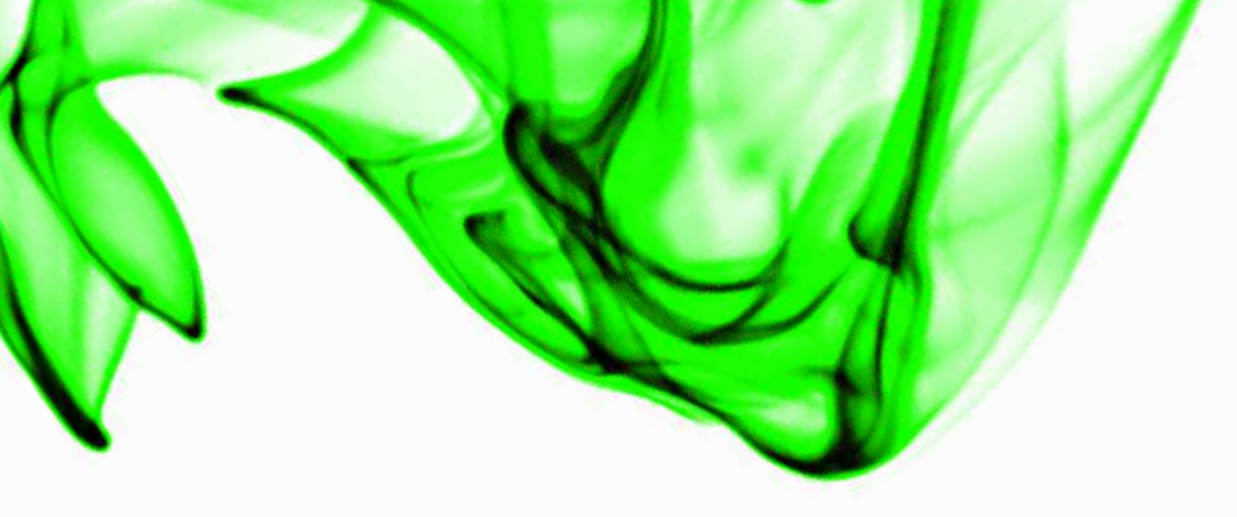

Customer Case Study

Government from Chile General Treasury of the Republic

Taxpayer Portal Implemented on Service-Oriented Architecture

Solution:
Customer Service

Product:
BEA WebLogic Portal®
BEA WebLogic Workshop®

Industry:
Public Sector

`The General treasury of the Republic of Chile has built a self-service portal for taxpayers on BEA WebLogic Platform™ 8.1. The portal's service-oriented architecture (SOA) allows the government to add new citizen services continuously and adapt the portal infrastructure to serve multiple purposes. Within three months of its launch, the portal was handling thousands of tax transactions daily and improving the timeliness and accessibility of service for millions of Chilean citizens.

Overview

As part of a government-wide modernization initiative and e-government politics, the Treasury moves toward paperless, electronic workflows. The goal of the initiative is to curb government spending by taking advantage of the Internet's rapid growth throughout Chile, and to provide timelier access to government services for all citizens, facilitating tax payment obligations.

"Like most governments around the world, we rely heavily on paper-based processes to calculate, track, and collect tax obligations," said Pamela Cuzmar, director of technology and research for the Treasury. "That leaves us vulnerable to everything from bounced checks to forged documents. We see e-government as a way to maximize convenience and improve service to our customers (the citizens of Chile) while lowering costs to serve, minimizing risk, reducing overhead for the government, and facilitating tax payment obligations. That's a win-win situation."

The Treasury conducted a comprehensive review of infrastructure platforms on which to deploy a set of Web-based, service-oriented e-government applications. After reviewing its options, including offerings from IBM and Oracle, the Treasury selected BEA WebLogic

Platform 8.1.The selection hinged on BEA WebLogic Platform's openness, extensibility, and comprehensive functionality, which includes an application server, development environment, integration hub, and portal framework.

After making its platform decision, the Treasury began building its Citizen Portal (*www.tesoreria.cl*) on an SOA that was designed to provide maximum adaptability, reusability, and agility. The first phase of the project was completed in just 90 days. Upon completion of phase one, citizens could use the portal to pay their property taxes. A "shopping cart" feature allows individuals to consolidate tax payments for multiple properties. Businesses are using the portal to pay customs duties mainly.

