

Laying the Groundwork for the Future: How Web Services Infrastructure is Changing the Mortgage Landscape

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(Part I of a two-part series.)

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Web services technology is the gift that just keeps on giving. By utilizing **Service Oriented Architecture (SOA)** and “**just-in-time**” Web services, lenders, vendors and service providers all benefit. Processes are streamlined across the board, in many cases eliminating outdated processes altogether. The result is more **efficient, more profitable** mortgage operations from origination through servicing.

Availability and adoption of Web services to meet a wide variety of mortgage banking needs have increased substantially in recent years. At the same time, application-by-application adoption has spurred creation of the necessary infrastructure to gain even more benefits from Web services moving forward. In this two part series, we'll look at some of the work that's been done in establishing that infrastructure, as well as the way Web services benefits continue to accrue over time.

Quicker, Cleaner, Better

To a great degree, the infrastructure needed to facilitate wider deployment of Web services is already in place, since many lenders have implemented individual Web services and the necessary conduits for their use. Arising from a basic reckoning—there there must be a better, cleaner way of executing process X—lenders have looked to Web services to enable a variety of operational improvements. By focusing on low-hanging fruit and going after time and cost reductions for key origination and servicing processes, lenders and servicers have already recognized significant gains.

Web services have also allowed lenders to completely eliminate outmoded and inefficient business processes to increase speed, reliability and security. Tools such as spreadsheets for storing and manipulating data, proprietary Web sites for connections between lenders and third-parties and direct dial-ups into proprietary systems can all be dispensed with. Instead, Web services can enable fast, direct access to the data and services lenders and their business partners need to operate efficiently.

In addition to benefits such as **automated ordering** for services such as property valuations or inspections, lenders can also **minimize internal and external transaction delays** through the real-time data access enabled with Web services. For example, lenders can deploy **automated business rules** to call up **fraud detection** or **risk mitigation** Web services, or access **detailed loan-level data** for decisioning or analytics. **Interactive Voice**



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Response (IVR) and **Web channel services** can be deployed to permit self-service solutions to common customer requests, decreasing call center volume and expense. For organizations that have made heavy use of hardware-intensive and time-consuming screen scraping operations to extract required data, the use of Web services can eliminate the need for this procedure altogether.

Whatever initial motivating factor is in play when a lender decides to incorporate Web services into its operation, doing so also builds the overall infrastructure and groundwork for further expansion and increased benefits.

The Framework for Success

The majority of front-end systems used by lenders today operate on **XML data**, as do standards such as **MISMO**. Indeed, almost all Web services follow the same model.

Standardization has increased the development of **middleware** that, having made a call to the appropriate Web service, only pulls the specific data that is necessary for the task at hand. This eliminates the need to transmit and maintain large amounts of irrelevant data—and helps ensure that data are displayed or delivered only to verified users for verified purposes.

Whenever transmitting data over the Web—some of it privileged, **non-public private (NPP)** information governed by **Gramm-Leach-Bliley**—security is obviously a prime concern. By putting controls in place to identify an authorized user and presenting only the data that each user is authorized to view and needs in order to complete a particular task, the security of Web services is ensured. Multiple layers of **back-end security**, including **encryption** and **digital certificates**, strengthen the protection of data in transit.

Perhaps the most attractive aspect of Web services arises from its **reusability**. Once connections have been made between lenders, vendors and third-party service providers, the use of enterprise-level middleware as an abstraction layer can provide access to data for a multitude of purposes. The key here is in the use of SOA and XML data structures, which allow for machine-to-machine communication based on messages rather than operations.

In part two of this series, we'll look at **opportunities for re-use** of services once they have been employed, the expanded benefits and what the future holds for the further development of Web services in the mortgage industry.

If You Build It, They Will Come (Again and Again)

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(Last of a two-part series.)

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In part one of this series, we examined the **infrastructure** that is **facilitating Web services** in the mortgage industry. Today, lenders are trending toward **enterprise-level middleware** that acts as an **abstraction layer** for data—no matter the source or destination—and provides **significant re-use opportunity** for the organization.

In this segment, we'll look at that **ability to reuse services** to accomplish new tasks beyond the initial goal that first prompted the implementation of Web services. We'll also examine how approaching operations from a **process perspective** has opened up further avenues for **enhancing mortgage operations, cutting costs, increasing efficiencies** and in some cases **eliminating processes** altogether.



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An Exponential Return

Web services deliver tangible benefits almost **immediately upon implementation**, with **quicker deployment cycles** and **transaction-based fee structures**. Lenders using Web services to replace screen scraping operations can do away with the banks of servers needed to power such efforts while drastically reducing the time to gather data. Customer-facing **Web channel** and **Interactive Voice Response (IVR)** services can deliver a better consumer experience, while offloading the most common tasks to a self-service model and allowing staff to devote more time to managing exceptions.

The benefits continue to accrue beyond these early advantages, often surpassing expectations and multiplying over time. The technology allows multiple disparate front-end systems to make use of the same data sources, tailored to the individual tasks at hand. Lenders are using sophisticated middleware to call out to the various services and act as an abstraction layer to determine the authority of users requesting data, then presenting only the data elements that are needed.

This infrastructure gives lenders a process-oriented view of their operations, allowing them to discover new ways to re-use data and services to enhance and/or streamline additional mortgage-related processes. **Service Oriented Architecture (SOA)** and Web services allow the lender to condense multiple systems into one. The same data can feed views for the end-customer, retail loan officers, customer service staff, servicing department and out to business partners, depending upon the needs and goals of the individual organization. It also works both ways: changes to data from one front-end are routed through the middleware, updating systems throughout the enterprise.

The Shape of Things to Come

In the months ahead, we will see greater aggregation of Web services. Results from one service will inform other services, with cascading events determining next steps. By aggregating services, out-of-date processes will continue to disappear.

For example, an **appraisal** or **BPO** ordered via one Web service returns data and a second service then propagates the data throughout the bank, avoiding the need for multiple updates and manual data entry. One Web service request can be made for a loan validation and another will pull loan-level information, screen it according to lender rules and then proceed to the next pre-determined step, automating several tasks within one process.

Best of all, once the connection points and infrastructure for Web services have been built, there's no need to build them again. Lenders leverage the same back-end systems to add additional applications as needed. The infrastructure is reusable by multiple applications, multiple departments and within multiple business processes in a single application. The result is significant savings across the board: in development, infrastructure, support and time-to-market investments.

In today's market, products and processes are in a state of flux for originators while rising default rates are placing new demands on servicing operations and spurring the need for new default, loss mitigation and collection techniques. These market changes require updates that must be pushed out to all business processes, and very quickly. Web services and SOA middleware allow lenders to adapt better and more quickly to such market changes.

Especially in times of market volatility, lenders must be able to react and implement change rapidly. Web services provide the very best route for organizations to further enhance the efficiency of their operations while cutting costs and boosting effectiveness.