

# PcVue, Solution for EV charging systems

CHARGING STATION MANAGEMENT SYSTEM



## PcVue

PcVue is at the forefront of monitoring and control software development with over 40 years of activity. The PcVue platform enables partners and end-users to develop applications integrating the latest technologies.

### Solution for EV charging

PcVue makes the charging stations easy to operate and maintain, it assists the driver along the charging process while optimizing ownership costs.

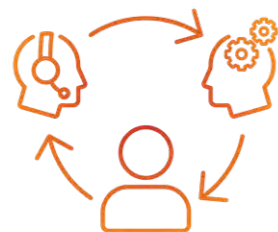
### About us

Our aims are clear. We adopt new, efficient technology and build it into our software. The solutions we propose help to reduce customers' operations costs and make their system more efficient. We leverage our technical and human diversity to deliver high level of support and to offer solutions addressing users needs worldwide.

## PcVue Solutions, your independent global SCADA provider

A global player with a local approach

- 16 strategic bases
- 50+ VAR worldwide
- 200+ local SI partners



### A customer-oriented approach

Listen and answer our customers needs effectively  
 Develop and adapt our solutions via R&D  
 Responsive technical support

### Continuous quality improvement

ISO 9001 & ISO 14001 certified  
 Microsoft® certified partner



*“ PcVue provides the best user experience for EV charging from operations to drivers ”*

PcVue is a software platform allowing to monitor and control EV charging stations, giving access to a wide range of services for all EV stakeholders.

Known by 500+ certified installers the platform can be customized and deployed to meet your needs.

### FEATURES

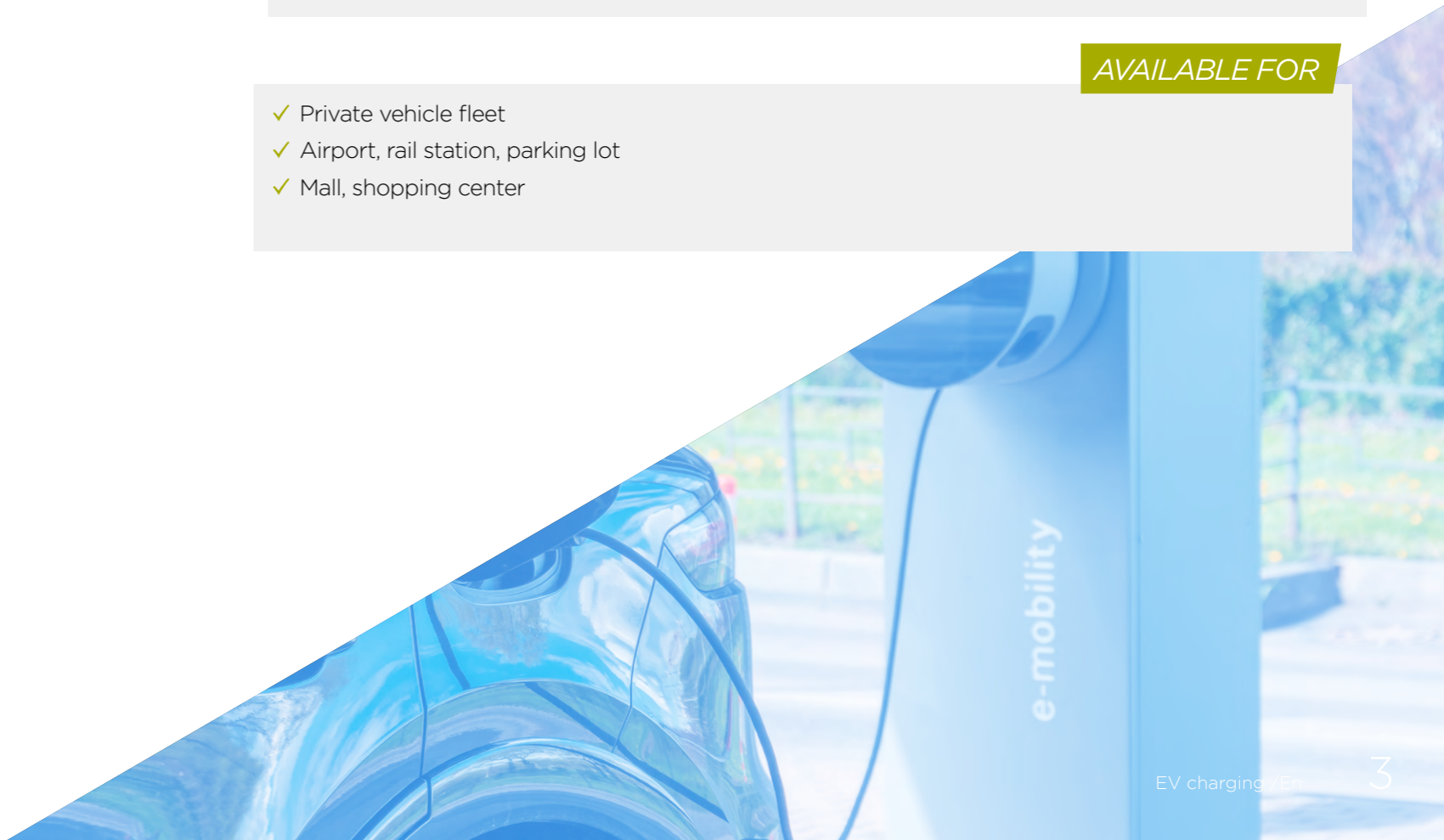
- ✓ Real-time management of EV stations
- ✓ Access to a wide range of services providers for users
- ✓ Support of any EV charging point manufacturer
- ✓ Support of OCPP 1.6 and 2.01