The portal's user interface is built on BEA WebLogic Portal. The workflows associated with each transaction type are managed and orchestrated by MDB (Message Driven Beans), and use JMS queue and Web services as a service broker. The business logic is contained in Enterprise JavaBeans (EJBs), which integrates with presentation layer through PageFlows created by BEA WebLogic Workshop™. The EJBs are built on Borland Jbuilder and integrated with presentation layer by BEA WebLogic Workshop. This enables services to be reused across multiple applications within the portal (e.g., customs tax, property tax).

Market estimations shows that processing tax payments electronically costs only 10 cents on the dollar compared with 1 dollar of manual processing cost of bank agencies' counters. Although the portal has been in production for only a few months, it is already handling 15,000 transactions each month for customs payments and property taxes. Receipts are in excess of $30 million. The Treasury expects the majority of payments to be made online within 24-36 months.

Customer brief

The Chilean Treasury is similar to the Internal Revenue Service in the United States. The Chilean Treasury collects all taxes, including customs duties, corporate and personal income tax, property tax, and value-added tax (VAT) on retail sales. Tax receipts are approximately U.S. $20 billion annually.

Business process challenge

Chile is home to one of the most robust economies in Latin America, and one of the most highly educated and financially active citizenry. The Treasury's responsibilities for tax collection span the country's 15 million citizens, a flourishing business community, and $16 billion in goods that are imported each year.

As part of a government-wide modernization initiative and e-government politics, the Treasury moves toward paperless, electronic workflows. The goal of the initiative is tocurb government spending by taking advantage of the Internet's rapid growth

throughout Chile, and to provide timelier, more convenient access to government services for all citizens, facilitating tax payment obligations.

In addition to these general e-government goals, the Treasury realized that modernizing its systems could yield benefits specific to electronic revenue collection. For example, state-of-the-art technology could help the Treasury combat fraud, particularly fraud related to customs payments. It could also assist the government in identifying and collecting all the tax revenue that it is due, and reduce the time required to process tax forms and payments.

“Like most governments around the world, we rely heavily on paper-based processes to calculate, track and collect tax obligations,” said Pamela Cuzmar, director of technology and research for the Treasury. “That leaves us vulnerable to everything from bounced checks to forged documents. We see e-government as a way to maximize convenience and improve service to our customers (the citizens of Chile) while minimizing risk, reducing overhead for the government and facilitating tax payment obligations. That’s a win-win situation.”

Solution

In 2003, the Treasury conducted a comprehensive review of infrastructure platforms on which to deploy a set of Web-based, service-oriented e-government applications. After reviewing its options, including offerings from IBM and Oracle, the Treasury selected BEA WebLogic Platform™ 8.1.The selection hinged on the BEA platform’s openness, extensibility, and comprehensive functionality, which includes an application server, development environment, integration hub, and portal framework.

“Support for open standards, specifically Java, was mandatory,” said Cuzmar. “We want the freedom to adopt new technologies and build new applications. The evolution of e-government may take us in directions that we’re not even thinking about yet. The only way to ensure that we’ll have the flexibility we need to extend our infrastructure is to leverage standards, and no platform vendor can match BEA’s aggressive support for existing and emerging standards.”

Cuzmar added, “During the evaluation period, we were also impressed with the speed and ease of development and integration on the BEA platform. That will enable us to achieve rapid results from technology investments and accomplish government politic about IT usage. We want citizens to see results and feel good about the way their taxes are being invested.”

After making its platform decision, the Treasury began building its Citizen Portal (*www.tesoreria.cl*) on an SOA that was designed to provide maximum adaptability, reusability, and agility. The first phase of the project was completed in just 90 days. Upon completion of phase one, citizens could use the portal to pay their property taxes. A "shopping cart" feature allows individuals to consolidate tax payments for multiple properties. Businesses are using the portal to pay customs duties mainly.

The portal also supports a government program intended to foster economic growth in rural areas. Business owners receive tax credits when they invest in geographic zones that the government has targeted for development. Investors can apply for, and check the status of, these credits via the portal.

