GERMANY

DR. DIRK WÖSSNER
KEY MESSAGES

01 MARKET WITH STABLE GROWTH
The German telecommunications market has returned to stable growth and Telekom is uniquely positioned within this market.

02 LEAD IN CUSTOMER EXPERIENCE
Our stable top-line growth focuses on four key drivers: Expanding our converged household penetration, continuing more for more and multi-brand approach in mobile, leveraging our improved broadband networks and TV proposition, and continued low churn through best-in-class service.

03 LEAD IN BUSINESS PRODUCTIVITY
“Mittelstandsinitiative 2.0” will further contribute to our strong growth momentum in the B2B market with secure ICT solutions.

04 LEAD IN TECHNOLOGY – FIXED
Finalizing our super-vectoring rollout and then reallocating our high budget towards fiber will yield strong broadband growth while addressing political concerns. Our proposed co-investment will ensure a fair risk reward.

05 LEAD IN TECHNOLOGY – MOBILE
Leveraging our backhaul capacity and unprecedented site expansion while increasing speed and capacity with massive MIMO, SDRAN technology and enable innovative 5G services.

06 VALUE TRANSFORMATION
Indirect cost reduction of €750 mn by 2021 through automation, operational excellence, and retirement. Improvements supported by consolidating management functions, flexible IT-architecture and investing into agile development skills.

07 FINANCIAL OUTLOOK
Continue our growth path of > 1% in revenue, +2–2.5% in adj. EBITDA and +4–5% in cash contribution with stable Cash Capex and Special factors (Cash).
REVIEW 2014 – 2018
## SOLID DELIVERY ON KEY PROMISES

### Ambition level 2018

<table>
<thead>
<tr>
<th>MARKET</th>
<th>QUALITY</th>
<th>FINANCIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 in FMC with MagentaEINS: 3 mn customers</td>
<td>Customer loyalty (TRI*M): ≈ 64 points</td>
<td>Adj. EBITDA margin: ≈ 42% (Pro Forma: ≈ 40%)²</td>
</tr>
<tr>
<td>#1 in Mobile service revenue: ≈ 1%¹ CAGR &gt;36% market share</td>
<td></td>
<td>Growing adj. EBITDA: +1–2% CAGR</td>
</tr>
<tr>
<td>#1 Broadband: ≈ +2% CAGR &gt; 40%² market share</td>
<td></td>
<td>Growing adj. Cash Contribution: ≈ +2% CAGR</td>
</tr>
<tr>
<td>Stable Wholesale revenue</td>
<td></td>
<td>Revenue stabilization: +0.3%¹ CAGR</td>
</tr>
</tbody>
</table>

### Achievements 2017

<table>
<thead>
<tr>
<th>MARKET</th>
<th>QUALITY</th>
<th>FINANCIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6 mn customers</td>
<td>59 points</td>
<td>38.4%</td>
</tr>
<tr>
<td>#1 Mobile: +1.0%¹ CAGR &gt;36% market share</td>
<td></td>
<td>+0.8% CAGR 2014–2017</td>
</tr>
<tr>
<td>#1 Broadband: +1.1%³ CAGR ≈ 40%² market share</td>
<td></td>
<td>-2.7% CAGR 2014–2017</td>
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<td></td>
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</tr>
</tbody>
</table>

### Delivered/on track

1 Without EU roaming impact  
2 Access market share in 2018e  
3 FY 2014 restated (supplement accesses allocated to voice only revenues) during 2015  
4 FY 2014 restated (€70 mn shifted from “Wholesale” to “Others”) during 2015  
5 Excl. DFMG and VCS

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³ FY 2014 restated (€70 mn shifted from “Wholesale” to “Others”) during 2015
GERMANY RETURNED TO GROWTH IN REVENUE & EBITDA

Revenue

€ bn

MOBILE SERVICE REVENUE

<table>
<thead>
<tr>
<th>Year</th>
<th>Mobile Service Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>6.7</td>
</tr>
<tr>
<td>2017</td>
<td>6.7</td>
</tr>
</tbody>
</table>