### BENEFITS

- ✓ A full featured cost-effective solution for best ROI
- ✓ Optimize operations and maintenance while reducing costs
- ✓ Sustainable solution over time allowing to operate 1 to hundreds of EV charging points
- ✓ User-friendly solution for drivers
- ✓ 500+ certified installers
- ✓ Plug & play platform, easy to deploy

### AVAILABLE FOR

- ✓ Private vehicle fleet
- ✓ Airport, rail station, parking lot
- ✓ Mall, shopping center



# Different needs, one platform

## Operation manager



*"I must deliver EV charging services to users with an efficient system monitoring and controlling any kind of station"*



- Monitoring & control of any manufacturer charging stations
- Smart assistance for remote operations
- Power optimization

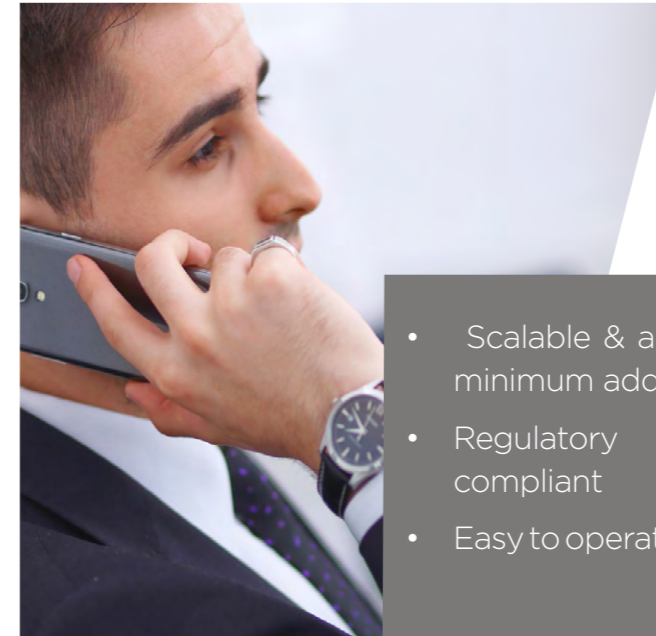
*Using PcVue I can operate the EV stations using a set of features and services:*

- ✓ Monitoring stations parameters: SOC, time of exit, load in progress, end of load, load duration, power delivered, list of vehicles...
- ✓ Monitoring and control of the stations health and efficiency through an interactive visual interface, alarms & events systems, CCTV
- ✓ Sequence of events and log analysis for better assessment of issues
- ✓ Power Load balancing, consumption tracking
- ✓ OCPP features
- ✓ Dashboards/reporting
- ✓ Interoperability with any services providers
- ✓ Create maintenance plans, smart charging profiles, scheduling...

