

FACC retools data center to support growth



Global aeronautics manufacturer taps HP Critical Facilities Services to increase data center capacity, enhance performance, improve security, and ensure redundancy

Industry
Manufacturing

Objective
Rebuild and retool its corporate data center to support corporate growth strategies while avoiding service interruption

Approach
Rely on HP Critical Facilities Services to assess and evaluate data center needs and enable a productive and cost-effective data center migration

IT matters

- All upgrades were implemented in three months without any service interruptions
- On-site HP program management consultants guided implementation
- Detailed scheduling enabled power, HVAC, and fire protection upgrades as well as functional testing

Business matters

- HP experts led workshops to define organizational data center requirements
- Cost simulation models and business case services led to cost-effective planning and implementation
- FACC is now efficiently controlling disaster recovery and data redundancy costs through a creative partnership for off-site mirrored infrastructure



“HP understood what we needed to get out of our data center upgrade and conducted workshops with our managers to develop and refine a strategic plan for retrofitting our data center to meet our business goals for the future.”

– Hermann Grabner, Vice President Information Technology

FACC selected HP Critical Facilities Services to refurbish an existing data center facility that had lacked the power, cooling, fire protection, and physical infrastructure to support the company’s strategic business goals. The goal of the project was to improve the infrastructure for current and future IT requirements as well as to allow more efficient IT operations. After three months of workshops and planning sessions, HP led a three-month data center upgrade that was successfully implemented without any service interruption and led to FACC’s corporate data center now being equipped to meet FACC’s IT goals over the next decade.

Based in Austria, FACC is a leader in providing lightweight composite components for the aeronautics industry, focusing on developing and manufacturing aerostructures, engines and nacelles, and aircraft cabin interiors. Its customers include all leading manufacturers of aircrafts and aircraft engines, as well as the Tier-1 suppliers of aircraft manufacturers.

No other organization has its lightweight composite components installed in so many different aircraft models. FACC is a leading force in the development and production of components and systems made of composite materials. Its high-quality lightweight solutions help ensure safety, save weight, and provide for more comfort and enhanced noise reduction aboard passenger, cargo and business aircraft, and helicopters.

FACC's corporate data center is located in a production facility in Ried im Innkreis, Austria, and it has evolved gradually through the years as IT added equipment to support corporate growth. In 2006, FACC constructed a production building on a new campus about 10 miles away that included new space for a data center. FACC didn't add any data center-specific power or cooling infrastructure, and backed up data center storage to this new location.

Meanwhile, FACC's business continued to grow worldwide. The data center facilities were extremely limited, and the company was increasingly relying on IT to support global operations. "About two years ago, I started evaluating how our data center needed to change," said Hermann Grabner, Vice President Information Technology for FACC. "The company was adding locations all over the world, but if power ever went down at Ried im Innkreis we would have no production throughout the company and all of our workers would have to wait for the data center to go back online."

He continued, "FACC employees depend on our data center whether they're located in Seattle or Shanghai, and many of our consultants work onsite at the locations of aircraft manufacturers and their contractors. We needed to refurbish our data center to support high availability, better security, and much better redundancy so that our IT infrastructure would support our corporate growth strategies over the next decade."

Relying on proven expertise

Grabner recognized that FACC needed external support to help IT develop and implement its data center refurbishment strategy.

"We needed to improve the infrastructure for current and future requirements while ensuring efficient ongoing IT operations," he explained. That meant refurbishing the existing data center facility quickly without allowing for any system downtime.

FACC selected HP Critical Facilities Services, which provides consulting, design, and assurance services for new or retrofit data centers. HP experts combine design engineering and architecture with IT expertise, and design and build data centers to meet changing business needs with lower facilities capital and operating costs.

"We've been working with HP since the beginning of our company, and rely on HP for our servers, storage platforms, and PCs," said Grabner. "We looked at other vendors but didn't see the advantages of going with any of them because HP understood our data center challenges and had a clear methodology for working with our team to help us clearly define our goals and how we were going to achieve them."

HP assigned a team of critical facilities consultants, architects and design engineers to work with FACC managers to assess the current situation and evaluate data center requirements. They conducted workshops with IT and facilities managers, and performed cost simulation and business case analysis for management review.

