Smarter Computing at Sogeti

How IBM Smarter Computing technologies enabled a leading global IT service provider to address emerging business needs

Introduction: New IT challenges in a changing world

The pace of change in today's IT environment is accelerating due to constant technology updates. Further, consumer expectations of IT are much higher than even just a decade ago, as evidenced by the speed of the user adoption cycle. Consumers expect economical access to IT services, available at any place, any time and on any device—without any compromise in the security and integrity of their information.

These challenges are fueled by recent transformational technologies such as social media, mobility and cloud computing that drive enterprises to reshape the way they interact with their end customers. This change is no longer an option, but rather a fundamental driver of business competitiveness as employees with anytime access to IT services ultimately become more productive.

In response to these changes, enterprises are rethinking their IT functions and architecture to address emerging customer needs. For example, in a recent survey, 60 percent of CIOs ranked cloud computing as a high priority and 83 percent ranked business intelligence and analytics as a high priority in their visionary plans. They also estimated that 80 percent of new apps will be distributed or deployed through the cloud in the next 10 years.[1]

Businesses are also looking for ways to speed time-to-market, improve efficiency and unlock the power of big data to deliver more actionable insight while securing critical information.

This case study defines Smarter Computing and shows how Sogeti, a leading service provider with over 100 locations in Europe, the US and India, uses IBM Smarter Computing technologies to address today's IT requirements.

How Smarter Computing can address customer challenges

Smarter Computing is an IT infrastructure approach created by IBM to meet today's customer challenges, using computing systems that are tuned to the task with optimized servers, databases and storage. Smarter Computing enables enterprises to address emerging needs by building an IT infrastructure that is cloud-ready, data-ready and security-ready, as follows:

- **Cloud-ready:** Requires enterprises to focus on IT optimization, driving cost-efficiencies by leveraging virtualization and cloud technologies and reducing infrastructure complexity
- **Data-ready:** Enables enterprises to derive insights and value from their data in real time, ensuring that they can leverage these factors to differentiate their customer experience
- **Security-ready:** Requires enterprises to improve their risk management practices while controlling the costs of security and compliance

In short, Smarter Computing is the IT infrastructure that powers a Smarter Planet®.

Smarter Computing is enabled by core technological breakthroughs that drive customer value. Specific innovations that enable the Smarter Computing encompass the following technologies.

A cloud-ready infrastructure speeds time-to-market while improving efficiency

Infrastructure speed and flexibility can be realized by leveraging IBM patterns of expertise with integrated service management, service automation and self-service provisioning, providing the ability to deploy systems in a fraction of the traditionally required time. Deployments through Cloud and current technologies are known throughout the industry to have vast deployment improvements. Efficiency is improved by consolidating and virtualizing workloads that use an appropriate mix of scale-out, scale-in and scale-within technologies, enabling a dramatic reduction in data center footprints. In addition, infrastructure resiliency is improved by replacing multiple points of failure with a single focal point.

A cloud-ready infrastructure should include the following capabilities:

- Cross-platform virtualization across multiple platforms— for example, virtualization across IBM® Power® and x86 architectures
- Capacity on demand to grow infrastructure when needed
- Predictive failure analytics to assess system logs and institute proactive measures before failure occurs
- Global data distribution across a cloud, providing an integrated view across multiple storage architectures

A data-ready infrastructure maximizes actionable insights on operational data to leverage improved data availability and trustworthiness

Actionable insights are enabled by accelerated analytic architectures that can rapidly process complex business intelligence queries. This speed enables enterprises to embed analytics in daily transactional operations to impact their value chain and improve business outcomes. Low-latency system and storage designs provide maximum availability of business insight by delivering faster analytics with high uptime.

Some of the technologies that enable a data-ready infrastructure include:

- Stream processing to rapidly integrate, analyze and (optionally) store many types of streaming data
- Massive parallel processing to enable rapid analysis of big data leveraging Apache Hadoop architecture
- A cluster file system that provides a global name space for shared access to unstructured, file-based data no matter where it physically resides
- Smart tiering of storage to dynamically optimize data placement based on workloads

A security-ready infrastructure protects critical information and reduces risk

Security is built in from end-to-end across the entire stack from the chip level to the middleware layer, along with trusted identity and access management, ensuring the right people have the access to the right data at the right time through role-based access controls. Improved risk management with automated policy-based compliance reporting and monitoring can substantially reduce overhead in security and compliance audits.

