



# Mobility Platform

A PwC Product

**Analysis and control of  
mobility behaviour**

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# Your challenge



Modern mobility providers face **three main challenges: urban growth, cost pressure and new mobility requirements**. In order to make themselves stand out from the competition as an attractive provider, new, data-driven paths must be taken. **So far, only a few mobility providers are exploiting the potential of data use**, because having access to their own mobility data and processing it efficiently is an additional challenge.

Statistically reliable mobility data is currently collected mainly manually by counting passengers, a method that takes place at long intervals, is time-consuming, and associated with high costs. Because of the equally high deployment and maintenance costs, data collection by sensors does not take place across the board in all vehicles. Accordingly, only a few providers know the actual movement behaviour of their users. **The available data basis is often too small and weak to recognize changes in demand and optimization potential in a timely manner and to make appropriate adjustments efficiently.**



# Our solution: Mobility Platform

**The Mobility Platform enables mobility providers to efficiently analyze the movement and mobility behaviour of users and to control this behaviour via intelligent communication services.**

With the help of smartphone sensor data, the platform creates a **situational picture of crowd behaviour**. Movement paths, densities, mobility types, infrastructure use and potential problem areas can be recognised and **evaluated in real time**.

Here, the **platform's artificial intelligence** supports by specifically identifying and **alerting to anomalies and trends**.

We easily integrate a software module (SDK) into your own app so that it becomes a distributed sensor network. External data sources such as IoT sensors can be easily integrated at any time. You can use the platform's functions via the user-friendly web dashboard.

### **Intuitive web application**

You can use your customized dashboard via the web app.

### **High data protection according to GDPR**

Data from end users is never collected without consent.

### **Out-of-the-box functions**

Our features work without the need of complex hardware installations.

### **IoT sensor integration**

External data sources such as IoT sensors can be easily integrated at any time.

# Technical features

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- **Usage analysis**

The interactive map provides you with real-time information on the intensity of use of stations, routes and route sections. The data is visualised and can be exported for analysis purposes.

- **Modal split**

Individual routes and sections are evaluated in terms of mode choice and user distribution.

- **Origin-destination analysis**

The transfer behaviour in public transport can be visualised for traffic hubs and routes. This allows you to identify and exploit trends in the mobility behaviour of the population in time.

- **People flow analysis**

People flows are visualised in terms of density, direction of movement and speed in real time on the interactive map. The platform's artificial intelligence detects anomalies and risks so that you can react accordingly.

- **Long-term analyses**

With a customised dashboard, the platform's web application enables efficient and intuitive data processing and use for long-term analysis.

- **Artificial intelligence**

The Mobility Platform's artificial intelligence analyses incoming data streams and detects anomalies and trends.

# Technical features

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- **Integration of external data sources**

External sensors of any kind can be integrated into the platform. These additional data sources serve you to collect further relevant information and use this for analyses.

- **Intelligent messaging**

Messages can be sent to app users in defined zones based on their location.

- **Sending geo-information**

You can individually enter and manage geographical locations, routes and zones in the site plan visible to your app users.

- **Asset tracking**

The geographical locations as well as movement data of your mobile assets are automatically stored and can be accessed by you at any time.

- **Asset messaging and reporting**

Using our free Command and Communicate App, your assets and responders can report any information and incidents to your control centre quickly and easily. Likewise, the control centre can send messages and instructions to selected assets.

- **Logbook**

The logbook automatically documents and chronologically stores all processes that are recorded by the platform in order to be able to trace back processes in retrospect.

# Use case

## Identify new demand potentials to optimize long-term supply planning

1



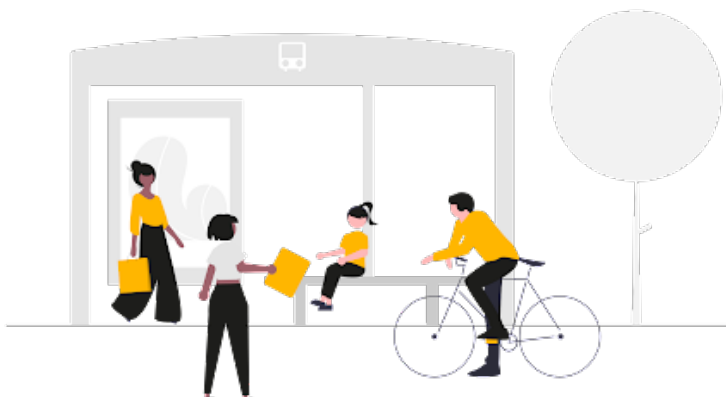
In order to optimise the mobility offer, the mobility behaviour in the individual city districts is to be analysed in a workshop. The planning team bases its decisions on historical data and information from the Mobility Platform.

