

A publication of PwC's Financial Services Institute (FSI)

Orchestrating Mortgage Lending Using Business Process Management

November 2010



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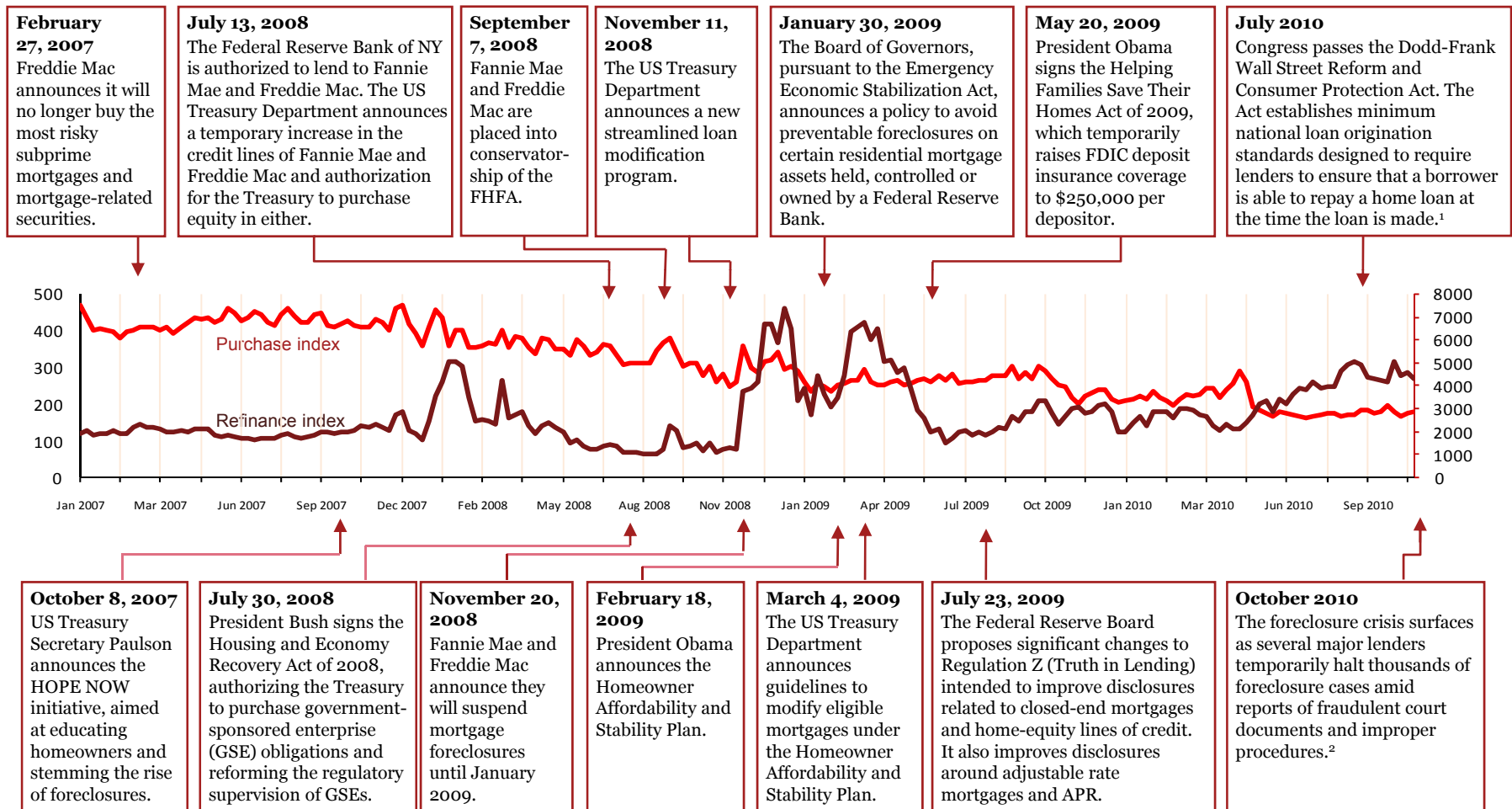
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Section 1

Point of view

Point of view

The recent financial crisis has caused the mortgage lending environment to change dramatically.



Graph: MBA and Haver Analytics

Timeline: The Federal Reserve Bank of St. Louis, "The Financial Crisis: A Timeline of Events and Policy Decisions," timeline.stlouisfed.org (January 7, 2009, last updated May 28, 2010) <http://timeline.stlouisfed.org/pdf/CrisisTimeline.pdf>, accessed September 17, 2010.