## Stations owners



*"I need to get the best ROI with a long-term solution which helps reducing further investments"*



- Scalable & able to evolve with minimum additional costs
- Regulatory and standards compliant
- Easy to operate & to maintain

*Owners can rely on PcVue as a full featured platform that is reliably supported over time, and :*

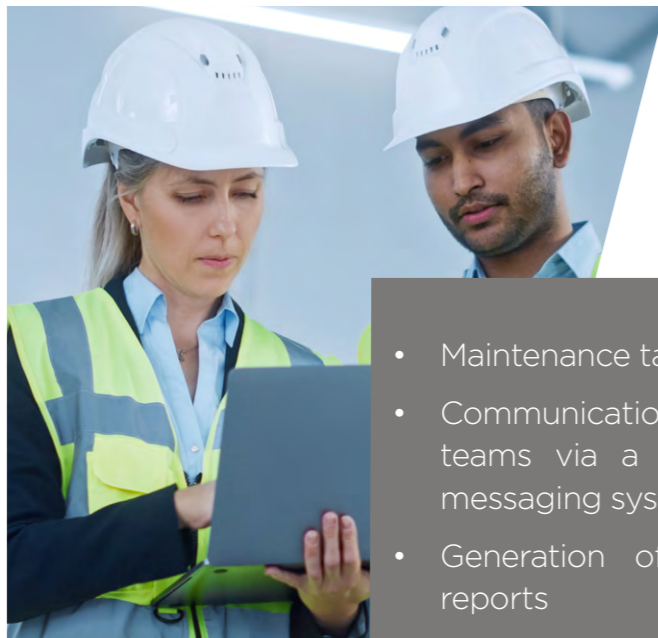
- ✓ Easy to implement and known by 500+ installers worldwide
- ✓ Scalable and able to evolve and adapt with minimum additional costs
- ✓ Manufacturers agnostic
- ✓ Regulatory and standards compliant
- ✓ Easy to operate and to maintain reducing operational and training costs

# Different needs, one platform

## Maintenance teams



*"We must be organized and synchronized to ensure that any charging point is up-to-date and running perfectly"*



- Maintenance tasks scheduling
- Communication between teams via a secure instant messaging system
- Generation of automated reports

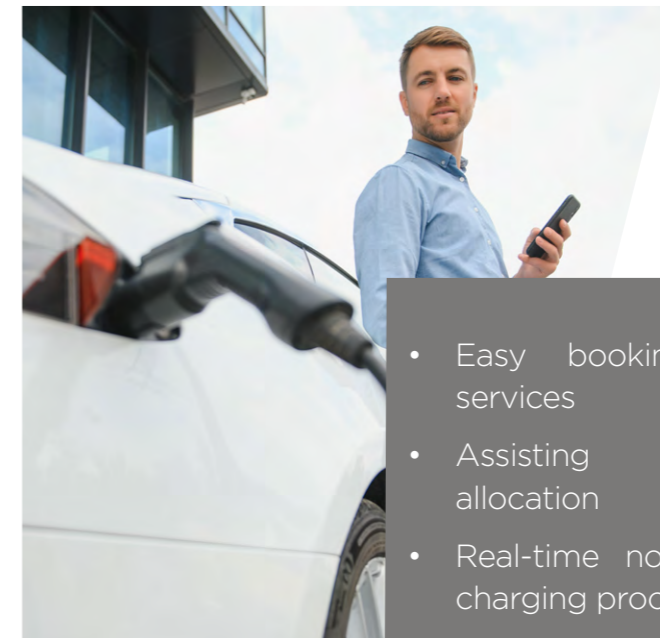
### *PcVue platform allows to:*

- ✓ Schedule maintenance tasks and coordinate teams according to skills and availability
- ✓ Guide maintenance operators in their tasks with smart assist
- ✓ Give contextual information to the operators to monitor and control stations
- ✓ Have an overview of the tasks done in real time to optimize maintenance work
- ✓ Communicate between operators with text, images, or voice to react better and faster
- ✓ Generate automated reports

## EV driver



*"I want a hassle-free way to charge my vehicle"*



- Easy booking & payment services
- Assisting parking slot allocation
- Real-time notifications on charging process

