



# The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

## Final Copy of Case Study

**LOCATION:**  
*Boston, MA, US*

**ORGANIZATION:**  
State Street Corporation

**YEAR:**  
*2011*

**ORGANIZATION URL:**  
<http://www.statestreet.com>

**STATUS:**  
*Laureate*

**PROJECT NAME:**  
21st Century IT Infrastructure

**CATEGORY:**  
*Business  
Responsiveness*

### PROJECT OVERVIEW

Over the last decade, State Street experienced dramatic business growth and expansion in Europe, significantly increasing the numbers of clients, applications, employees and technologies that IT supports. In parallel, State Street navigated enormous change in the financial services industry, including new regulatory requirements; changing business, service and staffing models; unpredictable market volumes; and greater demand for real-time information. As a result of multiple business acquisitions across Europe, server closets had become filled to capacity with inherited technologies. Local support staff across every office wrestled with the challenges of this diverse infrastructure while also trying to accommodate the demands of continued expansion and regulation. When State Street began planning to consolidate its London offices into a new flagship location, the Global Infrastructure Services (GIS) team, led by Executive Vice President Madge Meyer, met with State Street's CEO to propose an innovative solution: a 21st Century IT Infrastructure. This solution would leverage a multi-year global blueprint of data center and technology standards to change the way that IT Infrastructure in Europe was to be managed, delivered and supported. The solution would improve operations locally, as well as regionally and globally, and provide a foundation for the business growth and transformation goals that the CEO had set. The new design reduced the number of technology center locations, ensured business-appropriate resilience, and defined a strategic direction for locating core applications within Europe. The project introduced two regional data centers with a high-speed DWDM and MPLS network architecture assuring on-site and cross-site redundancy and connectivity for State Street and our clients, enabling critical system recovery within minutes or hours. It included state-of-the-art trading environments; regionally diverse market data and direct market access points; IP-based trader voice solutions; and integrated audiovisual access to news, market information, and colleagues around the globe. It also established a central virtualized hub of servers and storage, and a regional remote support model that soon evolved into follow-the-sun support for our businesses and clients worldwide. It also included our revolutionary Zero Footprint, Maximum

Impact™ strategy for quickly and flexibly meeting the demands of business growth. The scale and scope of this initiative was larger than any the European team had ever faced. The solution design and implementation addressed the consolidation and migration of 1,800 professionals accessing 167 business applications in six local technology centers. It also encompassed services delivered to users in 14 additional European locations as well as hundreds of clients with direct network connections. Added to this was the complexity of working with corporate managers across infrastructure disciplines (network, servers, storage, etc.) to standardize the new environment into which we would migrate, which required the collaboration of more than 300 technologists globally. The 21st Century European infrastructure now provides a reliable, resilient, secure and efficient environment that is quickly and cost-effectively responding to continued business growth and expansion, and providing a foundation for ongoing business transformation and success in the future.

## **SOCIETAL BENEFITS**

The project was a leader in State Street's Environmental Sustainability Program, implementing strategies that minimize the environmental impact of global business expansion and daily operations. Our facility is LEED (Leadership in Energy & Environmental Design) certified and received a BREEAM (BRE Environmental Assessment Method) rating of "excellent."

## **PROJECT BENEFIT EXAMPLE**

By providing a reliable, scalable and cost-optimized platform for current and future operational growth, State Street's 21st century European infrastructure directly supports our corporate objectives of doubling our non-US revenue, improving our risk management capability and increasing our operating leverage. Examples include our recent business acquisitions of Mouton International Finance Administration in the Channel Islands, and the securities servicing unit of Italy's Intesa Sanpaolo SpA. Together, these deals increase our non-US revenue by more than 18 percent and pave the way for further expansion across Europe. State Street's 21st Century European infrastructure has provided an immediate foundation for seamlessly integrating these businesses into our company. As detailed in the following section on innovation, it is able to provide this capability in a way that minimizes investment, lead-time and operational risks. According to State Street Vice Chairman Joseph C. Antonellis, who oversees investment servicing investment research and trading for Europe and Asia Pacific, "State Street has a world-class IT infrastructure that allows us to provide our clients with consistently high levels of service. It is also a strategic platform for continually extending the breadth, depth and geographic reach of our product and service capabilities." In addition to providing our business areas with a dependable and flexible platform for continued growth and expansion, our 21st Century European infrastructure also provides our employees, partners and clients with tangible evidence of State Street's global presence, reputation for excellence, and sustained commitment to Europe, the Middle East and Africa.

## **IS THIS PROJECT AN INNOVATION, BEST PRACTICE?** Yes

## **ADDITIONAL PROJECT INFORMATION**

We certainly take pride in the design and business impact of our 21st Century Infrastructure. Yet despite the significant effort that went into it, we wanted the actual transition to be entirely transparent to our end-users and clients. In fact, our mantra for the project was "zero-defect execution." We set about to



achieve this goal by maintaining a business-centric planning mindset, building our entire migration plan around key business processes, and understanding the components (people, applications, data and facilities, etc.) and interdependencies within and between them. This resulted in a comprehensive and detailed foundation for migration planning, scheduling and testing, and contingency plans to ensure rollback capability for every move. The work we did has since provided a re-usable baseline that we leverage today for improved incident management and business impact analysis. Global collaboration was another key contributor to our success. The EMEA team leveraged the skills and experience of counterparts in the US who had been involved in relocating State Street's corporate Data Center to a new embassy-class facility in the US. They shared their plans and the repeatable processes they had developed for activities like collapsing IP domains, moving trading floors, switching voice technologies, etc. They also provided tools and expertise in areas such as performance benchmarking and the dependency analyses described above. Application benchmarking, based on transaction response times, was used to simulate the network impact of the migrations in terms of changes to bandwidth, protocols, hardware and latency, and to simulate performance under significant user transaction volume for groups of users. Leveraging the expertise of this global team and organizing our efforts around business processes and interdependencies allowed us to successfully complete this major migration without interruption to a single business process, end-user, or client.