



# WAREHOUSE ON WHEELS

## Mobile Identity & Access for In-Car Delivery

### Warehouse on wheels

Digitization and new technologies for B2C and B2B2C businesses are causing massive changes in the field of logistics. Customized products, smaller quantities, shorter delivery times, and more personalized customer service are in demand. Distribution centers and pickup locations frequently cause slowdowns and bottlenecks for customized services. Each time an item is delivered or picked up, it means a trip to the warehouse. Delivery and shipping vehicles travel mostly during the day when warehouse staff is on the job. Shifting to distributed warehousing and direct delivery is a solution for all these challenges. Mobile Identity & Access for In-Car Delivery makes warehouses on wheels and all the advantages they bring a reality for logistics operations and their customers. Because the goods are delivered directly to the customer's vehicle. The system uses digital keys in combination with an app that permits monitored access for authorized individuals during a specified period of time. Delivery from a warehouse on wheels can take place during the day or at night. This saves time and eliminates trips to the central warehouse. Vehicle capacity is better utilized, and customers receive flawless service.

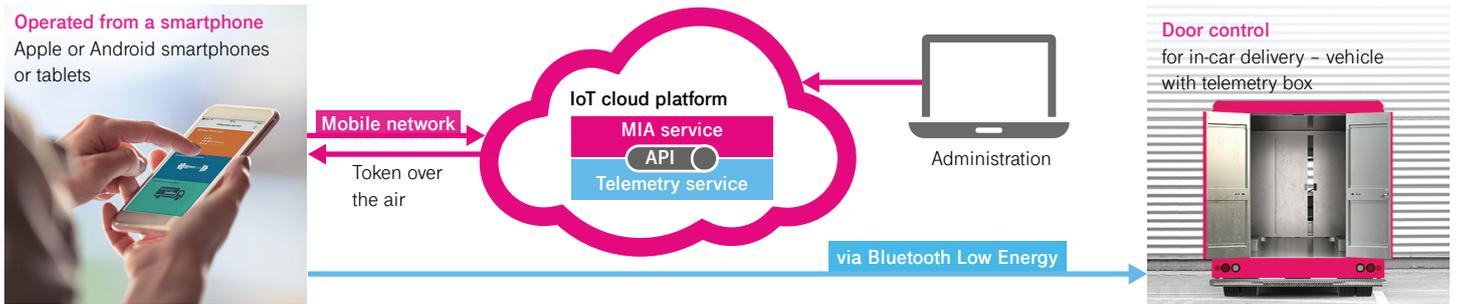
### How you benefit

- T-Systems provides end-to-end service including everything from connectivity to the Mobile Identity & Access platform and its operation including installation of the hardware from Valeo
- Digital app-based keys replace physical keys
- User identification in real time
- Token over the air, vehicles opened via Bluetooth
- Lean key management
- You can plan and track how keys are used
- Clear visibility of who is permitted to open which vehicle, when, and for how long
- Detection of anomalies and abuse
- Individual authorizations are not stored on the smart phone
- Access can be revoked at any time
- Encrypted transmission
- Trips to the warehouse are eliminated, increasing logistics process efficiency
- Optimized vehicle utilization
- Introduction of new service models such as overnight delivery



**LIFE IS FOR SHARING.**

# MOBILE IDENTITY & ACCESS FOR IN-CAR DELIVERY



## How in-car delivery works

Mobile Identity & Access replaces the need for physical keys because an app provides access. All user information and permissions are managed from the internet portal of Deutsche Telekom's IoT cloud platform. It controls who gets access for how long to which doors, gates, and gated lots. The user downloads the app and gets the digital keys in the form of a token from the mobile network transmitted to their smartphone. On-site, this digital key is used via radio transmission from the cloud or an electronic signal to provide access for the specified time. In-Car Delivery uses this system and expands on it to grant access to vehicles.

## Extended solution with telematics box

In this scenario, vehicles are equipped with a telematics unit from the automotive supplier Valeo that has been approved by Germany's Federal Motor Transport Authority. The telematics box is also connected to the portal via the internet for greater security. The portal authenticates the driver. Then the driver receives the token together with GPS data pointing to the vehicle that is scheduled to receive the package. Once the driver has reached the vehicle, they activate the digital key stored in the smartphone's secure storage. If the key is valid for the respective vehicle, the smartphone and the vehicle communicate via Bluetooth Low Energy. Then the digital key opens the central locks via the telematics box, making it possible to load the vehicle from any door.

## Airtight security and maximum convenience

The doors can be opened during the specified time period as many times as desired. If the driver doesn't lock the vehicle after making the delivery, the system takes care of it automatically after the specified time has expired. Since Bluetooth works even when there is no internet connection, vehicles can still be opened even if they are parked in a garage with no mobile reception.

## In-Car Delivery for wholesalers

One of our customers is a wholesale association with over 100 members from across all of Europe. Services and products for all aspects of building systems are the core business. Until recently, the association maintained a network of around 800 distribution centers to supply its customers in Germany. If a plumbing or construction firm places an order, it can pick up the materials at the closest wholesale location the next day. To provide even better, more individualized service, the association decided to make things even easier on its customers – by delivering goods directly to the construction vehicles. The association was looking for an advanced digital solution.

## Measurable efficiency

Once Mobile Identity & Access had proven itself for our customer as a viable solution for digital access to temporary storage containers, the rollout of the in-car delivery solution began. The advantages quickly became not just noticeable, but measurable. Since the delivery vehicles are now running day and night for better utilization, it is estimated that 20 percent fewer vehicles are needed. Deliveries that bypass the central warehouse arrive on average 60 minutes earlier. And with in-car delivery, the construction workers no longer have to pick up their orders first. Now, they can get straight to work in the mornings. This highly customized delivery service is creating a considerable boost in customer satisfaction.

## Warehouses on wheels now a reality

The more goods that never leave the vehicles or the road until they are installed at a building site, the more pressure is taken off those 800 warehouses. The warehouse on wheels is slowly becoming a reality, allowing the association to focus more on its core business—services and products for all types of building systems.

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