¹PricewaterhouseCoopers, LLP "The Dodd-Frank Wall Street Reform and Consumer Protection Act – Financial Regulatory Reform," July 21, 2010.

²Dina ElBoghdady, "Amid mortgage mess, owners are blindsided," The Washington Post, October 30, 2010.

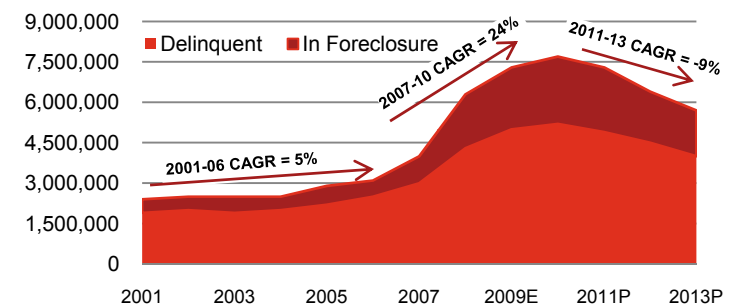
Point of view

Mortgage lenders are now facing several challenges that are straining their operations and diverting their attention from other crucial business goals.

Lender resources are strained by rising delinquency rates and unrelenting loss mitigation volume.

As of the end of the second quarter 2010, 9.9% of one-to-four unit residential mortgage loans outstanding were delinquent, an increase of 61 basis points from second quarter 2009. The percentage of loans in the foreclosure process at the end of the second quarter was 4.6%.¹ According to estimates by the Tower Group, mortgage defaults are expected to remain high through 2013 (see chart). The direct cost per loan serviced has increased over the past decade and was estimated to be \$103 in 2009.² Low interest rates, falling home prices, and tax incentives also spurred additional mortgage applications in 2010, both for purchases and refinances.

The mountain of mortgage defaults will remain high through 2013



Revised underwriting standards and new government programs present further challenges to the mortgage lending industry.

During 2008, Fannie Mae and Freddie Mac tightened their product underwriting guidelines in response to turmoil in the mortgage market. As a result, more paperwork and additional verification checks were required, requiring lenders to adjust. Due to inflexible business processes and technology, many lenders were unable to respond to the new guidelines quickly and often had to rely on manual workarounds to implement necessary changes.

Starting in 2009, the federal government announced several programs designed to help US consumers avoid foreclosure and to increase housing demand by providing tax credits. These initiatives, such as the Making Home Affordable Program and the Home Affordable Modification Program (HAMP), generally required mortgage lenders to modify their underlying processes to comply with program requirements. Lenders continue to struggle to make these modifications in a timely manner. Title XIV of the Dodd-Frank Wall Street Reform and Consumer Protection Act will create new regulations to protect consumers, potentially leading to additional regulatory requirements for mortgage originators.

¹ The Mortgage Bankers Association, "Delinquencies and Foreclosure Starts Decrease in Latest MBA National Delinquency Survey," Targeted News Service, August 26, 2010.

² TowerGroup, "Reinventing the Mortgage Business: Zero-Defect Initiatives, Portfolio Risk, and Cost Takeout," www.towergroup.com (June 24, 2010)

Point of view

In responding to these challenges, mortgage lenders have discovered that their existing business processes and technology platforms cannot keep pace in times of rapid change.

For many lenders, the recent upheaval in the mortgage market is forcing greater reliance on manual processes and workarounds to compensate for the limitations of legacy technology systems.

Inflexible technology platforms make adapting to change difficult for many mortgage lenders. Older technologies cannot be modified without IT intervention due to their level of complexity or because the rules may be embedded in underlying system code. Because such changes take time, manual workarounds are created outside the system. Internally, this means that transferring data between functional areas requires manual checking and rework because the data no longer exist within the system.

Vulnerabilities in lender systems and processes are intensified by the manner in which regulatory changes and new programs are introduced. Although the government typically announces general guidelines in advance, final details typically remain uncertain until close to the effective date. This leaves lenders with a choice: try to anticipate what the final change will entail, often implementing system enhancements that might well require subsequent updating, or wait for final guidance to be issued to begin the process of addressing the necessary system changes. Both approaches lead to significant risk, but the latter relies on personnel to keep pace with rapid developments and change processes accordingly.

