Electric vehicle charging stations – Success through high availability

By the end of July 2021 17,337 fully-electric cars were newly licensed for road traffic in Austria. This makes a plus of 195.4 % compared to July 2020*. More and more car manufacturers offer various models of electric vehicles and governments support the purchases financially. However, to become an attractive alternative to cars with combustion engines a close net of charging infrastructure with high availability is essential.

Success in the electric vehicle sector is highly dependent on the technical availability of the charging station. New business models must consider various challenges that come with the new technology. Full availability is by far not realized yet and electric vehicle charging stations must remedy childhood diseases unknown among traditional fuel stations and their petrol pumps. Moreover, the number of electric vehicles may accelerate more quickly than the required charging infrastructure. Space and power requirements or supply lines are only some examples that represent the various challenges in building up a comprehensive net. These are only some arguments that support the high importance

of a trouble-free availability.

Given the current situation numerous aspects lead to the assumption that the availability is even more important in the electric vehicle sector than in the traditional petrol and diesel market. First of all, there are fewer stations in general. It may take several years until the covering is comparable to common fuel stations. Second, the required charging time is much longer. Third, if e.g. advance bookings for charging stations are realized, breakdowns and long downtimes are even more problematic.

Electric charging stations are equipped with a wide range of self-diagnosis opportunities and may be able to report errors directly. However, the story does not end with a diagnosis and an automatic error report. Who cares about the repair processes, who commissions the service provider to undertake the repair, who informs all responsible persons, who forwards the information to the e.g. navigation device of the vehicle driver to let him know that the station is not available, who has the overview over the whole process? The solution is when right actions are taken in a timely manner. For this an end-to-end service workflow needs to be established. Good news is that such work flow systems exist already in traditional fuel retail and just need to be applied to electric vehicles. The job then becomes how to best integrate system generated alarms and process them to the right service teams and as in fuel retails make sure the right self-checks are in place to be performed. The better the organization of the fuel and charging station the higher the possibilities to stand out and develop a stable market position.

Cloud-based platform solutions like omis 4.0 offer answers to the questions that came up above. It provides a universal overview of all relevant equipment data and optimizes maintenance processes acting as a central platform for placing and handling error reports, forwarding of maintenance-related information, and commissioning of repairs and inspections. In addition, it can act as a messenger that forwards information about e.g. breakdowns of charging stations to the systems used by electric vehicle drivers. Through this the driver knows which locations are not available. Sensors in the charging stations or integrated in the floor may also provide information about waiting times at a location. Moreover, the whole equipment of the location (e.g. shops, catering, car wash facilities) is entered into the system representing another source of valuable information for customers that plan to use the charging stations, especially when they are informed about waiting times in advance – an opportunity to optimize the customer experience and enhance satisfaction.

In this context interfaces to relevant partners play a major role in sending and processing error reports quickly and efficiently. An example is Tokheim Service Group (TSG) that installs and maintains EV infrastructure. In the traditional fuel station sector a bidirectional interface between omis 4.0 and the IT system of TSG enables common customers to record and process error reports in one single system. Simplification of work of the service provider, faster solutions, more and detailed information, reduced downtime and therefore improved system availability are only some of the advantages operators, service firms and customers benefit of.

Digitization in the electric vehicle charging station sector should aim at improving the security and reliability of the device by ensuring a continuous operation and the following of legal regulations and inspection periods. Planned and regular maintenance helps avoiding potential losses through downtime – benefits for all parties involved, electric vehicle charging station operators, service providers and customers.

To learn more about omis 4.0, just get in touch with us.

*www.beoe.at/statistik (08/31/2021)

Contact information

Faschang Service & Management GmbH
Gewerbepark 11
4943 Geinberg
Austria

+43 7723 44600

+43 7723 44600 011

www.omis.at

Last update: September 10, 2021 | Advertorial