2



**Modal split:** Within the framework of an analysis of the modal split, the planning team recognises that commuters from a certain area (Q2) use private transport more often than average.

3



This way, the mobility planners can conduct targeted surveys in the identified area. Subsequently, the next steps are defined on how to reduce private transport and expand public transport services.

# Use case

## Efficiently coordinate assets and communicate to passengers

1



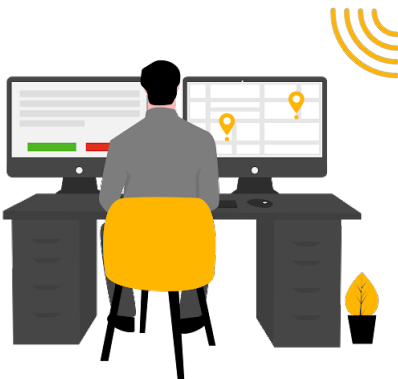
Monday, 08:35 AM: A city train cannot continue its journey due to a sudden technical malfunction.

2



**Reporting:** The driver reports the fault to the control centre via the Command and Communicate App.

3



**Asset tracking:** The control centre receives the message and requests technical support with the shortest route to the scene.

4



**Intelligent messaging:** The control centre reports the delay to the waiting passengers at surrounding stops and to the passengers in the tram. They receive information about alternative routes and means of transport.

5



**Logbook:** All messages and instructions are automatically saved in the integrated logbook. Process optimisations can be derived from the information afterwards.



# Use case

## Avoid dangerous situations with the help of the people flow analysis

1



The visitors of a concert are making their way home. A large stream of visitors moves to the western train station, disregarding the other station, also nearby, to the east of the site.

2



**People flow analysis:** The control center detects a significantly increased number of people on the way to this station.

3



**Intelligent messaging:** The control center provides location-based information to the relevant streams of visitors and recommends switching to other nearby stations and stops.

4



Some visitors follow the recommendation and use alternative stations and mobility options. In this way, overcrowding can be avoided and the distribution of use to other means of transport can be promoted.

## Answers to the most frequently asked questions

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### What is mobility analytics?

Mobility analytics is the data-based analysis, evaluation and forecasting of mobility, traffic and people behaviour using GPS and other sensor technology, usually with the help of artificial intelligence techniques. The results can later be modeled and illustrated on interactive dashboards. A specific use case is the origin-destination analysis, which can be used to illustrate transfer behaviour and thus make mobility planning more efficient in the long term.

### How does the implementation of the Mobility Platform take place and how long does it take?

We support you along the implementation path – from planning to operation. In workshops, we first plan the implementation process together with you and discuss individual details so that we can then integrate the new functions into your company's corresponding app. The next step is the download and rollout of the free Command and Communicate App and the training of your staff, before the go-live of your own mobility data platform takes place. In addition, it is always possible to integrate external sensors into the Mobility Platform.

### What data does mobility analysis include exactly?

With the help of GPS, smartphone and other external sensors and data, a lot of important information can be generated. Usage analysis makes it possible to make conclusions about the intensity of the use of stations. Modal split analysis helps track mode choice and user distribution to identify market gaps and potential. Origin-destination analysis can be used to identify transfer behaviour. Passenger flow analysis helps prevent risky situations. It can be used to map flows of people in terms of their density, direction of movement and speed in real time on an interactive map. The use of artificial intelligence helps to identify certain risks in advance and thus gain more time to react to changes. Long-term analyses ensure that an overview can be maintained over a longer period of time, that long-term planning can be carried out, and that the offer can be optimized. The inclusion of IoT sensors of any kind also helps to customize the analysis tools to the respective needs. Location-based and intelligent notifications as well as the sending of geo-information to passengers help to control behaviours.



Visit our PwC Store! Here you will find all current prices for our products.

# Unlock the value of your mobility data – we explain how!



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