A security-ready infrastructure should comprise the following:

- Protected key processor-based encryption that provides safe hardware encryption
- End-to-end database encryption from database tables to disk and memory
- Secure isolation of virtual machines that ensures applications running in one virtual machine cannot access another
- Automated security monitoring and compliance that checks the network configuration for newly loaded virtual machines against their security needs and policies

Sogeti adopts the Smarter Computing initiative for its own expertise

IT service companies such as Sogeti must meet today's emerging IT challenges, both for their customers and within their own IT environments. Today, IT service companies face multiple challenges, ranging from reducing IT costs and total cost of ownership to achieving improved time-to-market. Technology changes require a smart plan of adoption to sustain business growth and innovation—but organizations must be careful to deliver optimized performance while meeting service-level agreements and addressing security and compliance.

By adopting the Smarter Computing approach, Sogeti can better leverage its in-house expertise and deliver its end-to-end services, including consulting, expertise and solutions. These services address all layers of IT from facilities to infrastructures, and from virtualization to security.

For its initial consulting engagements, Sogeti employs the Smarter Computing Workshop Assessment (SCWA) and the Smarter Computing Fit for Purpose (SCF4P) Workshop. Using specific assessment tools, Sogeti conducts these workshops and produces relevant reports, including level of IT maturity, gap analysis and recommendations to customers.

The SCWA identifies the priority transformation themes of the client and determines key initiatives to achieve Smarter Computing (Figure 1).

Workshop elements include:

- Maturity assessment across multiple areas such as systems optimization, big data, service delivery, IT architecture and data governance
- Identification of specific areas for transformation
- Duration: 1 to 2 days
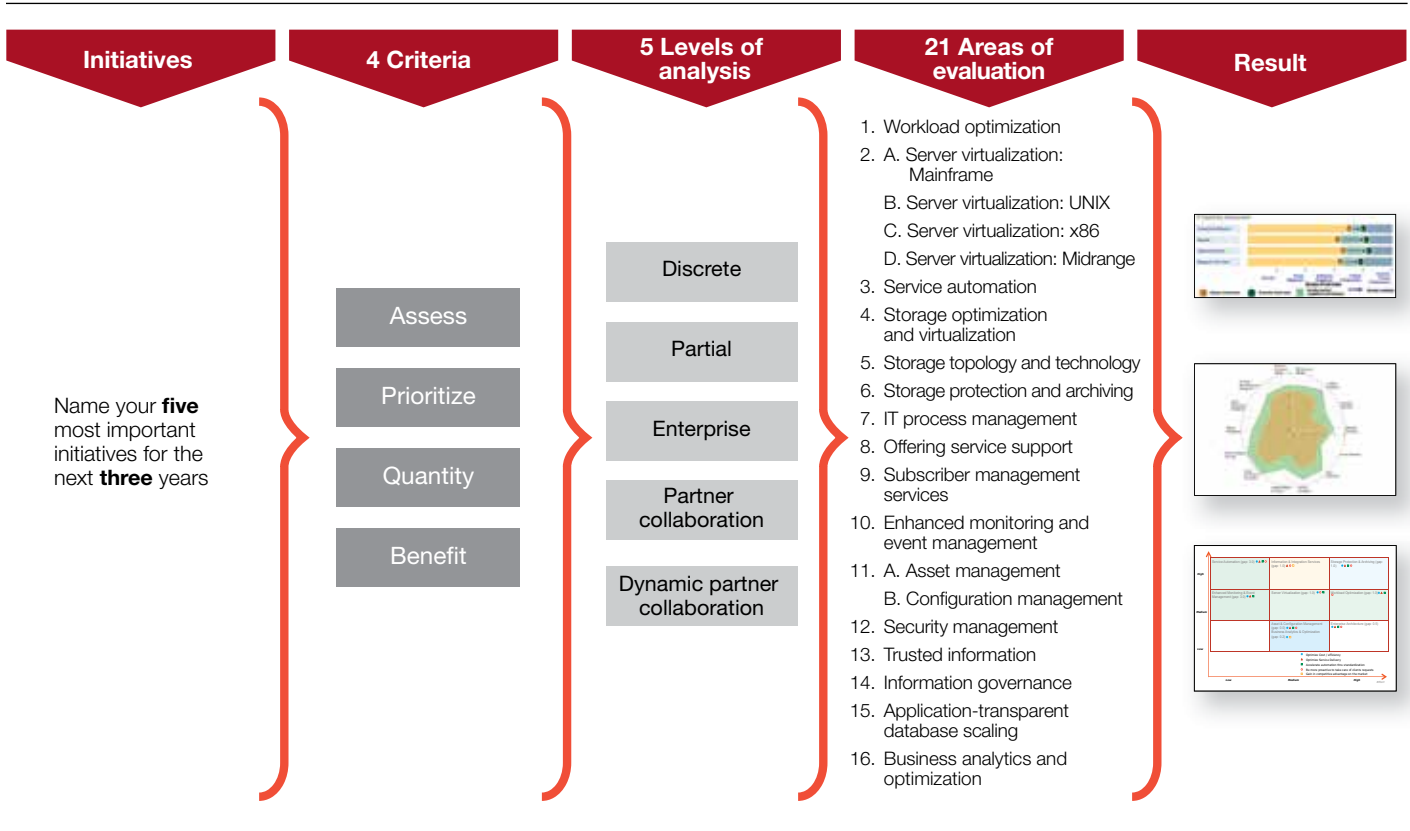- Audience: CIO or CTO, IT operations manager and data center leaders