The problem may only intensify as government program guidelines continue to evolve. For example, as of June 2010, lenders must fully verify borrowers' eligibility for permanent loan modification before they can offer trial modifications. However, lenders are struggling to meet the new requirement because of inflexible business processes. According to experts, only 54% of homeowners currently deemed eligible for HAMP have been offered trial modifications, leaving significant work to be done.¹

¹ The US Department of the Treasury, "Making Home Affordable Program: Servicer Performance Report Through September 2010," [financialstability.gov](http://www.financialstability.gov/docs/Sept%20MHA%20Public%202010.pdf) (October 25, 2010) <http://www.financialstability.gov/docs/Sept%20MHA%20Public%202010.pdf>, accessed November 3, 2010.

Point of view

For mortgage lenders with inadequate business processes and technology, the stakes can be high.

Lenders that can respond to market and regulatory changes quickly have the ability to win market share; whereas, lenders that cannot keep pace with these changes risk penalties, further losses, and potential disciplinary action.

With available resources tied up in loan modification and loss mitigation work, lenders have little time to focus on product innovation and future business planning. Absent a holistic view, lenders cannot respond with agility and risk losing their competitive edge. For example, HAMP presents an opportunity for lenders to increase market share and earn incremental revenue through government incentives. However, lenders that cannot implement this program effectively are presented with a risk. The success of this program continues to be under the microscope, as the number of canceled trial modifications in the program continues to exceed the sum of permanent modifications issued—and the gap is growing. Phyllis Caldwell, chief of the Treasury Homeownership Preservation Office, recently said that her office is looking at servicers' performance and will explore "every remedy available" against servicers that fail to be effective in issuing permanent loan modifications. Some examples of remedies include withholding further incentives in HAMP or clawing back incentives already issued via the program. Likewise, the Obama administration recently introduced new reporting metrics to evaluate servicers, including measuring response times to borrower phone calls and outcomes for those borrowers ineligible for HAMP modifications or those unable to convert their trial modifications to permanent ones.¹

Furthermore, FDIC takeovers continue to be a concern for the lending industry. With 139 closures so far in 2010, the pace of bank failures is on pace to exceed the 140 closures that occurred in 2009. By this time last year, regulators had closed 106 banks. The year 2009 had the highest annual tally since 1992 at the height of the savings and loan crisis. The pace this year has accelerated as losses mount on loans made for commercial property and development.² By one estimate, defects in mortgage process, product, and technology will contribute directly to 25% of all FDIC takeovers of mortgage lenders in 2010.³

Additionally, TowerGroup predicts that the inability to originate loans without defects will drive 100 lenders out of mortgage banking during 2010 and 2011. Conversely, lenders that originate mortgages without material compliance defects will win market share.⁴ For these reasons, lenders have an incentive to meet rapidly changing market conditions and reporting requirements. To do so, mortgage lenders need a more highly automated methodology to collect, process, and report data, enabling them to process mortgages more efficiently and accurately.

¹ Zach Fox, 'Canceled HAMP modifications continue to outpace permanent ones', Snl.com (July 20, 2010), <http://www.snl.com/interactivex/article.aspx?id=11470200&KLPT=6>, accessed September 16, 2010.

² Marcy Gordon, "Regulators shut 7 more banks as commercial-loan losses rise," The Washington Post, October 23, 2010.

^{3,4} TowerGroup, "Reinventing the Mortgage Business: Zero-Defect Initiatives, Portfolio Risk, and Cost Takeout," www.towergroup.com (June 24, 2010).

Point of view

Repercussions of the mortgage meltdown have caused many lenders to rethink the way they do business.

External pressures on mortgage lenders are driving up operating costs. Lenders should shift their focus from maintaining existing technology to identifying the business processes required for success and how to automate these processes.

Current-state technology often creates chasms between business process and technology system experts. This dichotomy leads businesses to think primarily in terms of systems at the expense of business processes. As a result, outdated systems often dictate business processes rather than business processes driving technology decisions, making change management difficult.

The result is that legacy systems of mortgage lenders have become outdated, difficult to maintain and update, and incapable of keeping pace with new business strategies and processes required by the changing regulatory and market environment. Lenders should abandon their technology-driven approach and instead, reengineer and automate business processes to comply with new regulatory requirements as well as improve data quality across the lending supply chain. Lenders must enhance their business processes and upgrade their technology to maintain profitability. They also should upgrade their risk management systems.

Mortgage lenders are being challenged to control and report on their operations with greater scrutiny than ever. Examples include reporting on loan modifications to regulators and investors and reporting on foreclosure process controls to regulators. Lenders are finding themselves in need of sophisticated operational capabilities in several key areas to successfully meet the heightened demands of today's regulatory and operational environment. Business process management (BPM) is a key enabler that brings together fragmented systems, provides transparency into processes across targeted areas of the enterprise, provides simulation capabilities, and strengthens activity monitoring. In our view, to meet the demands of today's mortgage marketplace and successfully implement BPM, it is key to combine industry knowledge with a proven implementation methodology.

