



## **From Isolation to Alliance—Making the Move to a Networked Lending Environment**

Originating, closing, and funding a mortgage loan are not isolated processes. In fact, they cannot occur without the involvement of numerous external participants: mortgage brokers, title companies, appraisal firms, document providers, credit reporting agencies, etc. Typically, a dozen or more people touch a mortgage file on its way to funding. Unfortunately, mortgage lending solutions have not traditionally been designed to address the collaborative nature of the lending process. They instead are isolated systems that create isolated channels, receive only manual input from disconnected partners, which is manually disseminated to dispersed, isolated users.

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This isolation has led to stagnation in the industry, and greatly inhibited a lender's ability to build and maintain an agile business. In this paper, we will focus on what we believe to be the primary causes of isolation and stagnation in the mortgage industry: poor technology infrastructure and application architecture.

## **Using Technology to Tame the Volatile Mortgage Market**

In its sixth annual Mortgage Focus benchmarking study, published in 2005, Fannie Mae analyzed the performance and tactics of a group of what the Mortgage Banker's Association calls low cost/high productivity (LCHP) lenders. These lenders had "superior cost and productivity performances compared with their peers." LCHP lenders outperformed 75% of their peers in achieving lower average costs to originate loans and higher overall productivity.

The study points to the use of technology to automate certain functions within the origination process as a key success factor for this group. Some examples include:

- In retail, lenders who used electronic processing and closing technologies and electronic ordering of third-party services for approvals shortened cycle times. And lenders who used business process management (BPM) had cycle times two days faster than the channel average.
- Internet/call center channel lenders who used an automated underwriting system integrated at the point of sale for more than half of their originations had 7 percent lower dollar costs and 13 percent lower basis points per loan.
- Wholesale and correspondent lenders who used automated underwriting for more than two-thirds of their loan production volume lowered average per-loan costs by 44 percent over lenders who used manual underwriting for most of their loans.

In 2004, each origination category saw downturns in overall productivity and originations and an increase in costs, but the lenders who were able to streamline and simplify even one origination process through automation were far less impacted by the general downward trends.

See cost and productivity data collected for retail and wholesale channels below.

**LCHP COST & PRODUCTIVITY SNAPSHOT  
WHOLESALE CHANNEL**

	LCHP Lenders	Wholesale Channel
Average Origination Volume	\$2,054,314,500	\$6,030,993,695
Average Cost (bps)	130.29	198.99
Average Closed Loans per Direct FTE	177	96
Average Closed Loans per AE	2,033	1,032
Average Pull-Through Rate	70%	65%

**LCHP COST & PRODUCTIVITY SNAPSHOT  
RETAIL CHANNEL**

	LCHP Lenders	Retail Channel
Average Cost per Closed Loan	\$1,161	\$2,703
Average Cost (bps)	89.14	176.36
Average Closed Loans per Direct FTE	77	45
Average Pull-Through Rate	78%	73%

SOURCE: Fannie Mae

A recent report from TowerGroup echoes these findings and supports the need for increased automation:

“The US Mortgage Bankers Association (MBA) forecasts (as of March 2006) that residential mortgage lending volume in 2006 will drop 19% from volume in 2005. TowerGroup analysis of historical MBA data on loan origination cost and loan volume shows that lenders’ cost metrics worsen considerably when loan volumes decline. Too many lenders, having forecast market-share increases, can’t reduce high overhead quickly when demand declines because it takes time to restructure people, processes, and locations to fit the lower level of demand.”

Restructuring people, processes, and locations to meet changes in demand is a time consuming and costly endeavor for most lenders. And yet, in an industry as volatile as mortgage banking, the ability to do this can mean the difference between a good year and a bad one. This underscores a fundamental disconnect between the nature of the mortgage process, which is highly collaborative, and the technological constructs that currently exist to automate it, which often create isolation and obstruction within the mortgage enterprise.

