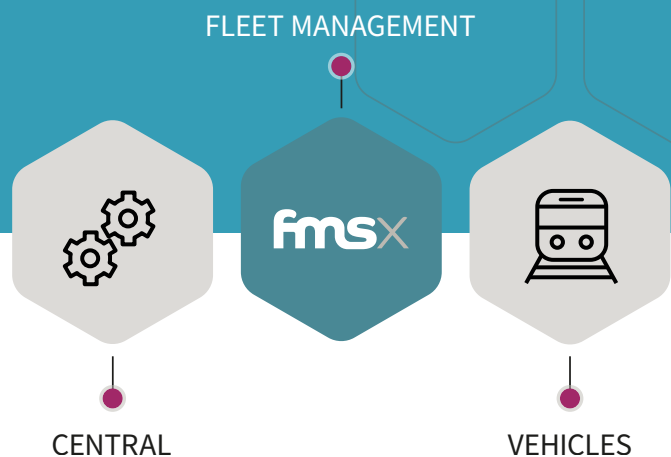




## intelligent fleet management

Flottenmanagementsystem-eXtended, also known as FMSx, is our solution for managing and updating a vehicle fleet's IT systems and monitoring them in real time. FMSx is independent of vehicle and software manufacturers and can easily be expanded and integrated.



## ADVANTAGES

### **Independent of vehicle suppliers – one solution for all vehicles**

Specific adapters are used if your fleet contains vehicles with different vehicle platforms from different manufacturers. This design makes connecting as many vehicle types as you like to FMSx simple and cost-effective.

### **Expandable modules – tailored to customer requirements**

FMSx is modular, so it can be adapted to specific applications.

### **FMSx Community – actively shape further development and save costs**

With the Community Source model, further development, maintenance and support costs are shared between all members. With our Community Management model, functionalities can be developed and financed jointly, enabling us to achieve maximum benefit for the community.

### **Integrated solution – one tool for all stakeholders**

FMSx integrates a range of applications into a single user interface and provides a solution for various stakeholders. This integration reduces media discontinuities and simplifies daily life.



“

With the fleet management system, we can be in contact with the vehicles at all times, monitor all connected components in the system, update data for the passenger information system, retrieve log files and also transmit remote activation and other switching requests.”

Jan Peyer,  
IT-Projektleiter, BLS

## OVERVIEW OF FUNCTIONALITIES

### Multi-client capability

FMSx can accommodate fleets from several operators. The advantage of this multi-client capability is that you can map your own fleet in an FMSx instance, as well as fleets belonging to subsidiaries or business partners.

### Master data and user management

Different vehicle types and all associated vehicles can be entered or imported into FMSx. Even existing directory services for user management, such as Active Directory, can be connected. There is no need for any additional logins or changes to existing user processes. Authorisations are allocated to users by means of user groups.

### Software, configuration and timetable data updates

Users can distribute new software, configurations and timetable data to the vehicles over the air interface. Reasons for an update could be to upgrade a software function, to import the latest timetable or to close a security gap in the vehicle. An overview displays the vehicle and update statuses. If an error occurs, defined users are contacted by email or SMS.

### Notification processing of real-time data

A central application transmits information such as delay or connection notifications to FMSx in real time. FMSx then forwards the notifications on to the vehicles.

### Automatic data supply from the vehicle

FMSx can receive arbitrary data such as diagnosis and passenger count data, which can be forwarded to third-party systems and processed according to defined configurations. Predefined users can be notified that data has been received.

### Manual vehicle data queries

Users can query data from the vehicle at any time. Manually querying status or version information, or log and diagnosis data, is a particular advantage for analysis purposes.

### Manual and time-controlled remote maintenance

With remote maintenance, commands such as restart, switch off, park position or sleep can be sent to the vehicle either manually or as part of a scheduled process.

### Video data downloads or live streams

If an incident occurs, authorised persons can download image and video data from the vehicle or watch a live stream from the video camera. In some cases, this saves the security officer from having to attend the vehicle. Data can also be backed up more quickly in an emergency.

### Vehicle platform monitoring

Graphic visualisation displays the status of each vehicle. Defined users are informed of an extremely wide range of system errors by email or SMS.

## OPERATING MODELS

### Software as a Service (SaaS)

FMSx is available as an all-in-one package on an SaaS model. If required, FMSx can be operated on the customer infrastructure.

FMSx is a well-established solution from Puzzle ITC. Having begun as a Swiss start-up in 1999, Puzzle ITC has grown into a successful software and technology company with about 150 employees in Bern, Zurich, Basel and Tübingen (Germany). As an innovative IT service provider, Puzzle ITC covers the entire lifecycle of business-critical applications and infrastructures. In doing so, the company consistently focusses on open source technologies.

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