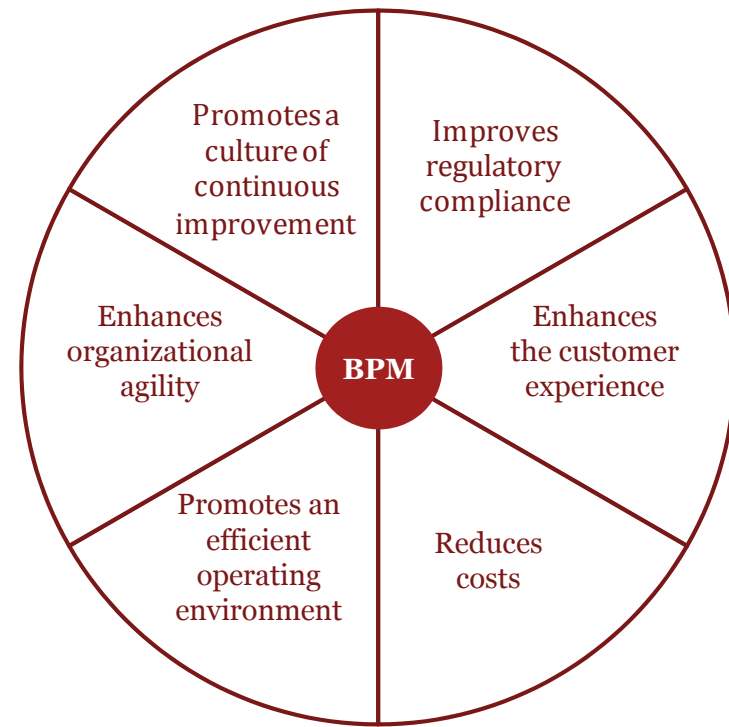
Point of view

A focused business process management approach enables process-driven solutions, supported by technology, to help lenders address new and evolving business needs quickly and effectively.

BPM can generate a host of benefits for lenders, including: cost reduction, compliance enhancement, and improvement in an organization's change management capability.

BPM initiatives, when properly designed and deployed, can reduce process time and related expenses dramatically while increasing operational efficiency. BPM helps ensure that processes and policies are implemented consistently across the organization. Through automation of risk management and operational processes, it supports compliance with the myriad laws and regulations that govern the capital markets. With processes standardized and automated, lenders can become more agile—able to respond quickly to new regulatory requirements, provide better customer service, and deliver new services to augment revenues.

BPM can provide management with the tools needed to guide the organization, even in the midst of a turbulent environment. Results are measurable and can be reported down to the task level, increasing employee accountability and highlighting processes that need improvement. The information provided through BPM can strengthen the overall management of the business, supporting activity-based costing analytics, capacity planning, and continuous improvement programs.



Organizational benefits of BPM adoption

Point of view

Key benefits of BPM

Improves
regulatory
compliance

Enhances the
customer
experience

Reduces costs

Promotes an
efficient
operating
environment

Enhances
organizational
agility

Promotes a
culture of
continuous
improvement

BPM improves regulatory compliance through automated and enhanced risk management and operational processes.

BPM automates risk management and operational processes, making it easy to modify them in response to changing regulatory requirements, such as automating the validation of Home Mortgage Disclosure Act (HMDA), Truth in Lending (TIL), Home Ownership Equity Protection Act (HOEPA), and Office of Foreign Assets Control (OFAC). With program rules and requirements in constant flux, it is very challenging for lenders to ensure that their operations keep pace with changes. For this reason, risk management processes and periodic compliance checks are essential to enable a company's regulatory compliance. Supported by a robust BPM capability, enhanced compliance checks reduce the time and expense of pre- and post-closing audits, while robust risk management enables lenders to:

- Monitor and report on business activities such as throughput, workload, and cycle time
- Monitor key objectives
- Monitor processes in real-time, as opposed to analyzing the past
- Identify regulatory exceptions based on automated rules
- Validate compliance throughout the process
- Quickly implement process changes to support compliance requirements

Adopting a BPM approach that incorporates sound compliance processes can help ensure that loans are originated correctly under new federal guidelines—and potentially generate a competitive advantage.

Point of view

Key benefits of BPM (continued)

Improves
regulatory
compliance

Enhances the
customer
experience

Reduces costs

Promotes an
efficient
operating
environment

Enhances
organizational
agility

Promotes a
culture of
continuous
improvement

BPM enhances the customer experience.