CAGR +1.0%\(^1\)

Roaming effect

BROADBAND REVENUE

<table>
<thead>
<tr>
<th>Year</th>
<th>Broadband Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>5.1</td>
</tr>
<tr>
<td>2017</td>
<td>5.3</td>
</tr>
</tbody>
</table>

CAGR +1.1%\(^2\)

Net add share

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Add Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>0%</td>
</tr>
<tr>
<td>2017</td>
<td>26%</td>
</tr>
</tbody>
</table>

WHOLESALE PRODUCT REVENUE

<table>
<thead>
<tr>
<th>Year</th>
<th>Wholesale Product Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>3.3</td>
</tr>
<tr>
<td>2017</td>
<td>3.5</td>
</tr>
</tbody>
</table>

CAGR +1.2%\(^3\)

Adj. EBITDA

€ bn

<table>
<thead>
<tr>
<th>Year</th>
<th>Adj. EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>8.2</td>
</tr>
<tr>
<td>2017</td>
<td>8.4</td>
</tr>
</tbody>
</table>

CAGR +0.8%\(^4\)

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\(^1\) Without EU roaming impact

\(^2\) FY 2014 restated (supplement accesses allocated to voice only revenues) during 2015

\(^3\) FY 2014 restated (€70 mn shifted from "Wholesale" to "Others") during 2015

\(^4\) Excl. DFMG and VCS
HEALTHY AND STABLE MARKET ENVIRONMENT ENABLES GROWTH

Market insights and trends

Stable economy with positive outlook
GDP +2.3% in 2018

Well segmented market.
Willingness to pay for quality & service

Stable & long-term capacity models for fixed & mobile in place

Expected improving regulatory environment
Stable IP BSA pricing until 2022,
MTR-glidepath defined until 2020

Mobile market back to growth...

Service revenue (market), growth rate yoy, %

After 3 years of decline, positive development expected
- 3-player market with capacity models for MVNOs
- Catch up in mobile usage (still low average consumption in Germany)

...and still positive broadband momentum

Broadband revenue (market), growth rate yoy, %

Broadband- & high-speed penetration supporting growth
- High-speed demand increases by ≈ 40% yoy on telco infrastructure
- Broadband growth due to low penetration (78% HH-penetration)

Source:
1. BMWi estimate
2. AnalysysMason/IDC
3. AnalysysMason Telco Market Aug. 2017
4. Credit Suisse Research Mar. 2018
WE ARE UNIQUELY POSITIONED IN THE GERMAN TELCO MARKET

#1 TELEKOM
MARKET LEADER IN GERMANY

1 Growth 2016–2017

$40 BN
Most valuable telco brand in Germany

3.6 MN
Lead in converged customers

#1
B2B market leader in Germany

+20%
IT/cloud growth leader in SMB

#1
Winner of most telco service tests

18 MN
Most customers on IP-platform

≈ 80%
Most mobile sites connected via fiber

95%
Outstanding winner of 95% of all network tests

UNLIMITED & STREAMON
#1 telco innovator in Germany
STRATEGY 2018 – 2021
Our strategy

**GROW**

- Lead in Customer Experience
- Lead in Technology
- Lead in Business Productivity

**SAVE FOR GROWTH INVESTMENTS**

**SIMPILIFY, DIGITALIZE, ACCELERATE**

**Ambition Germany**

1. **Lead in Customer Experience**
   Strengthen market leadership with stable top line growth in consumer market

2. **Lead in Business Productivity**
   Continue strong growth momentum in B2B with secure ICT solutions (“Mittelstandsinitiative 2.0”)

3. **Lead in Technology**
   Maintain network leadership based on demand driven network rollout within stable Capex budget

4. **Value Transformation**
   Clear commitment to efficiency improvements driven by digitalization
1 LEAD IN CUSTOMER EXPERIENCE