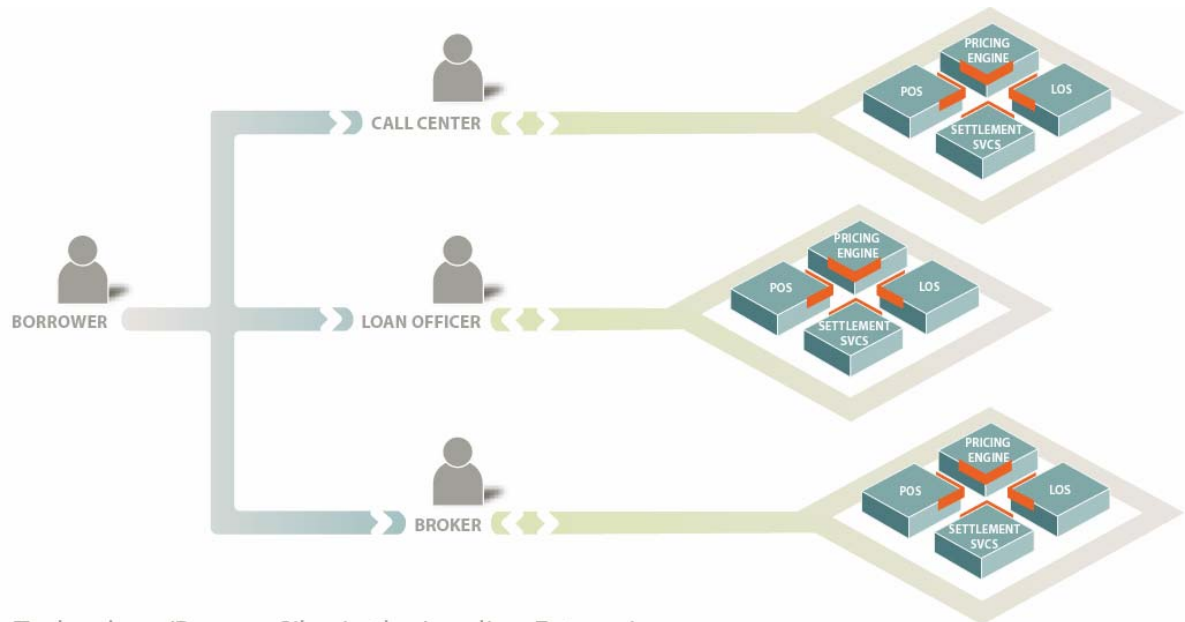
## The Cost of Poor Architecture

The mortgage industry is one of the least automated in the United States. Most communication occurs via telephone, fax, courier, or mail. This lack of seamless, fully automated workflow manifests itself in lengthy and costly transaction periods. The average application-to-close cycle time for a mortgage loan is 40 days. The average cost to originate per closed loan ranges from \$1,889 for consumer-direct channels to \$3,925 for wholesale channels. Both of these figures are astronomical when you consider that the product being manufactured and sold is purely information-based.

When viewed holistically, the loan process is analogous to a modern manufacturing process, which in most industries has already been highly automated. In the mortgage process, the product being manufactured is a package of borrower information that is consumed by a secondary market investor. Like all manufacturing processes, there are repeatable activities within the process that gain significant efficiencies through automation. Mortgage processing should benefit even more from automation than physical manufacturing processing because the mortgage product itself can be handled in a purely digital form. Part of the problem lenders have had in fully digitizing is that much of their process depends on partners, many of whom are not yet fully digital.

The main barrier to digitization, for lenders and their partners alike, arises from the architectural limitations of mortgage technology. The monolithic applications that are currently deployed among most top-tier lenders have poor interoperability, limited adaptability, and lack the ability to scale to meet increasing volume pressures. Perhaps most importantly, they create a gap between the customers (selling) and the transaction (fulfillment). Also, with the spate of mergers and acquisitions that have occurred over the past five years, lenders have been left with a hodgepodge of disparate systems that provide some automation—but for only a limited segment of the operation, like a single channel or even a single function within that channel. These systems offer little if any visibility into each other, and the people who use them have little or no visibility into what’s going on in the rest of the process. This isolation greatly impedes the loan process and the lender’s ability to achieve end-to-end automation.

In these environments, enterprise application integration (EAI) middleware is often used to build interoperability between application silos and to support business process automation, which is the creation of process scripts that define the movement of data between applications. Unfortunately, in most cases, EAI-driven business processes are static and brittle, suffering similar adaptability issues as the monolithic applications.



Technology/Process Silos in the Lending Enterprise

Also, these systems are not designed to extend beyond the enterprise. To try to achieve a degree of interoperability with external service providers, many lenders have deployed point-to-point integrations. However, most of these “tightly coupled” integrations utilize highly customized, brittle EDI files that increase costs and limit the adoption of more automation.

Attempts to replace legacy systems have been mammoth undertakings, requiring multi-million dollar investments and extended project timelines, leaving the lender with a new, poorly architected system upon deployment. The high visibility and risk associated with these big budget “rip-and-replace” projects put many CIO jobs at risk due to large budget overruns and, often, outright failures.

With the emergence of the Web, lenders have, in some instances, been able to achieve more open sharing of information between certain participants and systems in the mortgage process. Many large lenders have online portals where consumers can directly enter information and apply for a loan. Most also do at least some credit checking through integration to credit providers and automated underwriting through integrations to Fannie Mae, and Freddie Mac.