Initiatives	4 Criteria	5 Levels of analysis	21 Areas of evaluation	Result

Name your **five** most important initiatives for the next **three** years

Assess
Prioritize
Quantity
Benefit

Discrete
Partial
Enterprise
Partner collaboration
Dynamic partner collaboration

1. Workload optimization
2. A. Server virtualization: Mainframe
   B. Server virtualization: UNIX
   C. Server virtualization: x86
   D. Server virtualization: Midrange
3. Service automation
4. Storage optimization and virtualization
5. Storage topology and technology
6. Storage protection and archiving
7. IT process management
8. Offering service support
9. Subscriber management services
10. Enhanced monitoring and event management
11. A. Asset management
    B. Configuration management
12. Security management
13. Trusted information
14. Information governance
15. Application-transparent database scaling
16. Business analytics and optimization

Figure 1. Contents of the Smarter Computing Workshop Assessment.

The SCF4P Workshop defines the best solutions and platforms to carry out the transformational themes in the SCWA (Figure 2).

Elements of this workshop include:

- Potential follow-up to the SCWA
- Assessment of specific workloads across a range of architectures to determine the best fit
- Duration: 2 to 5 days
- Audience: CIO or CTO, IT operations manager and data center leaders

Meeting service delivery challenges using IBM PureFlex System

In addition to launching these Smarter Computing workshop services for clients, Sogeti also sought to leverage IBM Smarter Computing technologies to transform its own service delivery capabilities. To streamline its approach to managing projects, Sogeti sought an easy-to-maintain infrastructure that would help reduce labor and associated costs while speeding time-to-market.

Figure 2. Contents of the Smarter Computing Fit for Purpose Workshop.

To achieve this goal, Sogeti leveraged IBM PureSystems™, consolidating its five infrastructure offerings to just one by implementing IBM PureFlex™ System technology as a highly flexible, centralized and streamlined infrastructure. IBM PureFlex System is part of the PureSystems family of products launched by IBM to enable enterprises to realize the promise of Smarter Computing.

IBM PureFlex System combines compute, storage, networking, virtualization and management into a single system, embodying system integration by design and driving significant reduction in costs. IBM PureFlex System also pioneered the concept of encapsulating deployment expertise in patterns, driving significant improvements in time-to-market.

The IBM PureFlex System solution with IBM Flex System Manager™ technology allows Sogeti to reduce expenses while increasing flexibility and performance. Nicolas Saint Remy, chief information officer for Sogeti, explains, "IBM PureFlex is a single box that integrates hardware, networking, software and storage. It's quite simple, so we don't need a lot of manpower. The flexibility and performance allow us to reduce operations costs and focus on innovation, which is one of our major priorities."

