fringe benefits	35,741	34,596	34,596	34,596
Total fixed annual remuneration	735,741	884,596	884,596	884,596
One-year variable remuneration	550,000	643,750	0	965,625
Multi-year variable remuneration	706,533	927,186	0	1,966,407
Of which: 2017 Variable II (4-year term)	550,000			
Of which: 2018 Variable II (4-year term)		667,188	0	1,000,782
Of which: 2017 Share Matching Plan (4-year term)	156,533			
Of which: 2018 Share Matching Plan (4-year term)		259,998	0	965,625
Total	1,992,274	2,455,532	884,596	3,816,628
Service cost	272,566	267,948	267,948	267,948
TOTAL COMPENSATION	2,264,840	2,723,480	1,152,544	4,084,576

^a Other fringe benefits for Adel Al-Saleh include a one-time sign-on-bonus of EUR 800,000 and a "pension substitute" in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the disclosures relating to pension commitments).

^b Includes a compensation payment of EUR 2,400,000 as recompense for forgone share-based remuneration claims with the previous employer. Dr. Dirk Wössner was obligated to invest the net payout amount in shares of Deutsche Telekom AG. Upon expiry of a lock-up period, he can freely dispose of these shares.

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Adel Al-Saleh				Thomas Dannenfeldt				Srini Gopalan			
Function: T-Systems since Jan. 1, 2018				Function: Finance (CFO) until Dec. 31, 2018				Function: Europe since Jan. 1, 2017			
2017	2018	2018 (min.)	2018 (max.)	2017	2018	2018 (min.)	2018 (max.)	2017	2018	2018 (min.)	2018 (max.)
0	900,000	900,000	900,000	860,000	860,000	860,000	860,000	700,000	700,000	700,000	700,000
0	1,072,507 ^a	1,072,507 ^a	1,072,507 ^a	24,631	24,708	24,708	24,708	1,139,610	20,000	20,000	20,000
0	1,972,507	1,972,507	1,972,507	884,631	884,708	884,708	884,708	1,839,610	720,000	720,000	720,000
0	675,000	0	1,012,500	670,000	670,000	0	1,005,000	550,000	550,000	0	825,000
0	947,620	0	2,025,000	860,686	940,600	0	2,010,000	706,533	772,134	0	1,650,000
0				670,000				550,000			
	675,000	0	1,012,500		670,000	0	1,005,000		550,000	0	825,000
0				190,686				156,533			
	272,620	0	1,012,500		270,600	0	1,005,000		222,134	0	825,000
0	3,595,127	1,972,507	5,010,007	2,415,317	2,495,308	884,708	3,899,708	3,096,143	2,042,134	720,000	3,195,000
0	0	0	0	281,578	277,461	277,461	277,461	305,625	300,362	300,362	300,362
0	3,595,127	1,972,507	5,010,007	2,696,895	2,772,769	1,162,169	4,177,169	3,401,768	2,342,496	1,020,362	3,495,362

Dr. Thomas Kremer				Claudia Nemat				Dr. Dirk Wössner			
Function: Data Privacy, Legal Affairs and Compliance since June 1, 2012				Function: Technology and Innovation since Oct. 1, 2011				Function: Germany since Jan. 1, 2018			
2017	2018	2018 (min.)	2018 (max.)	2017	2018	2018 (min.)	2018 (max.)	2017	2018	2018 (min.)	2018 (max.)
700,000	700,000	700,000	700,000	900,000	900,000	900,000	900,000	0	700,000	700,000	700,000
63,620	63,667	63,667	63,667	78,567	78,552	78,552	78,552	0	2,423,865 ^b	2,423,865 ^b	2,423,865 ^b
763,620	763,667	763,667	763,667	978,567	978,552	978,552	978,552	0	3,123,865	3,123,865	3,123,865
550,000	550,000	0	825,000	675,000	675,000	0	1,012,500	0	550,000	0	825,000
706,533	772,134	0	1,650,000	867,109	947,620	0	2,025,000	0	772,134	0	1,650,000
550,000				675,000				0			
	550,000	0	825,000		675,000	0	1,012,500		550,000	0	825,000
156,533				192,109				0			
	222,134	0	825,000		272,620	0	1,012,500		222,134	0	825,000
2,020,153	2,085,801	763,667	3,238,667	2,520,676	2,601,172	978,552	4,016,052	0	4,445,999	3,123,865	5,598,865
247,956	241,729	241,729	241,729	291,092	285,459	285,459	285,459		296,498	296,498	296,498
2,268,109	2,327,530	1,005,396	3,480,396	2,811,768	2,886,631	1,264,011	4,301,511	0	4,742,497	3,420,363	5,895,363

Benefits allocated for the reporting year

Unlike the table of benefits granted shown on the previous pages, the table below contains not the target values for short- and long-term variable remuneration components, but rather the actual benefits allocated for 2018. There is another difference between the following table and the table of benefits granted

with regard to the presentation of the Share Matching Plan. The figures for the Share Matching Plan disclosed in the following table show the value of the benefits allocated applicable under German tax law at the time of transfer of the matching shares, whereas the table of benefits granted on the previous pages shows the fair values of remuneration at the grant date.