However, because the most entrenched technology vendors have only gone so far as to offer Web front ends for their client/server or mainframe-based systems, lenders have not been able to achieve the levels of seamless, end-to-end integration required for true business agility. There is typically still a large fault-line between the point-of-sale systems and the processing systems

in most lending organizations, leading at best to limited, untimely communication between the two systems and at worst to manual rekeying of data. Product rate and guideline changes are not efficiently conveyed from back office to the point of sale. Pipeline data from the front office is not available quickly enough or in enough detail for underwriting to make optimal exceptions or secondary to make optimal hedge trades.

This isolation has led to many forms and degrees of stagnation in the industry as lenders are still confronted with the same business problems they have been trying to solve for years.

Lenders are forced to “bet the business” on a particular strategy, channel, or type of product. They are not free to easily address new market needs as they arise. SourceMedia offers endless listings of leading lenders by “type” – wholesale, retail, correspondent, home equity, Alt A, subprime retail, subprime wholesale, etc. – each of these product “channels” requires separate sets of customer and product information, and unique workflow. Most existing lending environments cannot alter their processes to accommodate these differences, requiring entirely new solutions be put in place for each type of loan. The cost of originating a loan for both consumers and lenders increases every year. On average, the time it takes to close a loan has never decreased. And, as Tower Group reports, the only way lenders can handle significant increases in demand is by hiring more people, which they are then burdened with when volumes drop again, as they always do.

The bottom line is that isolation destroys a lender’s ability to be agile. Yet every day lenders are confronted with change of one kind or another – from rate changes and industry consolidation to regulatory reform and an enlarging or bursting housing bubble. All of these factors inform lender business decisions, and because they do, lenders continuously feel the pressure to implement new business strategies in the hopes of staying one step ahead. However, because of the isolated nature of most lending enterprises, a lender’s ability to implement these strategies is greatly inhibited.

The most commonly implemented business strategies range from radical: mergers, acquisitions, spin-offs, and off-shoring, to ostensibly simple: forming new partnerships, adding new products or channels, or altering operational processes. Radical or simple, all of these divert human resources and deplete capital, as well as add complexity and obstacles (isolation) to your processes. Because of this, technology heavily influences a lender’s business direction and the degree to which it can be successful pursuing different strategies and goals.

## Characteristics of the Agile Lender

Ultimately, the most successful lenders will be those whose businesses are not dictated by technological limitations, but by the needs of their customers and the direction of the market.

For this reason, a new type of lending technology infrastructure is needed—one that facilitates evolution and change and enables lenders to implement new business strategies rapidly and cost effectively. Ideally, such an infrastructure would have the following characteristics:

- 1) Openness - to enable all “assets” in the extended enterprise (both inside and outside the lender’s firewall) to exchange data freely with each other
- 2) Federation - to enable peer-to-peer collaboration between lenders, consumers, business partners, and service providers
- 3) Extensibility - to enable rapid and seamless integration of new systems and services into the lending workflow
- 4) Flexibility - to enable dynamic workflow and rules-based system configuration
- 5) Accessibility - to ensure assets are “always on” and instantly available to all participants on the network

This type of environment would enable lenders to adapt to the market’s ebbs and flows. Restructuring people and locations would no longer be necessary, as spikes in demand could be easily handled by a streamlined organization leveraging fully automated processes. And processes could be dynamically restructured for each loan based on pre-defined rules.

All of these characteristics are present in what we call a “networked” home lending environment. In a networked environment, the LOS is not a single application or even an integrated suite of applications, rather, it is a “virtual” solution composed of applications and resources that are distributed across multiple locations. A networked environment offers the highest levels of openness, extensibility, and flexibility available in information technology.

Resources on the network behave in a one-to-many model in which a centralized instance of a piece of software or a service can be leveraged by any user or system on the network. Rules used to govern these resources, therefore, can be created once and will automatically apply enterprise-wide, as every participant involved in the process seamlessly collaborates and shares information via an interconnected, distributed, Internet-based infrastructure. Because of this, processes and workflow can change and be reconfigured on the fly. The most complex and disjointed processes can be orchestrated into seamless end-to-end transactions using best-of-breed components, ensuring maximum efficiency and optimal resource utilization. Changes in demand and capacity for risk are translated instantly from Wall

Street to rate sheet. Lender strategies, product offerings, and capabilities are no longer circumscribed by the limitations of their underlying technology.

Collaboration and information sharing over the network can occur among applications that exist both inside and outside a lender's organization. Service offerings from partner companies are exposed as Web services and utilized as network resources that can be leveraged as part of the lender's workflow. In this way, workflows can be "federated" across the extended enterprise and allow data to be seamlessly exchanged between internal and external systems, creating a robust "chatter" between them. This also means that work can be delegated to systems and users both inside and outside the organization, enabling the use of on-shore or off-shore resources as required. The ability to federate workflows dissolves the barriers between consumers, lenders, and partner companies, enabling peer-to-peer collaboration among all participants in the mortgage process.

