

Virtual computing centers increase transparency, profitability and flexibility:

# Siemens A&D Shared Services— IT centralization substantially lowers IT infrastructure costs

»As general contractor for setting up computing centers, Fujitsu Siemens Computers and their project partners have successfully created the conditions for us to reduce our IT-costs in the medium term by about 25%.«

Juergen Groppe, Director A&D CIO IS, Siemens AG Automation and Drives

## SIEMENS

### → The Customer

Siemens AG  
Automation and  
Drives (Siemens  
A&D), Nuremberg/  
Germany

### → The Project

Lowering costs by  
process optimization  
and consolidation  
of IT infrastructure  
located in several  
computing centers

### → The Solution

Standardized IT  
infrastructure with  
disaster tolerant,  
virtual computing  
center, central data  
protection, dynamic  
resource use and  
site connection via  
Metropolitan Area  
Network



On April 9, 2004 it was ready: A new IT era for Siemens A&D began exactly according to the plan. The new era is marked by standardized and automated processes and by unmatched economy from IT infrastructure and services. The perfect interaction of innovative technologies, a disaster tolerant, single virtual computing center instead of the previous eight computing centers and a Metropolitan Area Network that provides a rapid flow of information for the Siemens A&D sites connected in Germany. The new IT world was created for the current 18,000 users in cooperation with Cisco, EMC, PrimeScale, Siemens A&D Industrial IT and Fujitsu Siemens Computers. As the general contractor for setting up the computing center, Fujitsu Siemens Computers together with experts from Siemens A&D provided the architecture for the new computing center and guaranteed the successful and on-schedule realization.

### The Customer

With 50,400 employees in 70 countries, Siemens A&D is constantly setting new standards with innovative products, systems and factory-wide complete solutions. Siemens technology can be found almost everywhere—in the most diverse applications, from the trades to

industry, even if at first glance it is not evident, like the power drive and automation technology in modern assembly lines or the control of a carousel. In the 2003 business year Siemens A&D created a turnover of 8.4 billion Euro with these and other solutions. The company is represented in 16 locations alone in Germany.



### Siemens A&D Shared Services—IT Infrastructure (Project Phoenix)

Power drive and automation technology from Siemens A&D moves the world, and in the future ever more productively and economically. Because now the intention to give a new quality to the company-wide flow of information has been realized in fact. This helps in the long term to guarantee competitiveness. "The goal of the project which was started in 2002", according to Juergen Groppe, director of Siemens A&D CIO IS, "was to realize Best-in-Class IT infrastructure and services with the project partners and with rigorous consolidation, standardization and harmonization, to reduce the IT infrastructure costs by about 25% within three years." The potential to achieve this goal was without doubt within reach. Siemens A&D had maintained eight computing centers, which were independently run, individually optimized, and depending on the location, collaborated via different external service providers. The result of this division of labor was a minimal utilization of the synergies, little structure transparency and double work, for instance because of multiple systems, each of which had to be administrated.

### Innovative Partners—a path breaking technical total solution

In the new Siemens A&D IT world, the best technologies complement each other in the most exceptional total solution in Europe which drastically increases the degree to which the creation of IT services can be automated and more efficiently shaped. The new, virtual IT infrastructure was conceptualized by employees from Siemens A&D CIO, the Siemens A&D industrial IT division, together with PrimeScale AG, which accompanied all project phases from the development of the business plan to the project implementation. All locations were connected with Cisco with high performance glass fiber, while EMC built the unified storage infrastructure. As general contractor, Fujitsu Siemens Computers provided the architecture for the new infrastructure and ensured the realization of the total concept. Decisive in this regard was the preparatory work on the systems in the Staging Center in Paderborn, the overall systems competence and the combined

know-how of the Competence Centers of the leading European IT solutions manufacturers, like Oracle or SAP. 50 experts alone from Fujitsu Siemens Computers plus the specialists of the partners put in about 3,000 man-days, in order to meet exactly all the goals and schedules.

The heart of the new IT world is a logical computing center that is parcelled out between Erlangen and Karlsruhe, 300 kilometers apart; while a 1,750 kilometers long glass fiber ring serves as the lifeline for the branch offices. Three server technologies are deployed in the infrastructure: PRIMEPOWER 2500 Unix servers with 76 CPUs provide the highest performance and reliability for business critical applications like the Oracle database and Oracle application server or web content management. About 100 Intel based PRIMERGY rackservers ensure central services like Exchange 2003. More than 200 Bladeservers PRIMERGY BX300 comprise the highly scalable platform for the economical operation of standard applications. Storage services are SAN and NAS based and centrally provided by DMX2000 systems from EMC, with up to 70 terabytes of useful data in one storage unit. Data mirroring in the virtual computing center provides precaution for disasters. In addition an automatic failover switch ensures that even in case of malfunction, production operation is guaranteed at any time. Additional important elements of the total concept are a central management, remote operation of the systems with virtual teams and the utilization of innovative tools like Call Order Business Data, a Siemens A&D development for the production and transparent billing of services.

**Flexible resource utilization in virtual infrastructures increases the profitability and quality of IT services**

#### → Advantages for Siemens A&D

- Highest profitability from IT services by rigorous standardization, automation, virtualization and integration
- Efficient business processes based on more transparent, efficient and high-available IT infrastructure
- High quality of the IT services
- High investment security with future-oriented, highly scalable technologies



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