### *PcVue EV smart assist - the ultimate mobile companion for driver !*

- ✓ I can find the best charging point for my vehicle
- ✓ I'm guided when arriving to the charging spot thanks to the Parking slot allocation First In First Out Management system
- ✓ I can select the charge load, duration and plug type I need for my vehicle
- ✓ I get notifications: charge over, charge issue, parking slot available...
- ✓ I can get online assistance in case of problem
- ✓ The booking system helps me to check the availability of a charging point and to schedule my next load

# PcVue Platform for EV charging

## Open and easy to deploy

### PLUG & PLAY

PcVue embeds all features needed for EVcharge and can be deployed and ready to operate in 3 clicks



### CUSTOMIZABLE

PcVue adapts to your needs and is designed to be fully customizable



### OPEN

PcVue acts as a services hub allowing to connect any services providers and add new services whenever it's needed

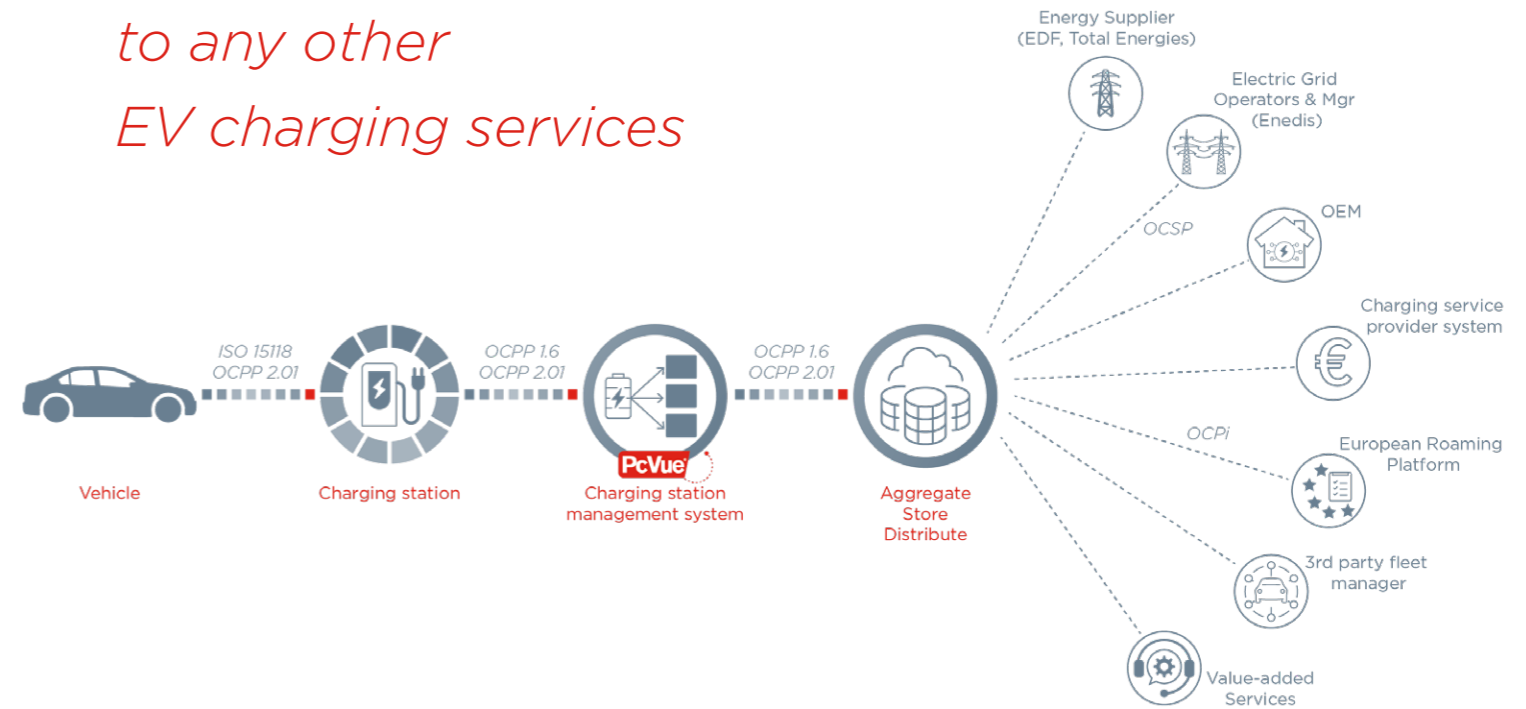


### SCALABLE

Starting with few stations you can add hundreds easily !