In the same way, banks can easily extend utilization of the network beyond the mortgage banking business unit to incorporate other internal retail banking processes. In a networked environment, retail banking components and processes can become participants on the network and dynamically interact with mortgage banking users, components, and processes, and vice versa. This facilitates information sharing between business units, allows real-time collaboration among employees, and enables automatic, context-driven cross selling of services. With the current emphasis on convergence of mortgage and retail banking, network-based architectures provide a viable and even cost-effective solution for banks who want to consolidate operations across the bank.

This type of environment also addresses many of the persistent challenges lenders have faced in trying to integrate newly acquired companies. The plethora of mortgage industry mergers and acquisitions over the past four years has exacerbated problems of system disparity as well as user and channel isolation. Without the correct technology infrastructure in place to enable rapid and seamless integration of newly acquired software components, people, and processes, lending operations become even more disjointed, sluggish, and error-filled. In a network-based lending environment, each new resource can rapidly assume the characteristics of a network resource and become a seamless participant and dynamic component of the lender's existing loan processing workflow.

In a networked environment, the time and cost associated with closing and funding a loan decrease exponentially, and the foundation for a completely paperless mortgage is in place. Customer needs take a front seat, enabling lenders to alter processes and select products and programs that best meet a customer's unique needs without having to disrupt normal operating procedures. Innovations in loan products, business models, and automation technologies benefit consumers in days or weeks, not years or decades. A wider diversity of loans meet a wider diversity of needs, and a greater share of each loan pays for home value rather than market friction.

Perhaps the most radical transformation driven by the network approach will be in the dynamics between lenders and their service partners. For years, lenders have tried to link to mortgage business partners electronically. Unfortunately, few companies could afford the high cost of deploying the physical connections—private networks based on dedicated point-to-point leased lines. To address this issue, value added networks (VANs) were formed to reduce the number of connections. The VAN allows a lender to connect to a hub that supported a common, but proprietary, request/response format that enabled the VAN to managed interoperability issues. Unfortunately, VANs did not relieve the financial issues as expected; rather, the high cost was moved from physical connections to a “per transaction” cost. Also, no single VAN included all vendors, requiring additional connections and/or connections to cumbersome multiple VANs.

With the rise of service-oriented architectures, VANs have become obsolete. Using a networked approach, any vendor service can be exposed as a Web service on the network and become an enterprise asset that can be leveraged by users and other applications on the network. These services can also be dynamically marshaled at runtime to become part of the workflow for a particular loan, based on the business rules set up in advance by the lender. This will give lenders unprecedented leverage with service providers whom they can swap in or out of the process on a per loan basis based on their own business needs and those of their customers. Now imagine a critical mass of vendors “living” on your network as leverageable assets. We are not far from realizing a complete shift in the market dynamics between lenders and their suppliers, which will have a far reaching impact on the industry.

## **Characteristics of the Agile Lending Architecture**

### ***The Services-oriented Architecture***

To build a networked architecture, a move away from the tightly coupled, monolithic systems of the past and toward systems of loosely coupled, dynamically bound components is needed. This architectural model offers a “best-of-breed” approach where new components and services, whether internal or external, can be plugged into the platform and made rapidly available by binding them to a business process.

