



High performance. Delivered.

French Revenue Agency: Contributing to high performance through robust, secure service- oriented architecture

The French Revenue Agency (in French, Direction Générale des Impôts, or DGI) belongs to the French Finance Ministry and collects taxpayer declarations on behalf of the Government of France.

Business Challenge

Direction Générale des Impôts needed to increase its effectiveness by simplifying and improving the relationship between the agency and taxpayers. In 2002, it launched an Internet-based tax declaration service that received 117,000 declarations in its first year, making the electronic service one of France's most visible electronic administration projects. Given the initial success, DGI began a program that would make it possible to dramatically increase the volume of tax declarations it could process. Its goal? By 2007, DGI planned to process seven million taxpayer declarations in a two-month period at a rate of 50,000 taxpayer declarations per hour during peak periods.

How Accenture Helped

To facilitate this significant increase in the volume of tax declarations that DGI could process, Accenture teamed with DGI for a four-year effort to design, build and deliver a new platform as part of the Adonis 2 project, which provides several web applications that allow taxpayers to securely (and easily) file taxes online, that help the 80,000 DGI agents to do their jobs more effectively and that complement revenue-declaration capabilities as well as those for simplified fiscal accounts.

Accenture helped develop a large-scale, highly flexible and secure service-oriented architecture for this mission-critical government project to enable taxpayers to complete tax returns online easily and securely.

- Consulting • Technology • Outsourcing

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To create an adaptable, heterogeneous IT environment to support taxpayers, Accenture mixed professional open source and closed source software components and, as part of the architectural design, implemented more than 500 application servers. Accenture and DGI delivered a service-oriented architecture implementation based on open source solutions compliant with interoperability standards from the Web Services Interoperability Organization and used innovative technologies such as Dependency Injection, Plain Old Java Objects, and Aspect Oriented Programming.

The solution Accenture built supports multiple computer configurations by detecting technical information from individual taxpayers' computer systems. Generic reusable services for public key infrastructure and digital signature were implemented as global assets. More than 80 terabytes of 34 million citizens' personal data are securely exposed through personal digital-certificate authentication. Accenture's people, skills and technology are helping DGI to improve business performance. DGI processed 7.3 million tax declarations in 2007. It takes about 30 minutes for the average taxpayer declaration and involves cryptographic operations for digital signature on client and server side. The system smoothly managed 24 million pages per day during peak periods.

High Performance Delivered

Accenture successfully contributed to high performance through implementing a robust, secure service-oriented architecture. Accenture's teaming with DGI yielded contributions to higher performance related to productivity, flexibility, security, availability and visibility. Regarding productivity, the engagement enabled short delivery cycles through extensive use of continuous integration and delivery-process rationalization (Agile development, with extreme programming methodologies and tools).

Flexibility was enabled through an easily scalable, generic architecture, including a service-oriented architecture implementation based on open source (back end: Spring, Hibernate, JaxB, Axis; front end: Spring MVC, Struts, DisplayTag, Tiles, Ajax; DWR; and security: Bouncycastle, XML-security). Security was enhanced through strong mutual authentication and digital certification—and a high-speed, high-quality transactional digital-signature web service—while high availability was made possible via automatic backup switchover and regulation mechanisms that protected the platform, resulting in service-level agreement with 99.99 percent availability.

Visibility was attained because DGI's best-of-breed framework implementation was harnessed as the Accenture reference for worldwide J2EE conferences (JavaOne, JavaPolis, Spring One). Finally, Accenture helped DGI realize its goal of high-volume usage of the Internet-based tax declaration service, with 7.3 million users declaring income online in 2007. This represented a major success for DGI and for Accenture and made the project a European reference for tax-declaration applications.

Accenture builds high performance businesses with SOA

Service-oriented architecture, or SOA, is an architectural approach to designing, building, implementing and maintaining IT solutions that Accenture believes will revolutionize the speed with which organizations can respond to changes in business and market conditions. Service-oriented architecture allows companies to fluidly combine existing and recent IT assets to deliver new applications, business processes and business models inside and outside the enterprise. In our extensive research into high-performance IT organizations and into how businesses and governments are planning to achieve new growth through enterprise systems, SOA has been identified by many of the world's

leading organizations as an area that will help them best differentiate themselves in the marketplace and deliver competitive advantage. By making it possible to reuse services and access them wherever they are located, SOA contributes to organizational flexibility and adaptability; by enabling the creation of composite solutions, SOA makes it easier for employees to access and use enterprise applications, driving productivity gains. Accenture recommends that organizations begin to study practical SOA approaches, quick-win opportunities and ways SOA could contribute to the ongoing quest for high performance.

For more information

To find out more about Accenture and service-oriented architecture, email david.l.nichols@accenture.com or visit www.accenture.com/soa

About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With more than 175,000 people in 49 countries, the company generated net revenues of US\$19.70 billion for the fiscal year ended Aug. 31, 2007. Its home page is www.accenture.com.

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