The integrated solution allows Sogeti to increase virtual machine capacity by 60 percent without increasing (the Sogeti staff), according to a client. Automation and integration reduce maintenance costs and complexity and accelerate business workloads, helping the company to boost productivity and deliver services to customers faster.

Sogeti expects to reduce the time needed to virtualize systems to several minutes, which helps speed time-to-market. With a private cloud system, decreased costs and simplified management, Sogeti can accommodate its future needs, and it anticipates servicing more business from its internal sites and infrastructure.

Providing cloud services based on IBM PureFlex System and IBM SmartCloud

Many Sogeti customers are interested in implementing private clouds, and Sogeti is using IBM Smarter Computing technologies for a solution that is flexible, efficient, scalable and simple to manage.

Sogeti's hosted private cloud solution is based on IBM PureFlex System, together with IBM SmartCloud®—IBM's family of enterprise-class cloud computing technologies and services for securely building public, private and hybrid clouds. Sogeti uses this convergent hardware and software platform to deliver a private cloud model to clients' data centers. Sogeti provides virtual machines for IBM AIX® or x86-based operating systems, at either a production level (OS and middleware) or development level (development and test platforms). A unique portal allows Sogeti customers to access a dedicated service catalog with a choice of offerings: a simple pay-as-you-go model or a full OPEX model.

Delivering results for Sogeti and its customers

The Smarter Computing Workshop Assessment has delivered significant benefits for Sogeti customers. For example, based on a workshop with one of the company's IT outsourcing customers in the industrial sector, the Sogeti team was able to identify 18 areas of potential Smarter Computing implementation. By the end of the workshop, the Sogeti team was well on its way to building the action plan and proposed Innovation Infrastructures Transformation Projects answering to the industrial company's key initiatives and priorities.

Another client had already started development of an infrastructure road map, and the thoroughness and structured approach of the Smarter Computing Assessment enabled Sogeti to complete the road map by adding new IT transformation components. In another case, a Fit for Purpose workshop and return on investment study enabled Sogeti to identify transformation projects for a client in the energy sector.

Sogeti also used Smarter Computing architecture to help a client in the banking industry improve its business agility and competitiveness by more rapidly deploying new applications and simplifying production and maintenance. Sogeti helped the bank consolidate its IBM i and x86 servers on a single, converged infrastructure using IBM PureFlex System. The system can support IBM i, Linux and Microsoft Windows operating systems and multiple hypervisors. A unique administration console allows IT to manage hardware, software and virtualization from a single pane of glass.

Conclusion: Responding to business change

The experience of Sogeti demonstrates how service providers can leverage the IBM Smarter Computing initiative to add value to their services and more quickly and efficiently meet the needs of their clients. Constructing and evolving IT infrastructures to better respond to constant economic and business change is critical to the long-term viability of every organization. To do it right, they need a smarter approach that exploits automated intelligence to increase the efficiency, utilization and performance of systems while lowering costs. By implementing Smarter Computing technologies and capitalizing on techniques such as Smarter Computing client workshops, IT leaders can increase agility and reduce costs for their clients and themselves.

About Sogeti

Sogeti is a leading provider of technology and software testing, specializing in application, infrastructure and engineering services. Sogeti offers cutting-edge solutions around testing, business intelligence and analytics, mobile, cloud and cybersecurity, combining world-class methodologies and its global delivery model, Rightshore®. Sogeti brings together more than 20,000 professionals in 15 countries and has a strong local presence in over 100 locations in Europe, the US and India. Sogeti is a wholly owned subsidiary of Cap Gemini S.A., listed on the Paris Stock Exchange. For more information, please visit www.sogeti.com

For more information

To learn more about IBM Smarter Computing technologies, please contact your IBM sales representative or IBM Business Partner, or visit: **ibm.com**/smarter-computing

[1] IBM Institute of Business Value study with CEOs is conducted once every two years. This involved more than 1,700 face-to-face interviews with CEOs and public sector leaders in 64 countries across 18 industries, making it the largest study of its kind.

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