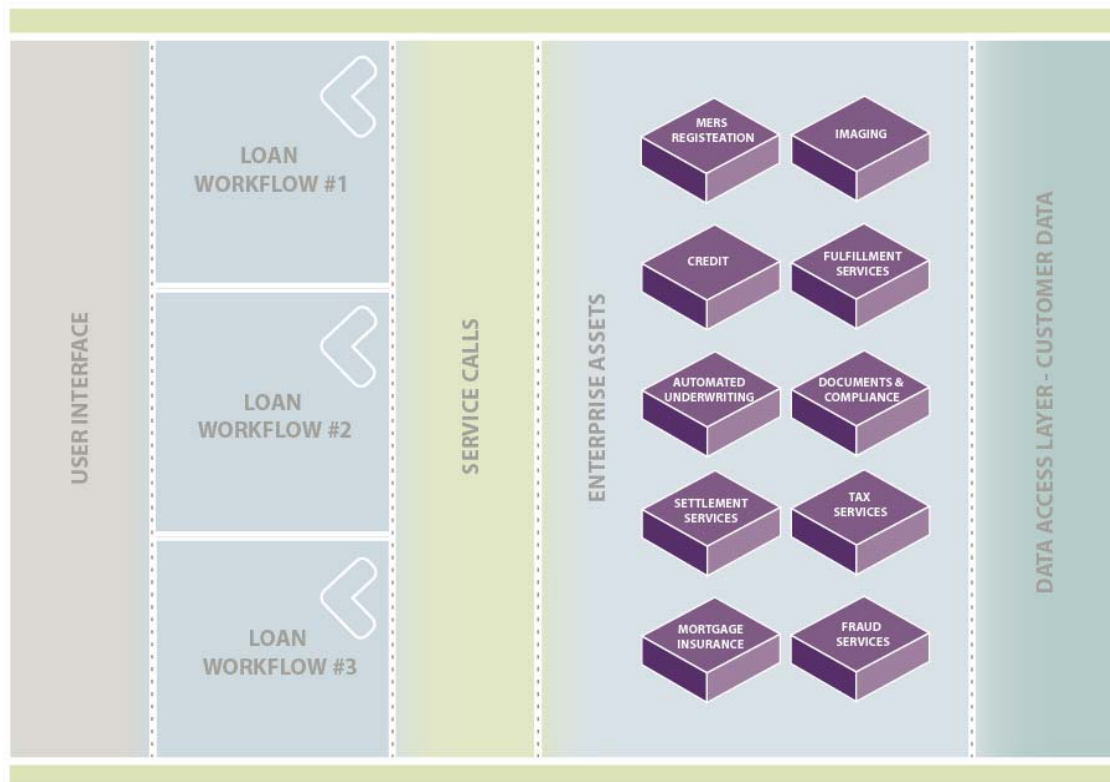
In software development, coupling typically refers to the degree to which software components depend upon each other. Loose coupling of interacting software components means that the components locate and communicate with each other dynamically, or, on-the-fly. Next-generation lending applications will therefore be based on compositions of services discovered and marshaled dynamically at runtime (on-demand integration of services), and orchestrated by context-driven business processes.

Business processes can be designed to consume coarse-grained business components dynamically, based on loan and product data and rules. The

result is a high level of flexibility and overall business agility.

While componentization and its inherent benefit of software reuse has been common within the world of J2EE programming, the emergence and adoption of open standards for integration (most notably the Web services stack of SOAP, WSDL, XML and UDDI) present a standard, application-independent means for components to be exposed as a library of invocable services. Building libraries of components into a vast network of distributed services is the concept of software virtualization, or, what is referred to as a Service-Oriented Architecture (SOA).

SOA enables more flexible systems that are easier to integrate and change, and Web services solutions play an important role in enabling this transformation. A services-oriented architecture enables the linking of resources and business services on demand, where resources are made available to other participants in the network as independent services that are accessed in a standardized way.



Services-oriented Architecture

Because of their ubiquitous availability across the extended enterprise (both

inside and outside the lender's firewall) these services are referred to as "enterprise assets." Enterprise assets could include a centralized repository for product and pricing data, centralized vendor management, or even an automated underwriting system. The dynamic linking of enterprise assets provides for more flexible, loose coupling of resources than in traditional systems architectures. It also obsoletes the idea of upgrading your software. With an SOA, upgrading means simply integrating new enterprise assets into your existing system and making them available to different participants at different points in the process to alter workflow. In this model, you should never have to do a wholesale replacement of your system with a new version.

Services-oriented architectures hide the underlying technology of an enterprise asset, allowing an application to use the service without having to understand the underlying technology. An application need only know what a service does, how to use it, and where to find it. Additionally, the loose coupling of Web services allows applications that rely on that service to continue to run regardless of implementation changes. These two key pieces of a services-based architecture—technology independence and loose coupling—fulfill today's lending needs where yesterday's component architectures failed.

A good example of this is in delivering a document service as a Web service. A document engine exposes its services to the network, which allows requesting applications to build a service request (e.g., upfront docs) that includes the necessary data for the engine to:

- Determine what documents are required
- Merge the needed data into the appropriate documents
- Deliver the completed doc set back as a response

Note there is no constraint about *when* in the process the request can be made or *how* the document response is built. This allows freedom for the requesting application to determine its own process flow independently of the document component, and the document engine to manage its technology independently as well. In addition, the document engine can be replaced by a better engine (using the same API) without impacting any of the applications.

In a services-oriented architecture, enterprise assets can be dynamically composed into applications stemming from capabilities-based look-up at runtime, instead of traditional static binding. The dynamic nature of the collaborations allows the implementations to be platform- and programming language-neutral, and communications mechanism-independent, while enabling the lender to create innovative mortgage banking products, processes, and partner ecosystems.

Use of a services-oriented architecture also provides greater flexibility to enable faster response to change and accelerated development projects that can reuse existing enterprise assets. The adoption of an SOA enables the definition of any application functionality or data set as an enterprise asset

that can be shared with other existing applications or used to create new composite applications.

### ***Context-driven Process Orchestration***

While Web services standards are important in increasing the interoperability of systems, these standards are merely one means to an end and not the end game itself. The true value of SOA for the mortgage industry comes from the ability to orchestrate internal and external enterprise assets across executable business processes.