Key growth drivers

1 CONVERGENCE
Expanding our converged household penetration with MagentaEINS

MOBILE
Continuing our successful more for more multi-brand approach

BROADBAND/TV/WHOLESALE
Leveraging our improved fiber network & TV proposition

SERVICE
Continuing low churn through best-in-class service
1 CONVERGENCE: CONTINUE MAGENTAEINS SUCCESS STORY

More for more strategy pays off

**HIGHER REVENUE PER HOUSEHOLD**

+€9.00
Additional revenue per household

**HIGHER CUSTOMER LOYALTY**

-50%
Churn rate (mobile/fixed)

**HIGHER CUSTOMER SATISFACTION**

+19pts
Net Promoter Score vs. consumer base

Growing converged base with focus on value

**Cross-sell into base and add additional SIM cards/family offers**

- Share MagentaEINS households/broadband households, %
- Secure high share of revenue in converged offer

**MagentaEINS revenue share, %**

- Share MagentaEINS households/broadband households, %
- Secure high share of revenue in converged offer

1 Average of last four data points of Consumer segment NPS vs. MagentaEINS
Multi-brand strategy with clear focus on premium segment

- Focus on defending leading position with innovative services (e.g. StreamOn, Unlimited)
- Differentiate through handset portfolio and pricing

- Aim for fair-share through fast-follower strategy with flexible “build-yourself” tariffs
- Strong digital heritage & reactive pricing strategy

- Underindexed and focus on revenue stabilization
- Balanced channel presence through wholesale brands & retail partnerships

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1 Rough estimation based on internal market survey
1 MOBILE: DIFFERENTIATION WITH INNOVATION & MORE FOR MORE

Innovative more for more strategy

MOBILE: INNOVATION STRATEGY

5G

MAGENTA
MOBIL XL

IOT

STREAM ON
WORRY FREE

MORE 4 MORE

Consumer IoT solutions allow ARPU uplift vs. M2M

Mobile service revenues

€ bn

2014
2017
2021e

CAGR ≈+2%

CAGR +1%

+3.2% GROWTH YOY Q1/18

1 Without EU roaming impact

2 Average growth rate adjusted for IFRS 15 impact; 2021e visually adjusted for IFRS 15
1 BROADBAND: GROWTH WITH FTTX COVERAGE & SPEED

Broadband revenue growth drivers

BANDWIDTH INCREASE
Higher speeds yield low churn and good gross-add momentum

Availability of ≥50 Mbit/s

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2018e</th>
<th>2019e</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>62%</td>
<td>95%</td>
<td></td>
</tr>
</tbody>
</table>

INCREASED CUSTOMER LOYALTY
High-speed customers vs. ADSL broadband

Broadband churn rate 2017, %

<table>
<thead>
<tr>
<th>Speed</th>
<th>18%</th>
<th>9%</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mbit/s</td>
<td>13%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>6 Mbit/s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25/50 Mbit/s</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13pp

TV GROWTH
Smart content investments & leading platform increase broadband attractiveness

Pay-TV share, %

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2017</th>
<th>2021e</th>
</tr>
</thead>
<tbody>
<tr>
<td>32%</td>
<td>41%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

Broadband revenues

€ bn

CAGR +3.4%

CAGR +1.1%

Pay-TV share, %

1 Customers with at least one booked paid package
2 FY 2014 restated (supplement accesses allocated to voice only revenues) during 2015
3 Including business IP products (e.g. DLAN, Company Connect); average growth rate adjusted for IFRS 15 impact; growth 2017–2021e without definition change approx. 1pp lower
1 TV: CONTENT AGGREGATOR WITH SMART INVESTMENTS

TDG is the only growing TV operator

- TV net adds FY 2017, k
- TV market share, %

Our differentiators drive further growth

BEST CONTENT AGGREGATOR

- Exclusive series: 3.7 mn views
- Smart content investments with high customer perception

BEST USER INTERFACE

- Award winning experience: Best image/audio quality
- Differentiating features: Voice control, 2nd screen, mobile app

