



“Reliable forecasts based on systematically collected and analysed sensor data? That’s when I called Elektrosil.”

Data analysis and functional data evaluation for snack vending machines: Elektrosil made it possible to reduce the downtime of vending machines by specifically collecting and analysing sensor data and making reliable forecasts.

THE CHALLENGE

To optimise its network of vending machines in terms of downtime and maintenance, the client wanted a solution that linked hardware, software and forecast-ing functions.

THE SOLUTION

Elektrosil developed a complete system that uses sensors to monitor various parameters such as temperature, current consumption and component functionality.

The central evaluation of the sensor data is used on the one hand for monitoring and on the other hand for training the adaptive algorithm used to calculate the failure probability of the component parts. With approx. 300 interactions, 3 million data records are generated daily for 10,000 automats used. 40% of the data is used to train the AI and 60% for predictive maintenance. This enabled proactive scheduling of fitters within the entire automated network, as component failures can be predicted and thus downtimes can be reduced by 70%.

In addition, fault diagnosis could be optimised because data from different devices could be evalu-ated in parallel and typical sources of faults could be narrowed down. In this way, the fitters already benefit

in this early phase of data analysis, and in the future, as the amount of data grows, further potentials will be identified, especially in the area of component optimisation.

The result: time and cost savings through reduced downtimes and maintenance times for the machines, optimised deployment plans for fitters and the crea-tion of a data basis for future component optimisa-tion.

OUR STRENGTHS

- Development of customised system solutions, interdisciplinary and from a single source
- Short development times through us as a central “one-stop-shop” development partner
- System-optimised hardware and software
- Future-oriented in-house measurement data processing (Predictive Maintenance, Big Data, Data Mining and Artificial Intelligence)

Are you also looking for a custom-fit solution for your system and a competent partner? Then give us a call: +49 40 840001-0.

Project information

- Client: a German industrial company
- Sector: Vending/POS
- Project size: 10.000 devices
- Product areas: Display, drive technology, sensor technology, software, cooling systems, connection technology and power supply
- Services: Data analysis, development, design, manufacturing and delivery

Elektrosil's services

- Application consultation, development assistance, design-in support
- Quality assurance
- Engineering and production
- Completely customised applications