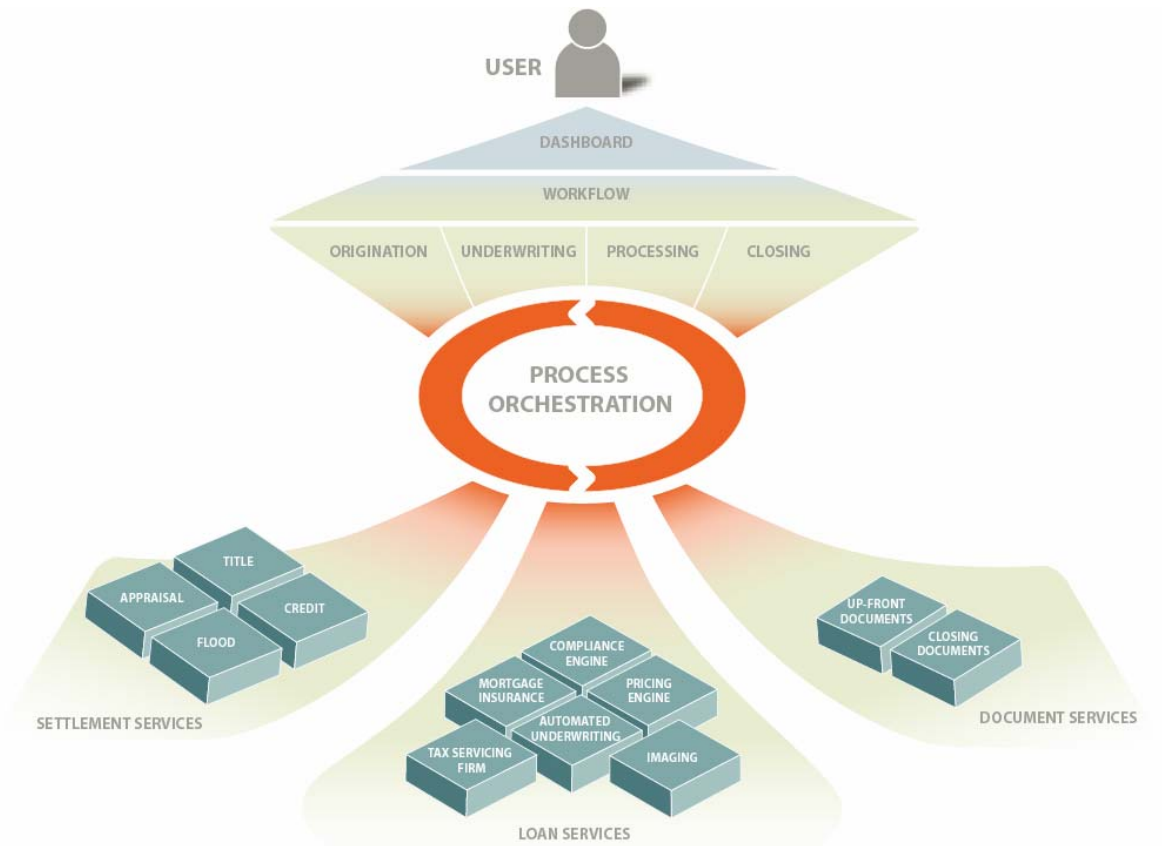
Orchestration involves a development and deployment methodology that abstracts business processes from specific application logic and data sources, and directs and manages the on-demand assembly of multiple component services. This makes it possible to logically chain discrete functions and resources into inter-enterprise business processes.

What an orchestration-based approach offers is the ability to manage processes of greater complexity with far more efficiency than is possible with alternative approaches. Orchestration allows for the sequencing of steps to be determined during the runtime instance of a process, with paths and resource selection determined by evolving context resulting from each new step. The potential number of paths and outcomes may be too complex to define in terms of pre-determined “If-Then-Else” rules, but may be easily resolved through human interaction and decision-making.

The complex, end-to-end loan origination, processing, and closing process does not lend itself to comprehensive automation, where the exact sequence of steps and tasks can be known in advance. The optimization of the loan process demands the flexibility to adapt and modify the timing and sequence of steps and procedures based on the continuously changing climate of the lending environment.

The industry is seeing growing adoption of automated valuation models (AVMs) in place of full appraisals for certain classes of loans. The lower cost and faster response times of AVMs benefit both the consumer and the lender. The ability to rapidly change which loans can use AVMs (based on loan characteristics like LTV and loan product) and have that change manifest as tasks in a dashboard on a loan-by-loan basis is an example of the improved business agility derived from the a properly orchestrated process.

Context-driven orchestration supports process flow paths that are dependent on the outcome of previous steps. Context-driven solutions are capable of process orchestration, even in instances where all possible path permutations and process outcomes cannot be pre-defined. Solutions built using context-based process orchestration allow lenders to enforce the governance and process integrity expected from an SOA, without forcing the impossible task of hard wiring all possible process flows.