In addition to generating numerous operational advantages, BPM can help lenders meet customer demand and improve customer satisfaction by enabling the organization to adapt rapidly to changing market requirements—for example, new government programs that address loss mitigation or workout issues. “We decided to automate our loan mod process because the volume of modifications is becoming more prominent,” noted Robert Shiller, director of loan resolution at Wingspan Portfolio Advisors. “If you wait 30 days to do a paper process you may lose the borrower on the modification. With an e-mod it’s done in a day and you’re gaining that borrower’s trust.”¹

A sound BPM capability also can improve customer service through decreased cycle time and errors, increased access to customer information enterprise-wide, and process flexibility that enables key events to trigger customer notifications.

BPM reduces costs.

With cost containment a paramount challenge, lenders should remain mindful of the long-term need to leverage processes to achieve their goals. Reengineered and automated business processes, guided by a robust BPM methodology, lead to improved operational efficiency and reductions in errors, rework, manual work, and work hours. Implementing imaging processes, for example, limits manual touch points, paper, and storage needs, while an increased rate of BPM adoption can reduce training needs.

Adopting a BPM approach can help lenders to realize major savings with minimal investment. According to a study performed by American Banker, “One ‘industrialization’ mechanism developing in the credit world is the lending factory: simplified operations with shared platforms and streamlined processes. It can lower loan operating costs by 30% or more. Using leading-edge technology, such as automated document recognition and data extraction, and outsourcing business process services can save midsize lenders \$3 million to \$5 million of annual processing costs. Improvements can be realized in about 90 to 120 days, with little up-front investment.”²

¹ Anthony Garritano, “A Roadmap to Automating Modifications; With loan modification volume at record highs, servicers need to automate to keep up,” *Mortgage Technology*, April 1, 2009, Vol. 16, No. 4.

² Tom Mataconis and Ted Landis, “Why Banks Must ‘Industrialize’ for Efficiency,” *American Banker*, March 25, 2008, Vol. 173, No. 57.

Point of view

Key benefits of BPM (continued)

Improves
regulatory
compliance

Enhances the
customer
experience

Reduces costs

Promotes an
efficient
operating
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Enhances
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Promotes a
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BPM promotes an efficient operating environment.

BPM supports an automated workflow, which can standardize and streamline processes. This in turn can enable easier decision making, promote consistency in execution, reduce errors, and enable lenders to better identify process redundancies while boosting speed and accuracy for routing, process performance monitoring, interdepartmental handoffs, and exception management.

BPM enhances organizational agility.

BPM enables organizations to change business processes rapidly through enhanced automation of processes and elimination of paper. Eliminating paper is the critical improvement that allows for virtualization of the back office, giving lenders the flexibility to move the locus of work wherever they want.¹ The ability to expedite process changes dictated by evolving business and compliance needs and unforeseen events builds organizational agility and can lead to additional revenue generation opportunities.

For example, automation of the loan modification process can help companies realize the full benefit of a growing revenue stream in the current lending environment. Servicers are incented to encourage modifications because servicers can make up to \$4,500 for each successful loan modification.² Given the government's expectation to see 4 million to 5 million loan modifications before 2013³, this is clearly a significant revenue generating opportunity for servicers. BPM can help lenders coordinate the workflow and distribute workloads involved in loan modifications by routing digital loan files across operations centers or to outsourcing partners, helping to ensure that modifications will be generated efficiently.

BPM promotes a culture of continuous improvement.

Beyond the individual operational benefits BPM can unleash, the iterative process of implementing this methodology can help lenders realize incremental ROI in the longer term, building a culture of continuous improvement and placing them in a position of preparedness.