*An Open door to any other EV charging services*



- You are eligible to the subvention
- PcVue is labelled by the Advenir program

### What is Advenir?

The Advenir program by Avere France is designed to support the installation of EV charging stations on the French territory.

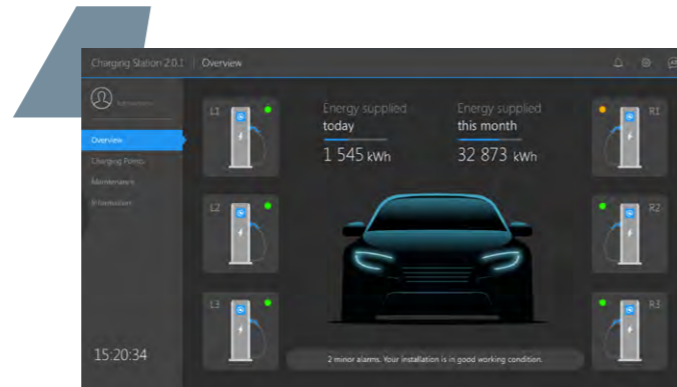
With a 320 million euro budget, Advenir's goal is to offer subventions for the installation of 125,000 charging points before the end of 2025.

Eligible projects are very diverse, from charging points in collective buildings to street charging open to the public. Advenir offers 10 different types of subventions.

**Keep your stations under control**

**Efficient operations**

Making sure that all stations are delivering a constant electric charge to each vehicle is a challenge for any operation manager. PcVue offers a perfect platform for the monitoring and control of each parameter in the stations, aiming to optimize power load balancing and trigger alerts anywhere at anytime if needed. The operator can keep permanent and reliable control over the station and its costs.



**Preserve your assets**

**Fire prevention**

The possibility of battery fires during charging is a risk for many markets. To prevent vehicle damage, PcVue can monitor the temperature of any battery in real-time and alert the right operator in case of overheating.



**Make the drivers happy**

**Stress-free charging**

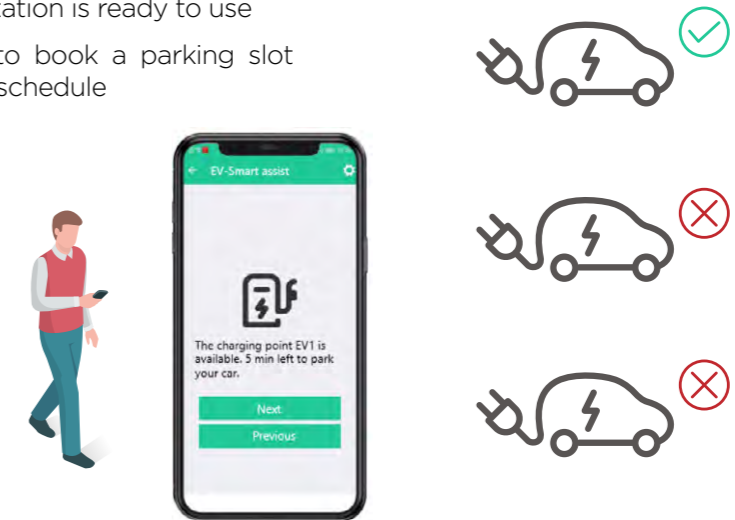
Charging a vehicle can sometimes turn into a very unpleasant experience. Waiting for an available slot as well as lacking information and technical assistance are situations far too common for EV drivers. PcVue provides a fully customizable mobile app to help drivers throughout the charging process. It includes a "first in first out" slot allocation management system, an easy and secured booking and payment solution, and a virtual assistance in real-time.