The portal's user interface is built on BEA WebLogic Portal. The workflows associated with each transaction type are managed and orchestrated by MDB (Message Driven Beans), and use JMS queue and Web services as a service broker. The business logic is contained in Enterprise JavaBeans (EJBs), which integrates with presentation layer through PageFlows created by BEA WebLogic Workshop. The EJBs are built on Borland Jbuilder and integrated with presentation layer by BEA WebLogic Workshop. This enables services to be reused across multiple applications within the portal (e.g., customs tax, property tax).

"For instance, citizens can make tax payments via wire transfer or credit card," said Carmen Gloria Ramirez, development manager for the Treasury. "Rather than build a separate payment system for each tax application, we built one service and use it many times. User authentication is another example of a reusable service. The SOA approach saves time and money by eliminating infrastructure redundancy. It also makes the portal very adaptable because it minimizes the work needed to add new applications."

The hardware environment for the portal is a cluster of 16 IBM servers running AIX. The database system is Oracle 9i. The back-office environment that houses the Treasury's billing and accounting systems and other business-critical applications is Open VMS running on Alpha servers. Integration between the portal and back-office applications is done primarily via Eculink connections (software developed by a Chilean company). The development environment for the portal is BEA WebLogic Workshop complemented with Borland Jbuilder 9.

Results

"Frankly, we've been surprised by how easy it is to learn and develop on BEA WebLogic Workshop," said Ramirez. "Our background is COBOL. Turning around the first phase of the portal in only 90 days on a Java platform was remarkable. BEA WebLogic Workshop's controls, wizards, and visual designers removed so much complexity from the project. In fact, many steps were fully automated thanks to the underlying BEA WebLogic Workshop application framework. Portal's pages navigation building, it would have taken much longer without BEA WebLogic Workshop, and it would have been a more intimidating and complicated project. And now that the modest learning curve is behind us, we expect future projects to move even faster."

Although the portal has been in production for only a few months, it is already handling 15,000 transactions each month for customs payments and property taxes. Receipts are in excess of $30 million. Processing time for the rural business-development tax credits has dropped from 60 days to four days.

"One particularly compelling success story has to do with customs payments," said Cuzmar. "In the past, a person could pick up a shipment and hand the customs official a bad check. By the time the check bounced, the person was long gone. Now, when shipments are scheduled to arrive, the duties can be paid in advance through the portal. If we don't receive the money, we don't release the freight. And if the freight sits on our dock, the duties increase. That encourages importers to pay promptly."

In addition to making the portal the primary channel for tax transactions, the Treasury's vision is to become a payment service provider to other government agencies. The Treasury is prepared to process and track payments and disbursements for all types of government fees, licenses, permits, and registrations. The service is already being leveraged by the Social-Secure Normalization Institute (INP), Public Health Institute (ISP), and others.

In addition, the Treasury is already assisting Chile's elections commission. Local elections are publicly funded to level the competition between rich and poor candidates. The same infrastructure the Treasury uses to track tax payments is being used to track the disbursement of public funds for local elections. Citizens are able to view every election expenditure via the portal, ensuring that the democratic process is completely transparent.

"The Treasury is operating much more efficiently, and we've been able to expand our value to the country, since deploying our BEA-powered portal," concluded Cuzmar. "We're serving our citizens more effectively. We're capturing more revenue for the government, and we're reducing the cost of ongoing operations."

About BEA

BEA Systems, Inc. (NASDAQ: BEAS) is a world leader in enterprise infrastructure software, providing standards-based platforms to accelerate the secure flow of information and services. BEA product lines—WebLogic®, Tuxedo®, JRockit®, and the new AquaLogic™ family of Service Infrastructure—help customers reduce IT complexity and successfully deploy Service-Oriented Architectures to improve business agility and efficiency. For more information please visit *bea.com*.

BEA Systems, Inc.

2315 North First Street
San Jose, CA 95131

+1.800.817.4BEA (US)
+1.408.570.8000

bea.com

January 2006 CCS1110E0504-1A

WLP, WLW/GOVT/CS