Compensation of the Board of Management

€

	Timotheus Höttges		Adel Al-Saleh	
	Function: Chairman of the Board of Management (CEO)		Function: T-Systems	
	since Jan. 1, 2014		since Jan. 1, 2018	
	2017	2018	2017	2018
Fixed remuneration	1,450,000	1,450,000	0	900,000
Fringe benefits	29,061	31,655	0	1,072,507 ^a
Total fixed annual remuneration	1,479,061	1,481,655	0	1,972,507
One-year variable remuneration	1,749,968	1,770,098	0	817,425
Multi-year variable remuneration	1,585,809	1,971,241	0	0
Of which: Variable II (4-year term) ^c	1,135,680	1,583,560	0	0
Of which: Share Matching Plan (4-year term) ^d	450,129	387,681	0	0
Other	0	0	0	0
Total	4,814,838	5,222,994	0	2,789,932
Service cost	1,129,225	1,117,049	0	0
TOTAL COMPENSATION	5,944,063	6,340,043	0	2,789,932

	Claudia Nemat		Dr. Dirk Wössner	
	Function: Technology and Innovation		Function: Germany	
	since Oct. 1, 2011		since Jan. 1, 2018	
	2017	2018	2017	2018
Fixed remuneration	900,000	900,000	0	700,000
Fringe benefits	78,567	78,552	0	2,423,865 ^b
Total fixed annual remuneration	978,567	978,552	0	3,123,865
One-year variable remuneration	804,600	822,825	0	691,350
Multi-year variable remuneration	1,178,312	1,055,461	0	0
Of which: Variable II (4-year term) ^c	702,000	796,500	0	0
Of which: Share Matching Plan (4-year term) ^d	476,312	258,961	0	0
Other	0	0	0	0
Total	2,961,479	2,856,838	0	3,815,215
Service cost	291,092	285,459	0	296,498
TOTAL COMPENSATION	3,252,571	3,142,297	0	4,111,713

^a Other fringe benefits for Adel Al-Saleh include a one-time sign-on-bonus of EUR 800,000 and a "pension substitute" in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the disclosures relating to pension commitments).

^b Includes a compensation payment of EUR 2,400,000 as recompense for forgone share-based remuneration claims with the previous employer. Dr. Dirk Wössner was obligated to invest the net payout amount in shares of Deutsche Telekom AG. Upon expiry of a lock-up period, he can freely dispose of these shares.

^c Variable II as shown in the column for 2018 relates to the payment of the 2015 tranche; the figure in the column for 2017 relates to the payment of the 2014 tranche.

^d The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2013 or 2014.

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Thomas Dannenfeldt		Srin Gopalan		Dr. Christian P. Illek		Dr. Thomas Kremer	
Function: Finance (CFO)		Function: Europe		Function: Human Resources		Function: Data Privacy, Legal Affairs and Compliance	
until Dec. 31, 2018		since Jan. 1, 2017		since Apr. 1, 2015		since June 1, 2012	
2017	2018	2017	2018	2017	2018	2017	2018
860,000	860,000	700,000	700,000	700,000	850,000	700,000	700,000
24,631	24,708	1,139,610	20,000	35,741	34,596	63,620	63,667
884,631	884,708	1,839,610	720,000	735,741	884,596	763,620	763,667
835,490	866,980	654,500	695,750	685,850	814,344	654,500	691,900
572,000	716,225	0	0	0	608,438	795,928	873,068
572,000	649,000	0	0	0	608,438	572,000	649,000
0	67,225	0	0	0	0	223,928	224,068
0	0	0	0	0	0	0	0
2,292,121	2,467,913	2,494,110	1,415,750	1,421,591	2,307,378	2,214,048	2,328,635
281,578	277,461	305,625	300,362	272,566	267,948	247,956	241,729
2,573,699	2,745,374	2,799,735	1,716,112	1,694,157	2,575,326	2,462,004	2,570,364

COMPENSATION OF THE SUPERVISORY BOARD

The compensation received by the members of the Supervisory Board is specified under § 13 of the Articles of Incorporation of Deutsche Telekom AG. Under the compensation system applicable for the 2018 financial year, members of the Supervisory Board receive fixed annual compensation of EUR 70,000.00.

The Chairman of the Supervisory Board receives a further EUR 70,000.00 and the Deputy Chairman EUR 35,000.00. Members of the Supervisory Board also receive compensation as follows for activities on Supervisory Board committees:

- (a) The Chairman of the Audit Committee receives EUR 80,000.00, ordinary members of the Audit Committee EUR 40,000.00.
- (b) The Chairman of the General Committee receives EUR 70,000.00, ordinary members of the General Committee EUR 30,000.00.
- (c) The Chairman of the Nomination Committee receives EUR 25,000.00, ordinary members of the Nomination Committee EUR 12,500.00.
- (d) The Chairman of any other committee receives EUR 40,000.00, ordinary members of any other committee EUR 25,000.00.