"HP consultants worked closely with our team to carefully evaluate our needs and present the best options for moving forward," said Grabner. "From their plans I was able to go to the FACC management board and present not only the costs of the upgrades but the strategic business impacts the upgrade would have on the company in terms of the availability of IT."

The company was facing a business risk from the weakness of its data center infrastructure, and it was a strategic necessity to eliminate that risk. Grabner presented the case that a single day of the data center being down would cost the company far more than the cost of the data center upgrade, and the management board approved the refurbishment.

Implementing a non-disruptive refurbishment in 3 months

Implementing a major refurbishment in a tight timeframe required careful orchestration. HP deployed a redundant power system with diesel-powered backup, removing the existing dependency on the single power source so that a power failure in the factory could not hinder data center operations. The floor of the data center was not high enough to support the flow of a new cooling system, so HP raised it about eight inches. HP also replaced the existing air conditioning units and renovated the existing server, storage, and network racks. All of these upgrades and adaptations were implemented without any service interruption so the facility could remain in operation around the clock.

HP installed a new fire protection system, which reduces the oxygen levels below 17% to better protect data center assets. HP also installed a new data center security system, which strictly limits data center access to authorized personnel. "Very few people are now allowed to enter the data center," Grabner said. "In the past we had limited security and no video surveillance, but now our IT resources are securely locked down."

All data center construction work was done with full production loads on the data center, which required careful planning and intricate logistics for moving equipment in and out of the facility. HP had a product manager onsite most of the time to manage the upgrade, and power and communication cabling was performed by HP and integrated with the existing cable plant. The refurbished state-of-the-art data center was designed with a capacity planned for future growth and it also has dramatically increased security, service availability, and asset protection via an enhanced fire protection system.

Partnering for two-way data mirroring

Disaster recovery and data redundancy were important aspects of the data center refurbishment strategy, particularly since data was previously backed up to storage resources located in old server rooms. FACC wanted to mirror its storage to an off-site location, and sought to better protect enterprise data resources while efficiently controlling disaster recovery and data redundancy costs.

The data center refurbishment enabled a creative opportunity for FACC to develop a partnership with a local ISP that was also seeking to improve its data redundancy strategy. FACC entered into a partnership with Infotech EDV-Systeme Ltd. whereby each company would mirror their data center infrastructure to each other's data center.

"We were considering building a second data center facility but that would be quite expensive," Grabner stated. "Since we were refurbishing our data center into a state-of-the-art facility, we were able to make a deal with Infotech EDV-Systeme Ltd. We let them use space in our data center in exchange for the use of space in their facility, which is allowing both of us to efficiently control our costs."

The FACC data center is mirrored to the Infotech data center, which is located about 10 miles away. Infotech's data center is mirrored to hardware deployed at FACC's refurbished data center. The sites are linked over a dark fiber connection, and both companies have avoided the costs of building and maintaining a second facility.

Customer at a glance

HP Products

- HP Critical Facilities Services
- HP 3PAR StoreServ 7400

Preparing for the future

“With our new data center, we can now provide data center services around the clock all over the world, time zones are no longer a problem for us,” said Grabner. “FACC employees working in Brazil can count on accessing the resources they need while those of us in Austria are sleeping, and we can add more storage platforms and servers now without worrying about problems with power consumption or cooling issues.”

To ensure continuous availability, the power supply with diesel generators is tested monthly. “I now sleep very well. The data center is resilient and I know that it’s always available to our workforce,” said Grabner. “HP understood our pains and had very good solutions for everything. The HP

consultants were knowledgeable about all of the options available to us, and made solid recommendations. For example, we didn’t think of implementing redundant cooling systems and alternating them daily but that turned out to be an excellent recommendation.”

The data center refurbishment performed by HP Critical Facilities Services has made FACC more agile and better equipped to connect with its global customer base. According to Grabner, “If we need to expand our IT infrastructure to support a corporate initiative, we can quickly add capacity as needed. If we hadn’t done the upgrade, we wouldn’t have had the power, cooling, and capacity in our data center to support our evolving business goals and our continued global expansion.”

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