### Federated Workflow with Process Orchestration

An orchestration-based approach also enables what we call “recursive” workflow. With recursive workflow, a change that impacts a previous step in the workflow will be reflected in the impacted activities only, without forcing the user to restart the process. For example, if the automated underwriting decision requires the user to select a new product for the customer, the system will give visual indications of the activities that have been impacted, and the user need only make corrections to the highlighted activities to move forward with the rest of the process. A lending solution that does not offer process orchestration would force the user to begin the origination process again for that loan.

Combining a business rules engine (BRE) with a services-oriented architecture and process orchestration capabilities would take this level of automation even further. The BRE would allow lenders to set up business rules that use “If-Then-Else” logic to define which enterprise assets, resources, and steps should be used for a particular type of loan. This would enable the system to automatically select the workflow process, for example,

for purchase, home equity, sub-prime, and commercial loans, dynamically at run-time, each leveraging different steps and combinations of the same enterprise assets.

### ***MISMO***

The other movement that is helping to advance interoperability of the disaggregated mortgage ecosystem is the growing adoption of XML for the interchange of real estate related data.

The Mortgage Industry Standards Maintenance Organization (MISMO) was established by the Mortgage Bankers Association (MBA) to coordinate the development and maintenance of XML real estate finance specifications. MISMO has published specifications that support mortgage applications, mortgage insurance applications, secondary, investor delivery, real estate services, credit reporting, and underwriting process areas. The definitions being defined by MISMO will make it easier for systems to interoperate using a common vocabulary.

### ***Rich Internet Applications: Rich Clients for SOAs***

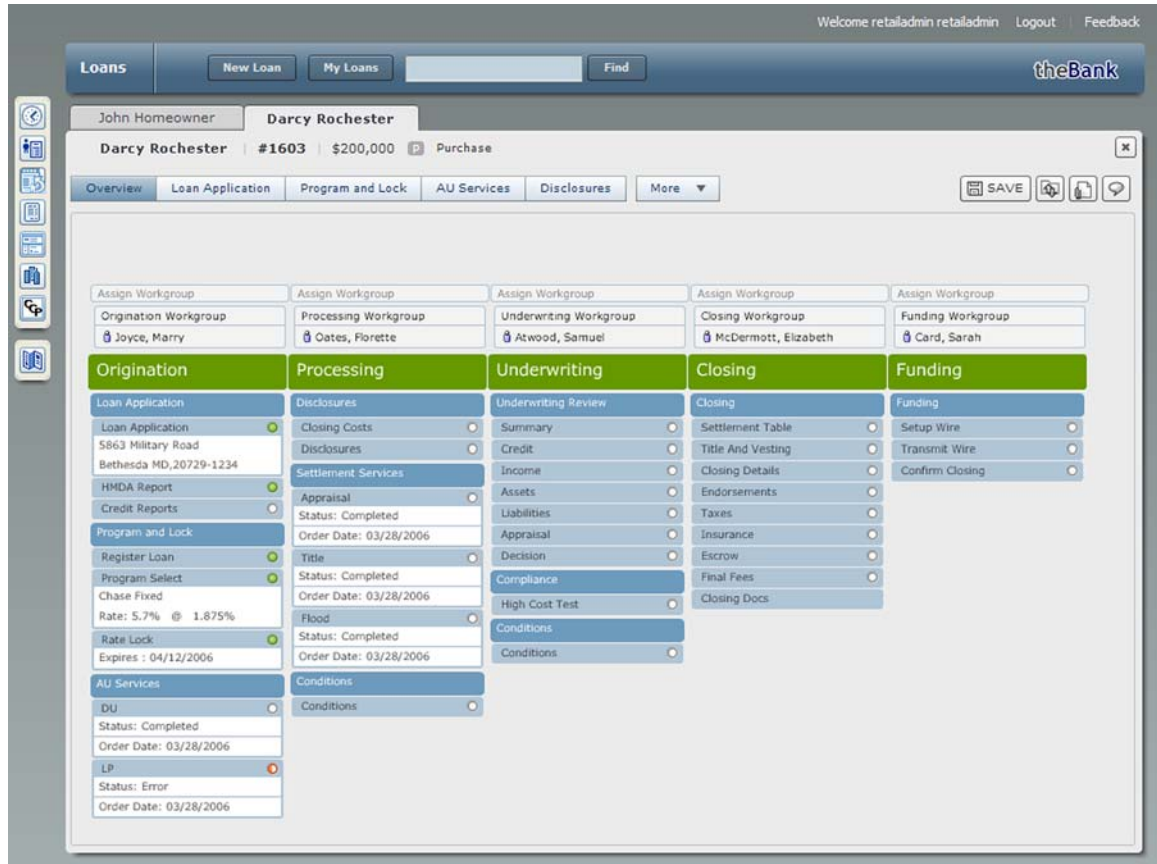
While companies have long delivered application functionality to Web browsers, users are now coming to expect increasingly greater interactivity from this presentation tier. They are demanding a set of rich user experience capabilities that include visual interactivity elements and instant access to information, interaction with distributed and remote applications, and integration with local desktop applications. Lenders today want to gain the operational and cost advantages of Internet and Web services technologies, but don't want the limitations that Web browsers impose on user interfaces.