Chairmanship and membership of the Mediation Committee are not remunerated.

Members of the Supervisory Board receive an attendance fee amounting to EUR 1,000.00 for each meeting of the Supervisory Board or its committees that they have attended. The Company reimburses value-added tax payable on remuneration and expenses.

The total compensation of the members of the Supervisory Board in 2018 amounted to EUR 2,888,833.37 (plus VAT).

The Company has not granted any advances or loans to current or former Supervisory Board members, nor were any other financial obligations to the benefit of this group of people entered into.

The compensation of the individual members of the Supervisory Board for 2018 is as follows:

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Member of the Supervisory Board	Fixed remuneration	Meeting attendance fee	Total
Baldauf, Sari (until May 17, 2018)	39,583.34	3,000.00	42,583.34
Bednarski, Josef	165,000.00	24,000.00	189,000.00
Dr. Bösinger, Rolf (since June 1, 2018)	88,958.33	12,000.00	100,958.33
Brandl, Monika (from January 1 to June 30, 2018)	60,000.00	5,000.00	65,000.00
Dr. Bräunig, Günther (since March 21, 2018)	100,000.00	10,000.00	110,000.00
Chatzidis, Odysseus D. (since January 3, 2018)	82,500.00	8,000.00	90,500.00
Geismann, Johannes (until May 17, 2018)	73,958.34	11,000.00	84,958.34
Greve, Constantin (since November 20, 2018)	15,833.34	1,000.00	16,833.34
Hanas, Klaus-Dieter (until November 20, 2018)	87,083.34	7,000.00	94,083.34
Hinrichs, Lars	95,000.00	8,000.00	103,000.00
Dr. Jung, Helga	84,583.33	6,000.00	90,583.33
Prof. Dr. Kaschke, Michael	110,000.00	10,000.00	120,000.00
Koch, Nicole ^a	82,500.00	9,000.00	91,500.00
Kollmann, Dagmar P.	187,500.00	18,000.00	205,500.00
Kreusel, Petra Steffi ^b	110,000.00	12,000.00	122,000.00
Krüger, Harald (since May 17, 2018)	46,666.67	4,000.00	50,666.67
Prof. Dr. Lehner, Ulrich (Chairman)	300,000.00	25,000.00	325,000.00
Sauerland, Frank ^c (since November 20, 2018)	15,833.34	2,000.00	17,833.34
Schröder, Lothar ^d (Deputy Chairman)	240,000.00	24,000.00	264,000.00
Dr. Schröder, Ulrich (until February 6, 2018)	22,500.00	0.00	22,500.00
Seelemann-Wandtke, Nicole ^e (since July 5, 2018)	39,166.67	5,000.00	44,166.67
Sommer, Michael (until November 20, 2018)	132,916.67	11,000.00	143,916.67
Spoo, Sibylle	135,000.00	12,000.00	147,000.00
Streibich, Karl-Heinz	132,500.00	12,000.00	144,500.00
Suckale, Margret	109,583.33	10,000.00	119,583.33
Topel, Karin	74,166.67	8,000.00	82,166.67
	2,630,833.37	257,000.00	2,887,833.37

^a In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Nicole Koch also received other remuneration amounting to EUR 4,500.00 (including meeting attendance fees) in the 2018 financial year (for her mandate as member of the supervisory board of Deutsche Telekom Privatkunden-Vertrieb GmbH).

^b In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Petra Steffi Kreusel also received other remuneration amounting to EUR 16,000.00 (including meeting attendance fees) in the 2018 financial year (for her mandate as member of the supervisory board of T-Systems International GmbH).

^c In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Frank Sauerland also received other remuneration amounting to EUR 25,625.00 (including meeting attendance fees) in the 2018 financial year (for his mandates as member of the supervisory boards of Telekom Deutschland GmbH and Deutsche Telekom Außendienst GmbH (until November 19, 2018)).

^d In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Lothar Schröder also received other remuneration amounting to EUR 31,000.00 (including meeting attendance fees) in the 2018 financial year (EUR 19,000.00 for his mandate as member of the supervisory board of Deutsche Telekom Services Europe AG and EUR 12,000.00 as Chairman of the Data Privacy Advisory Council).

^e In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Nicole Seelemann-Wandtke also received other remuneration amounting to EUR 9,833.33 (including meeting attendance fees) in the 2018 financial year (for her mandate as member of the supervisory board of Telekom Deutschland GmbH (until October 17, 2018)).

SHARE OWNERSHIP BY MEMBERS OF THE BOARD OF MANAGEMENT AND THE SUPERVISORY BOARD

Members of the Board of Management and Supervisory Board of Deutsche Telekom AG were reported to have purchased and transferred as part of the Share Matching Plan 364,036 shares (2017: 270,755) and sold 0 shares (2017: 9,531) in the course of 2018. Total direct or indirect holdings in the Company or associated financial instruments by members of the Board of Management and the Supervisory Board do not exceed 1 percent of the shares issued by the Company.

Deutsche Telekom AG
Friedrich-Ebert-Allee 140
53113 Bonn, Germany

www.telekom.com