**Assisting parking spot allocation**

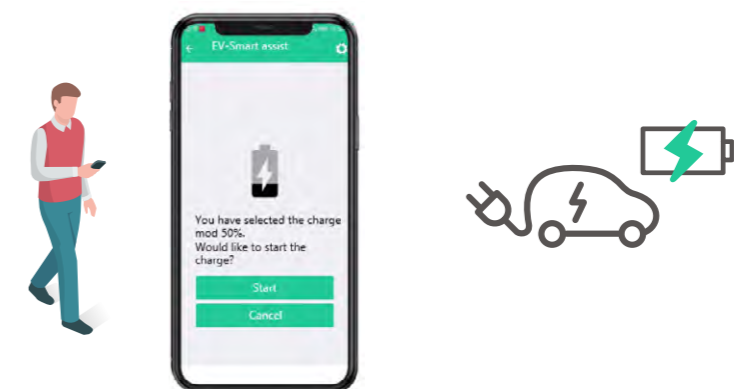
When entering the parking lot drivers:

- Get information on their estimated waiting time
- Get notified when a station is ready to use
- Have the possibility to book a parking slot fitting their own time schedule



**Guiding the charging process**

- Station access via the mobile app (authorization and payment processes)
- Drivers may select the charging load and get informed of its remaining duration
- They also get notifications and can access online assistance in case of technical issue



## Success story

Customer: City of Jena

Germany

System Integrator:  
Actemium Automation

# Monitoring the charging stations of the e-bus fleet of the city of Jena

*How Jena's public transport system monitors its charging columns for the e-bus fleet and uses advanced diagnostic features to increase availability and optimize maintenance activities.*

In the city of Jena, Germany, electromobility has been present in the form of a tramway in service for 120 years. Last year saw the introduction of e-mobility in the operation of city buses as well, contributing to CO2 savings (53,000kg per bus and year), but also reducing particulate matter and noise emissions in the urban area.

Operations of tramways require a reliable and uninterrupted power supply nevertheless, malfunctions of the system technology can occur in rare cases. In order to minimize the effects of malfunctions on the operational process as well as on the passengers, it is necessary to keep downtimes as low as possible. This is supported by a reliable control and telecontrol system implemented on the basis of the PcVue SCADA software.

Actemium Automation Frankfurt, a longtime partner of Jena's public transport system, was commissioned to integrate chargers into the control system.

The primary goal of the expansion is remote monitoring of the charging infrastructure by

### BUSINESS OBJECTIVE

The primary goal of this expansion is remote monitoring of the charging infrastructure by the power supply department so that any faults that occur can be detected and eliminated as quickly as possible

# Electric Bus

the power supply department so that any faults that occur can be detected and eliminated as quickly as possible and to do so while reducing travel times for service personnel as much as possible.

### OCPP- Driver for communication with charging stations

The latest PcVue version provides a communication driver for the OCPP protocol that supports the current protocol versions 1.6-J and 2.0.1 as well as the security profiles 1 and 2. Using a proxy function, the charger's OCPP messages can be passed on to third-party systems.

### Integrated operating functionality

A newly added entry point into the user interface that is seamlessly integrated with the existing system, is a map display that shows the charging stations distributed throughout the city area as symbol markers.

### Data analysis and monitoring

The central function of this implementation by Actemium is alarm and log data management, which allows precise fault analysis during live operation as well as during the evaluation of historical data.

The implemented user interface of the system further enables:

- An access management system for charging stations
- To lock and unlock charging stations for use
- Remotely activate or cancel charging processes
- Store and retrieve charging station-specific documents