LEAD IN SPORTS CONTENT

- Most popular sports content: Bundesliga Conference & 3. Liga
- Exclusive sports rights: BBL, Ice hockey

NEW TARGET AUDIENCE

- Focus on young audience
- New segments: Housing industry

1 TDG including Entertain IPTV and Sat, Vodafone Coax and IPTV lines, Telecolumbus incl. Primacom & Pepcom
2 Since start in Oct. 2017
WHOLESALE: DRIVING GROWTH WITH FIBER MONETIZATION

Stable Wholesale access base & ARPA growth

**SUBSCRIBER GROWTH**
- "Kontingentmodell" as reliable long-term model to provide access to our fiber infrastructure
- Low churn due to attractive wholesale platform (bandwidth)

**ARPA GROWTH**
- ARPA increase driven by shift ULL/BSA
- Stable regulatory environment (fixed IP BSA pricing up to 2022)

<table>
<thead>
<tr>
<th>Wholesale access base, mn</th>
<th>2017</th>
<th>2021e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11.8</td>
<td>12.3</td>
</tr>
</tbody>
</table>

**Access ARPA growth €/month**

<table>
<thead>
<tr>
<th>2017</th>
<th>2021e</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6</td>
<td>13.5</td>
</tr>
</tbody>
</table>

**Wholesale revenues € bn**

<table>
<thead>
<tr>
<th>Other</th>
<th>Access1</th>
</tr>
</thead>
<tbody>
<tr>
<td>20142</td>
<td>2017</td>
</tr>
<tr>
<td>3.3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Ambition**

CAGR ≈ +2%3

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1 Carrier customers  
2 FY 2014 restated (€70 mn shifted from “Wholesale” to “Others”) during 2015  
3 Average growth rate adjusted for IFRS 15 impact
Leading customer experience in products and service

**PROACTIVE**
- **Big data analytics** for early fault detection
- **Proactive customer information** in case of critical incidents, contract changes, IP migration, etc.

**FLEXIBLE & DIGITAL**
- **Self-service** via Mein Magenta App for reduction of service calls (e.g. contract status & changes, invoice, data usage)
- **Self-administration** for SMB (e.g. Cloud PBX)

**SIMPLE & SEAMLESS**
- **Simplification** of product portfolio
- **Seamless customer service** on all channels (e.g. web, hotline, shop)

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**Ambition**

Customer loyalty (TRI*M), in points

- 59
- 64

**Rate of complaints, %**
- 5% (2016)
- 4% (2017)
- ≈1% (2021e)

**Share of resolved requests in digital channels, %**
- 38% (2017)
- 70% (2021e)

**SMS/year for proactive customer interactions** >1.8 MN

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1 E-Service Share Interaction, year end 2017
LEAD IN BUSINESS PRODUCTIVITY

B2B growth areas

**CONNECTIVITY & INFRASTRUCTURE**
Mobile, fixed network, cloud IaaS and M2M

**AGILE WORKPLACE**
Smartphone, tablet, notebook and office software

**BUSINESS APPLICATIONS**
Horizontal, vertical and cloud SaaS
MITTELSTANDSINITIATIVE 2.0: SECURE ICT SOLUTIONS FOR SMB

B2B market leadership driven by digitalization

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

MITTELSTANDS-INITIATIVE 1.0

2014–2017

MITTELSTANDS-INITIATIVE 2.0

2018–2021

CAGR 2014–2017

- +1%
- +19%
- +11%
- +17%

- Further growth in mobile & broadband
- Connectivity & infrastructure: M2M/IoT
- Agile workplace: Cloud PBX & office solutions
- ICT solutions & business applications

Ambition

€ bn

- 5.7
- 6.0
- 6.5

+€300 MN since 2014

+€500 MN 2017–2021

2014 2017 2021e

GROWTH IN MOBILE & BROADBAND

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

FURTHER GROWTH IN MOBILE & BROADBAND

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

AGILE WORKPLACE

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

ICT SOLUTIONS & BUSINESS APPLICATIONS

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

CONNECTIVITY & INFRASTRUCTURE: M2M/IoT

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions

SECURITY

- Growth in mobile & broadband revenues
- IT solutions: SAP & cloud infrastructure for SMB with automatic provisioning
- Business connectivity solutions
- Security: Mobile security & firewall solutions
Drivers for network leadership