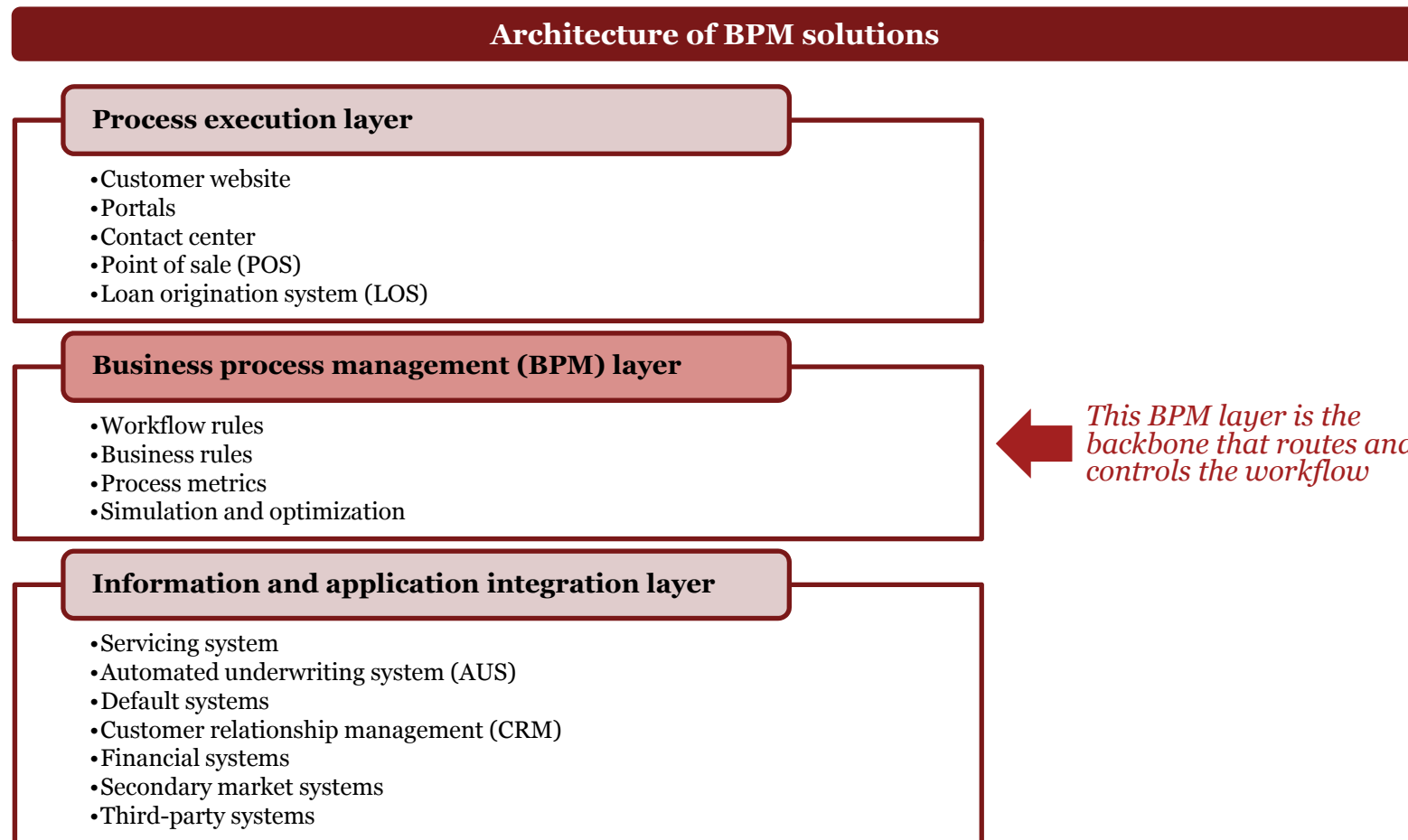
¹ TowerGroup, "Lights-Out Processing: Elements of Mortgage Origination and Fulfillment Systems for the Future," MarketResearch.com, March 2, 2009.

² Anthony Garritano, "A Roadmap to Automating Modifications; With loan modification volume at record highs, servicers need to automate to keep up," Mortgage Technology, April 1, 2009, Vol. 16, No.4.

³ The US Department of the Treasury, "Homeowner Affordability and Stability Plan-Executive Summary", March 2, 2009, <http://www.financialstability.gov/latest/tg33.html>, accessed Sep. 16, 2010.

Point of view

Leading mortgage lenders are responding to market and regulatory demands by adding a business process management layer to their system architecture.



Section 2

Competitive intelligence

Competitive intelligence

Lenders should determine the strengths and vulnerabilities in their business processes to position their organizations for continuous long-term improvement.