### Practical benefits proven after just a few weeks

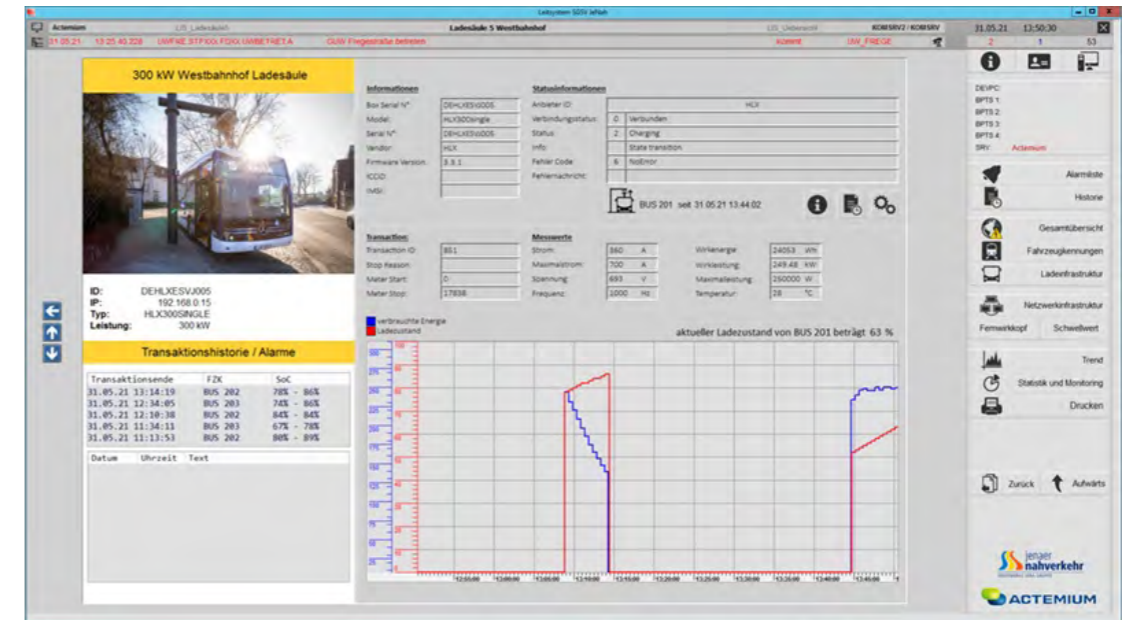
Christian Zeh, a testing and maintenance engineer at Jena's public transportation system, is enthusiastic about the solution:

*"By integrating the monitoring and control system for e-charging stations, all operating states are now visible in the control system, which opens up immediate intervention options for us.*

*The charging infrastructure is thus fully integrated into the operational workflows of the power supply department.*

*The usefulness of the system was proven after just a few weeks in daily operation, especially regarding the control of temperature fluctuations in the charging stations."*

With the implementation of the charging infrastructure in its control and telecontrol system, the power supply team is thus well prepared for the already planned increase in the electric bus fleet and the associated expansion of the charging infrastructure.



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The charging infrastructure and monitoring system





## Mastering interfaces between #Humans #Systems #Connected things

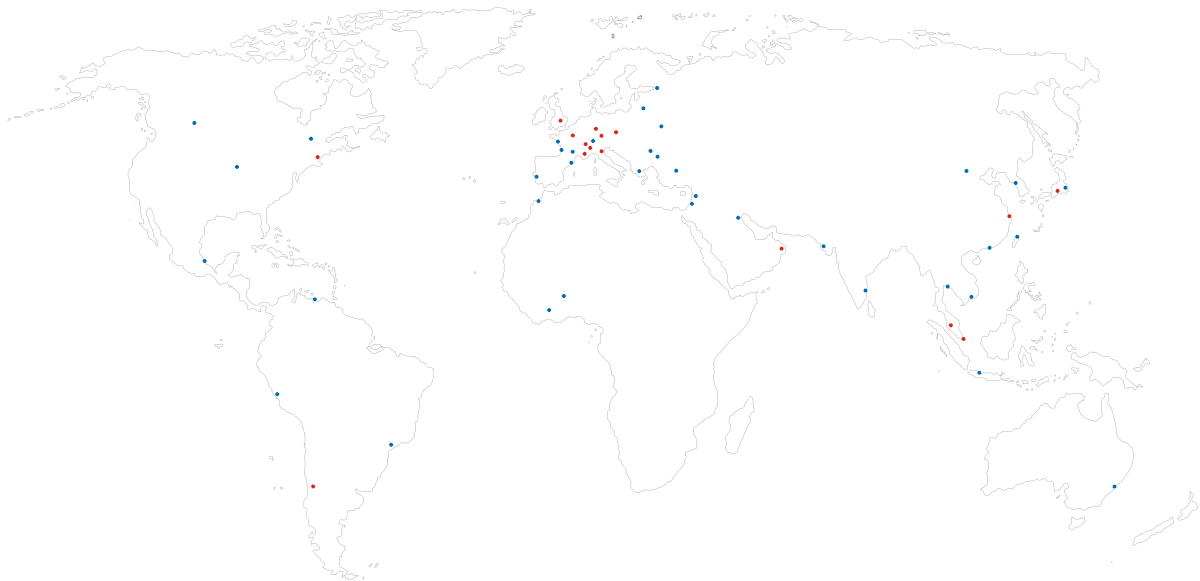


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