**FIBER ROLLOUT**
FTTH/B rollout with intelligent area and technology mix within stable Capex envelope

**COOPERATION & CO-INVEST MODELS**
Increase of coverage with intelligent cooperation models

**MOBILE**
Extension of leading mobile network position in reach and quality

**NETWORK INNOVATION**
Innovation leader in 5G network technology and efficient rollout technology
3 FIBER ROLLOUT: NOT MANY WHITE SPOTS LEFT

TDG building the leading infrastructure in Germany

Vectoring coverage

- Reaching ≈ 80% HH coverage with vectoring in 2019 (≈ 62% in 2018)^1
- ≥100 Mbit/s in 70% of HH (in 2019)
- Introduction of Super-Vectoring (up to 250 Mbit/s)
- Wholebuy potential 15% (in 2019)

Expected market broadband coverage end of 2019^2

- Only 5% “white-spots” end of 2019
- 70% coverage with 1 Gbit/s by cable expected
- Further subsidies expected

^1 Bandwidth ≥50 Mbit/s, delayed due to long regulatory process  
^2 Schematic illustration

15 MN homes connected with Super-Vectoring by end of 2018
3 Fiber Rollout: Smart Area and Technology Mix

Expected German broadband coverage end of 2019:

- **Bandwidth**
  - >>1 Gbit/s
  - 400 Mbit/s
  - 250 Mbit/s
  - 100 Mbit/s
  - 50 Mbit/s

- **Coverage**
  - Cable area
  - Non-cable area
  - FTTC area
  - White spots

- **Subsidized rollout of areas with very low bandwidth and high customer demand**
- **Connecting 80% of businesses in business parks with fiber (by early 2020s)**
- **Areas with strong competition and winback potential for customers lost to cable/other operators**
- **Shared investment for efficient rollout & wholebuy**

Rollout priorities:

1. **Cable area**
2. **FTTC area**
3. **White spots**

Cooperations & co-invest models:
### Cooperation models

- **Joint ventures**: Joint rollout of fiber infrastructure with larger regional carriers (e.g., EWE)
- **Renting network elements**: Renting complementary infrastructure from regional players (e.g., municipal services)
- **Wholebuy**: Renting infrastructure & active equipment based on commercial wholesale models (market potential 15% in 2019)

### Investment oriented & fair commercial models

- **Open network, based on fair return, risk sharing, and reciprocity**
  - **A**: Commitment Model with annual upfront payments for bitstream connection fee
  - **B**: Investment oriented connection fee per line charged to retail service provider
FIBER ROLLOUT: RAMPING UP TO 2 MN HOMES PER YEAR

Guardrails fiber rollout

SMART INVESTING

- Improving rollout efficiency with trenching, data driven rollout, and “FTTH factory”
- Status 2020: ≈ €1,000 per home passed

SMART AREA & TECHNOLOGY MIX

- Smart area mix between B2B areas, competitive areas, FTTC areas and white spots
- Efficient technology mix with FTTH, FTTB and WTTH (potential: 20–30% of homes where we have fiber available)

SMART COOPERATION & CO-INVEST

- Joint fiber rollout with regional players (e.g. EWE)
- DT will sell and buy wholesale fiber access based on fair return, risk sharing and reciprocity

<table>
<thead>
<tr>
<th>MAINTAINING STABLE CAPEX €4.2 BN P.A.</th>
<th>MINIMUM IRR 7.5%</th>
<th>RAMPING UP TO 2 MN HOUSEHOLDS P.A. BY 2021</th>
<th>SHARING INVESTMENT RISKS WITH PARTNERS</th>
</tr>
</thead>
</table>