Elements of business processes	Lagging	On par	Leading
Design	Informal processes are in effect with a heavy reliance on staff's industry knowledge and experience.	Standard processes exist across regional or centralized operations centers.	Business processes are in sync with business strategy.
Standardization	Business processes are inconsistent, leading to increased risk.	Some level of standardization may exist within individual silos.	Processes are standardized and streamlined across the organization, and are fully repeatable and reliable.
Technological integration	Technology is disconnected from business processes, leading to manual, paper-driven processes and workarounds.	Some workarounds exist, mainly due to legacy applications.	Business processes are routed by automated workflow with digital loan files/documents, and are fully supported by technology solutions.
Process improvement	Process improvements may be achieved ad hoc; but are not repeatable due to the absence of a methodology.	Process improvement is achieved by a small team with a simplified methodology.	Robust process modeling exists with the goal of continuous process improvement. A dedicated team focuses on the iterative process of analyzing, designing, implementing, and optimizing.
Automation	Most processes are not automated.	Automation may exist at some level, but speed to adapt is lacking. May have some basic imaging with loan indexing and system messaging/alerts.	Ability to quickly adapt automated processes to market changes based on new products or regulations. An automated workflow is driven by business rules, automated document recognition, and data extraction.
Change agility	Requires significant lead time necessitated by structured enhancement processes that control all change.	Operations and technology collaborate to make frequent but controlled changes to workflow and business rules.	Operations is empowered to execute select changes to workflow and rules, and uses modeling tools to test and predict the impact of change.
Performance reporting abilities	Management reporting provides no operational insight into cycle time, functional, or vendor performance.	May have some level of monitoring and reporting.	Ability to monitor and report on business activities such as throughput, workload, and cycle time at the staff, supervisor, and management levels of the organization.
Compliance	Company relies on people to know regulations and laws and monitor compliance manually.	Some level of automation may exist around the compliance function, but may not be integrated into workflow and routing capabilities.	Workflow can build in checks and validations at numerous points in the process, with automated routing based on results.

Section 3

A framework for response

A framework for response—overview

Each BPM project entails several detailed steps, regardless of which candidate process is selected.



A framework for response—overview

When implementing BPM, several key questions should be considered.

What drives the business needs?

Vision

•Where do we want to be? What do we want to achieve?

Strategy

•How will we get there? What are the things that we will and won't do?

What capabilities are required to meet the needs of the business?

Business architecture

•How are we organized/structured? How do we operate as a business?

Business requirements

•What business capabilities are required to meet the business needs?

How will we provide the required capabilities?

Business rules

•What are the parameters/constraints within which we must operate?

Functional requirements

•What are the functional characteristics of the required capabilities?

Non-functional requirements

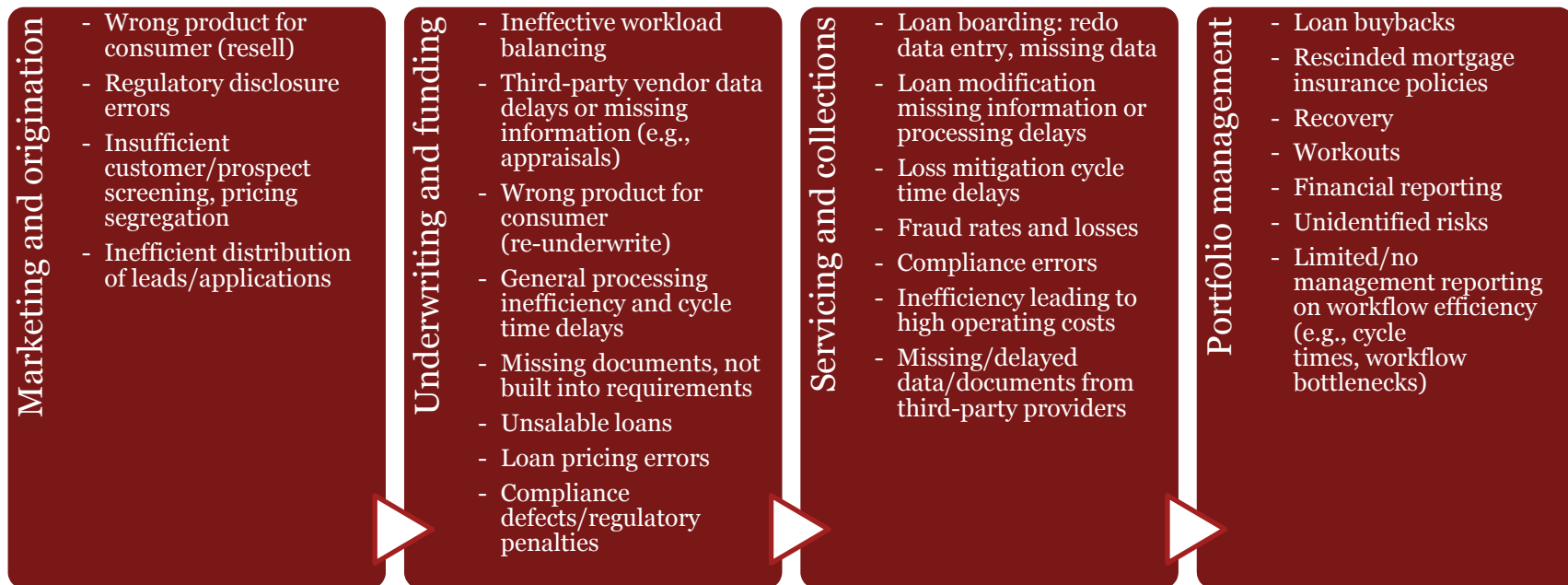
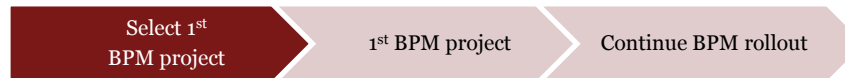
•What behavioral characteristics or properties are required of the solutions?