There are significant changes occurring in the market for UI development, with the emergence of a new category of what analysts are calling Rich Internet Applications (RIA). Rich Internet Applications offer the benefits of distributed, server-based Internet applications with the rich interface and interaction capabilities of desktop applications—resulting in significantly more intuitive, responsive, and effective user experiences.

Rich Internet clients don't have the performance, interaction or real-time limitations that HTML-based browsers have. For example, rich clients provide windowing features, menu bars, and multimedia components that a browser or portal cannot. They can also integrate local and remote sources of data. Like the standards-based Web thin client, they can be truly loosely coupled, enabling innovation of the business logic independent of the user interface.

Rich clients aren't tethered by specific, tightly-coupled communications protocols, as are most client/server thick clients and Web-based thin clients. Rather, rich clients can communicate with a wide range of distributed

computing systems using both synchronous and asynchronous communication modes as needed. As a result, rich clients can surpass the inefficient request/response paradigm of thin clients and make use of the most cost-effective and productive means to communicate.



Networked LOS with Rich Internet Application Interface

### On-demand Delivery

The previous sections describe the fundamental architectural requirements for what we call a “networked” home lending environment. In a networked environment, the LOS is not a single application or even an integrated suite of applications, rather, it is a “virtual” solution composed of enterprise assets and resources that are distributed across multiple locations. A networked environment offers the highest levels of openness, extensibility, and flexibility available in information technology. However, with broad distribution comes distributed management, which can be prohibitively expensive if it’s possible at all. To maximize manageability and ensure the

system can be maintained cost-effectively over time, networked environments require a non-traditional method of delivery.

Like all distributed computing environments, a networked lending environment can only be efficiently managed when there is a hub through which all activity is administered and controlled. The Internet provides a cost-effective medium for broad asset distribution, but transaction control, security, compliance, and system management can only be achieved if the controlling systems exist in a centralized location. With core applications and interfaces to all enterprise assets located in a centralized data center, the entire solution can be delivered as a service using a software as a service (SaaS) delivery model. This gives all participants on-demand access to the entire virtual solution, based on permissions. Rules for permissions are managed centrally by the lender who will have primary access to all systems located in the data center. Security, administration, change control, and technical support can be provided by a single vendor. All additions, changes, and updates to information and applications can be made directly to the control systems and pushed to all users via the network.

## Conclusion

Recent research by Fannie Mae and the Tower Group supports the fact that lenders who implement technology to automate processes are more efficient and productive, outperforming their peers even in times of extreme market volatility. In fact, because the mortgage industry is impacted by such a unique and volatile set of market dynamics, a lender's ability to succeed is largely determined by its ability to respond to these dynamics. And a lender's ability to respond to these dynamics is largely determined by the flexibility of its systems and processes.

Mortgage lenders have a long history of trying to gain flexibility by automating their processes using traditional information technology including mainframe- and client/server-based solutions. More recently, many lenders have superficially incorporated Internet technologies into these solutions, but are little if any closer to the goal of achieving end-to-end automation. Overwhelmingly, the mortgage lending solutions that exist today are not equipped to address the unique needs of the mortgage process, which is highly collaborative. The technologies in widest use today are highly obstructive, creating isolation between users and channels, and impeding business processes.

Thus, a new type of lending technology infrastructure is needed—one that integrates all aspects of the mortgage process and enables all participants to collaborate as peers. Achieving this level of automation requires a “networked” home lending environment in which the process is run not by a single application or even a suite of integrated applications, but by a virtual solution composed of enterprise assets and resources that exist in multiple locations, can freely exchange data across organizational boundaries, and can

dynamically compose workflow at runtime. An ideal architecture for this type of environment consists of a single platform based on a services-oriented architecture that offers context-driven process orchestration capabilities and is delivered using a software as a service model. These capabilities are coupled with a rich Internet application on the front end to optimize usability in a distributed, Internet-based environment.

In the ongoing battle to become more agile, lenders have a new weapon against isolation and stagnation in the enterprise. With the power of the network behind them, lenders will not only change the way they do business for the better, they will fundamentally change the dynamics of the mortgage lending industry.

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