1 Incl. area & technology mix 2 Stable total Cash Capex vs. 2017 3 Internal Rate of Return for FTTB/H
# Mobile: Best Network in Germany

### Reach of LTE Network

- **LTE Pop coverage**
  - 2017: 94%
  - 2018e: 95%
  - 2019e: 98%

- **Approximately 80% mobile sites connected via fiber**

- **27,000 mobile sites**
  - End of 2017

- **Winner of all major mobile network tests**

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**BEST MOBILE NETWORK**

- **Mobile**: best network in Germany
Key priorities

**NETWORK EXPANSION**
- Unprecedented site expansion (≈ 2,000 additional sites p.a.)
- Differentiation with customer driven rollout

**QUALITY IMPROVEMENT**
- Improve coverage of highways & train tracks
- Enhance indoor coverage & quality
- Extend lead in fiber backhaul

**NETWORK INNOVATION**
- Top-speeds in city-centers of 1 Gbit/s
- Increase of capacity with massive MIMO
- Mobile Edge for low latency use cases

Ambition: Best customer experience

- **Ambition 2021**
  - Top-speeds in city-centers of 1 Gbit/s
  - Increase of capacity with massive MIMO
  - Mobile Edge for low latency use cases

Source: Connect Mobile Network Test 2018
3 NETWORK INNOVATION: FORERUNNER IN 5G TECHNOLOGY

5G enabling new speed and efficiency levels

1,000x HIGHER NETWORK CAPACITY

10x LOWER LATENCY

10x HIGHER SPEED
>10 Gbit/s

4x INCREASED EFFICIENCY
€/Mbit/s as efficiency factor

Pilot use cases with strong partners

- Trials successfully completed
- Capex savings potential through synergetic rollout with FTTH

- Pilot cases already initiated
- Innovative solutions leveraging 5G features (e.g. drones, Augmented Reality, remote maintenance)

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1 Network capacity costs per incremental busy hour capacity
VALUE TRANSFORMATION

Key drivers for cost reduction

- **AUTOMATION**
  - Data analytics and smart processes
  - €300 MN

- **OPERATIONAL EXCELLENCE**
  - Predictive servicing and maintenance, less complaints and process optimization
  - €250 MN

- **PLATFORM RETIREMENT**
  - Retirement of platforms, investment in state-of-the-art infrastructure
  - €200 MN

- **LEAN & AGILE ORGANIZATION**
  - Lean commercial and sales units, agile central functions and reduction of executive functions

-750 MN INDIRECT COSTS\(^1\)

9.9

9.2

2017

2021e

\(^1\) Net cost reduction

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GROUP STRATEGY  GERMANY  SYSTEMS SOLUTIONS  TECHNOLOGY & INNOVATION  T-MOBILE US  EUROPE  GROUP DEVELOPMENT  FINANCE
**AUTOMATION: BOTS FOR CUSTOMER INTERACTIONS AND SIMPLIFYING PROCESSES**

Key drivers for cost reduction

- **Agile bot development** to automate repetitive tasks
- **Significant reduction of development time** compared to traditional IT
- **1,500 bots** implemented in 2017

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**AI/DIGITAL ASSISTANTS**

- **Chat bots** for improved experience & efficiency in customer interaction
- **AI supported chat** to improve service experience

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**Example: Field Service App**

- **E2E field service process** in a single app
- **Optimized processes** and handover in technology & service
- **Dynamic workflow** to avoid manual errors

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**PROCESS AUTO BOTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Robot transactions, mn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>20</td>
</tr>
<tr>
<td>2018</td>
<td>35</td>
</tr>
<tr>
<td>2021</td>
<td>e</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Customer interactions with digital assistants, k</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>40</td>
</tr>
<tr>
<td>2018</td>
<td>300</td>
</tr>
<tr>
<td>2021</td>
<td>e</td>
</tr>
</tbody>
</table>
Reduction of complaints through efficiency measures and self-service

**Ambition**

Customer complaints per quarter

- **Mein Magenta App** as central contract management tool
- **Data analytics** to solve occurring issues in advance
- **Training of experts** to solve requests in first contact
- **Dedicated product teams** ensure end-to-end quality

**Self-Service**

- 4x Monthly App usage
- ≈99% Adherence to appointment 2021¹

**Reliability**

- >80% Contact resolution rate 2021²

**Service Quality**

- 70 PTS. TRI*M Entertain TV
- 70 pts.

