

SUCCESS STORY



TRACKING OF RECHARGEABLE HYBRID VEHICLES (RHV)

PcVue supervises the world's largest experiment with RHV's

In May 2010 Toyota, EDF and Strasbourg City and Urban Community launched a joint project called "Kléber" for a full-scale demonstration of rechargeable hybrid vehicles (RHV).

This experiment is vital as Toyota is now marketing a plug-in version of its well-known Prius range. The Kléber program is part of a world-wide project rolled out by Toyota, with 600 Prius RHVs also being tested in Japan, the United States, England, Canada and Australia. For EDF it is an opportunity to test the charging facilities in practice.

The Kléber project is the largest experiment of its kind in the world with a fleet of 70 RHVs and 145 charging stations, almost all connected via cellular network. The 145 stations are installed in all the places one might expect: at the roadside (8 stations), in public car parks (18), at the vehicle owners' homes (44) and in the car parks of the businesses where they work (75).

To manage the remotely metered portion of the charging data from the EDF stations, the sponsors of the Kléber project selected the PcVue SCADA software as it is a proven and reliable industrial tool that is used to supervise numerous devices in many large-scale projects around the world.

The choice was also influenced by its meeting performance requirements and value for money.

The main function of PcVue is to collect data for transfer to other computer systems for analysis.

The acquired data is collected in industry standard databases for processing via analytical software such as spreadsheets. Data is also processed directly by PcVue for display using pre-defined symbols that are instantiated in the mimics.

The data acquired by the charging stations is transmitted



BUSINESS OBJECTIVE

- ✔ Understand RHV customer expectations
- ✔ Verify RHV and infrastructure performance
- ✔ Develop methods for evaluating fuel consumption and CO² emission

over a cellular network also managed by PcVue. The database created by PcVue using the collected data is shared with an EDF central server via a web service. This means that the data can be accessed over the Internet or an intranet via secure access.

The PcVue software logs the usage of the charging stations throughout the Strasbourg area. It also provides real-time management of any charging station that malfunctions improving maintenance of the overall system.

One year into the experiment and the EDF and Toyota teams started analyzing the technical data gathered from the charging stations, uploading the data recorded in the RHVs during visits to the dealer, and reviewing user questionnaires and field surveys.

The PHVs involved in the project were intensively used in an urban environment and for longer journeys. PHV users averaged a yearly mileage of 19,000 km (12,500 miles), which is above the 13,000 km (8,000 miles) average for French drivers. The solution implemented with the PcVue SCADA software has allowed a remarkable reduction in maintenance costs, while centralizing all the information from the remotely controlled plants.



KEYS TO SUCCESS

- ✓ Responsiveness of vendor due to very short time frame from concept to implementation



RESULTS

PcVue demonstrated that PHV performance is in-line with customer expectations and meets a significant share of daily commuter needs

Solution using PcVue identified that PHV environmental performance depends on utilization

PcVue consultants responsiveness and software tools proved capable of meeting aggressive development schedule





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