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Case Study

ITWorx Mobilizes its SOA Expertise to Fulfill the Egyptian Government Quest for Highly Accessible E-Services for Citizens

وزارة الدولة للتنمية الإدارية

Ministry of Communications & Information Technology

Country:
Egypt

Industry:
Government

Customer:
Ministry of State for Administrative Development and Ministry of Communications and Information Technology

Executive Summary

Bawaba, the Egyptian government's portal, provides citizens with online service. The government needed to increase customer accessibility to these services via multiple channels such as SMS, post offices, call centers, and automated kiosks. ITWorx built the architecture that connects these channels and delivered the Bawaba Services Channel Interface (BSCI), an SOA solution that acts as a mediator, handling requests for government services by the different communication channels and forwarding them to the Bawaba while maintaining the highest levels of security, control, and performance.

The Customer

The Ministry of State for Administrative Development (MSAD) and the Ministry of Communications and Information Technology (MCIT) launched the Egyptian government portal (Bawaba) in 2004. Bawaba is a gateway through which citizens can access all Egyptian government services, information, and documents.

By virtue of the Egyptian government's agreement with Microsoft in 2001, Microsoft is supporting Bawaba and working jointly with the government on one hand and with its partners on the other to deliver applications and services that cater to the welfare of the Egyptian citizen.

The Challenge

MSAD wanted to enhance and simplify the user experience of acquiring governmental services. They needed to introduce another set of highly accessible channels for citizens; such as mobile phones, fixed line phones (IVR and call centers), post offices, and automated kiosks.

MSAD needed a solution that would face all the architectural challenges of enabling a cohesive user experience irrespective of the medium of communication used. The solution should integrate with the various channels and multiple backend systems existing at various ministries. The solution should also provide the highest levels of transactions and information security, and enable Business Intelligence (BI) reports generation to reflect service utilization rate for different user categories.

> *"ITWorx, Microsoft Gold Certified Partner, and its professional support team assisted MSAD in enhancing the quality of the Egyptian governmental e-services for citizens through Bawaba portal by developing a new additional Bawaba Services Channel Interface "BSCI". BSCI project was seamlessly integrated within the Government Portal fulfilling the complex architecture requirements of the project."*
>
> ***Ashraf M.Fawzy, E-Gov Infrastructure Program Manager, Ministry of State for Administrative Development (MSAD)***

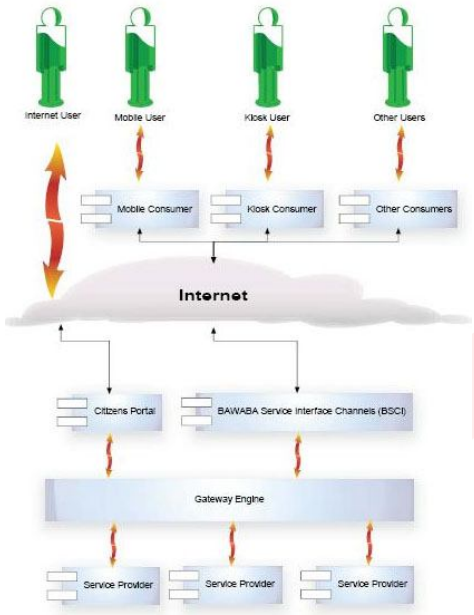
Technologies and Software

- Active Directory
- WSE 2.0
- IIS 6.0
- SQL Server 2000
- ISA Server 2004

The Solution

Microsoft Egypt commissioned ITWorx to create Bawaba Services Channel Interface (BSCI) for MSAD. BSCI acts as a mediator that handles requests issued by the citizen via different communication channels and forwards them to the Bawaba. BSCI solution is based on Service Oriented Architecture (SOA), in the form of an exposed Web service, which the communication channel can communicate with, using standard XML documents on top of standard protocols such as HTTP and SOAP. The Web service also performs data validation to protect the backend systems from malicious attacks and reduce bandwidth consumption for erroneous requests.

The solution guarantees secure communication through the use of Web Services Enhancement 2.0 (WSE2.0). The system authenticates the communication channel using X.509 certificates and once approved, a Security Context Token (SCT) is issued to be used at every later access. BSCI also includes tracking and logging capabilities needed for monitoring and troubleshooting system operations and generating BI reports for tracking purposes. The administration module enables granting/denying access to a function per service per communication channel. It assigns consumer certificates and maintains their credentials. It also controls the XSD schemas used to validate data.



The Benefits

Eliminating red tap through highly accessible services for citizens
A government-related errand that used to consume an average of 3.5 visits now takes only minutes. BSCI enhances governmental services, offered through Bawaba, and makes them accessible round the clock and from anywhere through various communication channels.

Attesting to the government dedication for citizen-centric services
Building a single government portal, accessible from multiple channels, confirms Egypt's efforts and commitment to fulfill the highly demanded services by citizens and rise up to meet international information technology lifestyle that is now indispensable in the daily activities of an average citizen.

Formulating technology innovation to achieve security and control
In designing BSCI, ITWorx created an optimum balance of quality and security; maintaining the level of security, requested by MSAD, while keeping adequate service speed and quality. ITWorx used the hybrid model that enables the government to limit access to special services and/or functions to a specified group of communication channels.

Building a better government-to-business rapport
BSCI reinforced the government's relationship with the private business sector such as mobile service providers. From the government's side, it is ensuring an easier and more comfortable means for citizen to access governmental services. Meanwhile, private businesses are adding to their customer share-of-wallet and satisfaction through introducing innovative, highly in-demand services.

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