



VOLKSWAGEN CHINA TRANSFORMS ITS DATA CENTRE

Case Study

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Objective

Transform its ageing data centre to ensure uninterrupted IT infrastructure services

Approach

Conducted a review of options from leading vendors

IT improvements

- Improved reliability with new wiring, power and cooling, ensures IT function keeps pace with business growth
- Overhauled its data centre operations with no impact on business, satisfying management concerns

Business benefits

- Reduced operating costs with Power Usage Effectiveness (PUE) dropping from 2.5 to 1.8 indicating the use of 30-40 per cent less energy
- Almost 50 per cent more space now available inside the data centre provides room to grow without additional cost



HP customer case study:

Volkswagen China Works with HP Technology Services to transform its Data Centre operations

Industry:

Manufacturing

Volkswagen was one of the first international automotive manufacturers to set up operations in China, entering the market in 1984. Today, it has 14 divisions across China, including manufacturing, spare parts and servicing.

The single data centre which provided infrastructure services for the entire Volkswagen Group in China was in desperate need of upgrades. Most urgently, there was no effective integrated automated monitoring system, the air-conditioning and alarm systems were faulty, the network wiring was a mess, and there were serious power supply hazards.

Volkswagen Group China was wasting a great deal of resources keeping the system functioning, taking energy away from business development and service improvements.

Aware it needed to fix these reliability issues to deliver a highly scalable, flexible alternative, the Group met with several vendors. It selected the Critical Facilities Services team from HP Technology Services to complete the on-line upgrade and transformation of the data centre.



Comprehensive evaluation starts the process

Before starting the transformation, HP technology services experts conducted a comprehensive evaluation of the server room. This was followed by an in-depth quantitative analysis based on the current situation and future development needs of Volkswagen Group China.

The power system inside Volkswagen Group China's data centre had a low redundancy rate as it had been in use for a long time. At the same time, the wiring between the main distribution frame and the cabinets was messy, with many cabinets running above capacity. Ordinary patch boards were used as PDU and the interfaces did not meet the required standards.

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The transformation process lasted more than six months. System migration took place during ten scheduled downtime switchovers. In some instances, the planned downtime lasted as long as 70 hours.

HP engaged more than 30 relevant suppliers and had over 60 people participating in the project directly. The team managed to get the IT equipment online and offline more than 400 times, lay out almost 20,000 metres of network cables, establish network connections more than 2,000 times, and relocated and installed the cabinets 60 times.

With the help of Volkswagen's project manager and meticulous arrangements by the HP Critical Facilities Services team, the project team repeatedly practiced each transformation task. In the end, it was able to ensure the on-line system transformation was completed successfully, meeting the challenging goal of zero unexpected interruption of the IT services.

At completion, the HP Critical Facilities Services team successfully optimised and transformed Volkswagen Group China's power distribution system, reorganised the cooling system and air circulation, segregated and transformed the IT function areas, migrated the entire network system, set up a new wiring system, and adjusted the layout of the core application system. It had improved and integrated the overall infrastructure monitoring system of the data centre.

Customer solution at a glance

HP Services

- HP Critical Facilities Services

From vulnerable to reliable, scalable and adaptable

HP transformed the entire power distribution system and installed intelligent power distribution cabinets, together with a monitoring system. It changed the Uninterruptible Power System (UPS) inside the data centre and replaced the original patch boards with professional Power Distribution Units (PDU) to ensure improved reliability. Next, the HP technical team changed and rewired the network to get rid of the complicated and messy network wiring. Changes were made to the position of the air-conditioning system and air-conditioning input efficiency was optimised, helping cool the data centre without having to add or replace a/c units.

Since its transformation, Volkswagen Group China's data centre has not experienced any downtime. At the same time, the data centre is saving energy. The PUE value went from more than 2.5 prior to the transformation to 1.8, helping Volkswagen Group China use 30-40 per cent less power. With a new layout and repositioning of the equipment, there is now almost 50 per cent more space in the data centre. The data centre previously housed 30 cabinets in three rows; now it houses 50 cabinets in five rows. This significantly adds to the scalability of the system. In addition, HP also installed a dynamic environment monitoring system in the data centre to report abnormalities in the main server room power distribution, main equipment, cabinets, temperature and humidity.

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