**Product Quality**

- Q1 2018: 66%, survey based on customer SMS feedback within 24 hours
- Monthly App usage >80%
- Contact resolution rate in 2021²

¹ 2017: 92% ² Q1 2018: 66%, survey based on customer SMS feedback within 24 hours
4 PLATFORM RETIREMENT: SIMPLIFICATION AND END OF LIFE

Key drivers for cost reduction

- **Standardized production model** for all access technologies
- **BNG migration** and **IP transformation** for mass market will be finished in 2019
- Retirement of multiple legacy transport platforms and closing of locations

Example: BNG transformation

- **Legacy architecture**
- **Today’s architecture**

IT SIMPLIFICATION

- **Micro-service architecture** and increased use of **open source technologies**
- **Decoupling of architecture** and retirement of older IT platforms
- **Agile methodologies** to improve delivery time

Retirement of multiple legacy transport platforms and closing of locations
4. LEAN AND AGILE ORGANIZATION: ACCELERATED DECISIONS AND IMPROVED COLLABORATION

Key areas of agile methods and organization

- Consolidation of management functions and reduction of hierarchy to foster accountability
- Introduction of product-tribes and skill-based chapters

- Strong focus on software and product development
- Improve time to market by agile delivery processes
- Strong usage of AI & big data analytics

- Reskilling for future capabilities
- Agile methodology like scrum or design thinking as standard of collaboration
- Agile Academy launched in Jan 2018

Increased agility...

Share of projects with agile/flexible delivery
- 2017: <10%
- 2021e: 60%

... for faster time to market

Average delivery time of software projects, months
- 2017: 12–18
- 2021e: 6
FINANCIAL OUTLOOK
FINANCIAL OUTLOOK

Revenue growth

- **CAGR >1%**
- 2017: 21.9
- 2021e: 

Cash contribution

- **CAGR +4-5%**
- 2017: 3.9
- 2021e: 

Cash Capex

- **CAGR +2-2.5%**
- 2017: 8.4
- 2021e: 

Cash Capex

- **CAGR +4-5%**
- 2017: 4.2
- 2021e: 

Special factors (Cash)

- **CAGR +2-2.5%**
- 2017: 0.3
- 2021e: 

1 Average growth rate not adjusted for IFRS 15 impact
2 Cash Contribution = Adj. EBITDA − Cash Capex − Special factors (Cash)
MID TERM AMBITION LEVEL
## Mid Term Ambition Level

### Lead in Customer Experience
- #1 in Mobile service revenue: CAGR ≈ +2%<sup>1</sup>
- #1 Broadband revenue: CAGR +3–4%<sup>2</sup>
- MagentaEINS share of broadband households: ≈ 30%

### Lead in Business Productivity
- Growing B2B revenues by +€500 mn

### Lead in Technology
- Ramping up to 2 mn households p.a.

### Value Transformation
- Reduction of Indirect cost by €750 mn (net)

### Financials
- Growing Revenue: CAGR > 1%<sup>3</sup>
- Growing adj. EBITDA: CAGR +2–2.5%<sup>3</sup>
- Growing Cash Contribution<sup>4</sup>: CAGR +4–5%

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<sup>1</sup> Average growth rate adjusted for IFRS 15 impact
<sup>2</sup> Including business IP products (e.g. DLAN, Company Connect); average growth rate adjusted for IFRS 15 impact; growth 2017–2021e without definition change approx. 1pp lower
<sup>3</sup> Average growth rate not adjusted for IFRS 15 impact
<sup>4</sup> Cash Contribution = Adj. EBITDA – Cash Capex – Special factors (Cash)