Technical requirements

•What are the behaviors and characteristics of specific solutions?

A framework for response—selecting the first BPM project

Frequently, several common processes can be improved through BPM. The project selection approach should identify target processes for consideration.



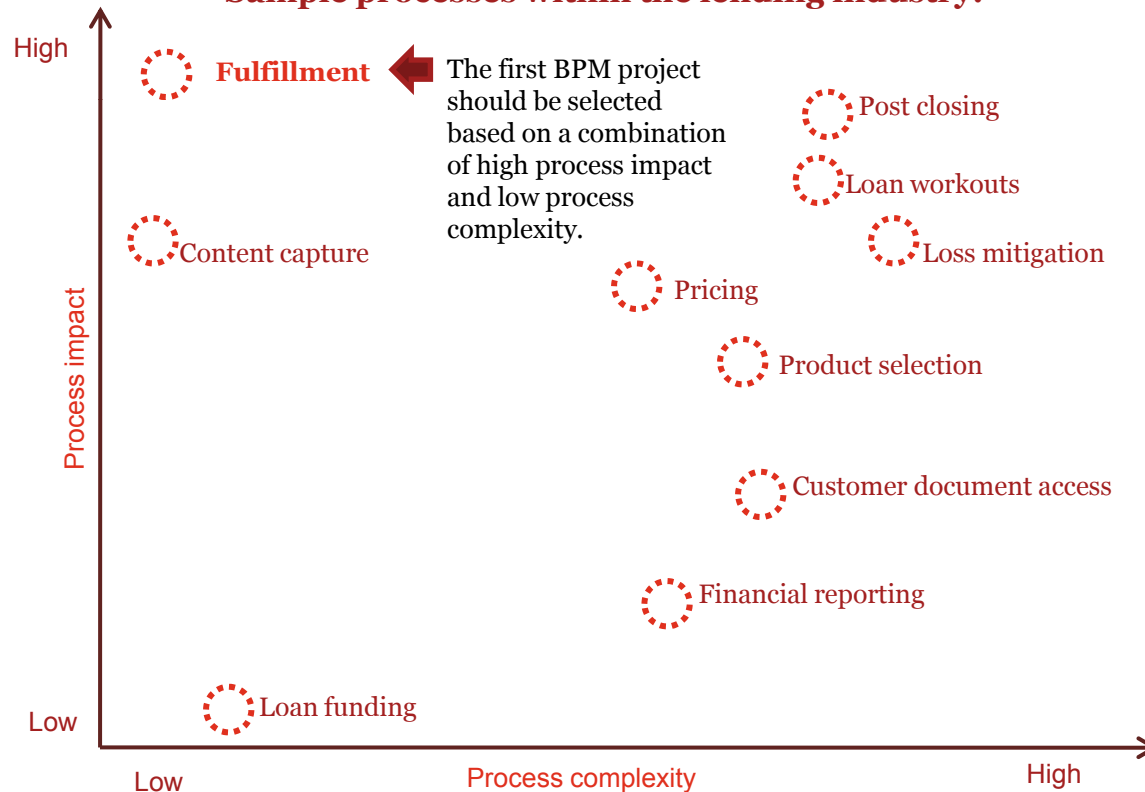
Source: "Reinventing US Mortgage Lending: Zero Defects, Strategic Cost Takeout, and Portfolio Risk Management", TowerGroup, June 21, 2010

A framework for response—selecting the first BPM project

BPM project selection should first focus on low-complexity processes that deliver high impact.



Sample processes within the lending industry:



Process impact considerations should include:

- Revenue
- Cost
- Risk
- Customer satisfaction
- Cycle time

Process complexity considerations should include:

- Nature of process
- Number of process tasks
- Number of participant roles
- Number of integration points
- Data requirements
- Transaction volume
- Number of organizations
- Number of exceptions

A framework for response—an example of applying BPM to the fulfillment process

Based on its relative impact and complexity, the first process that could be chosen for BPM is the fulfillment process.



This process has several common issues that can be solved with BPM.

Issue:

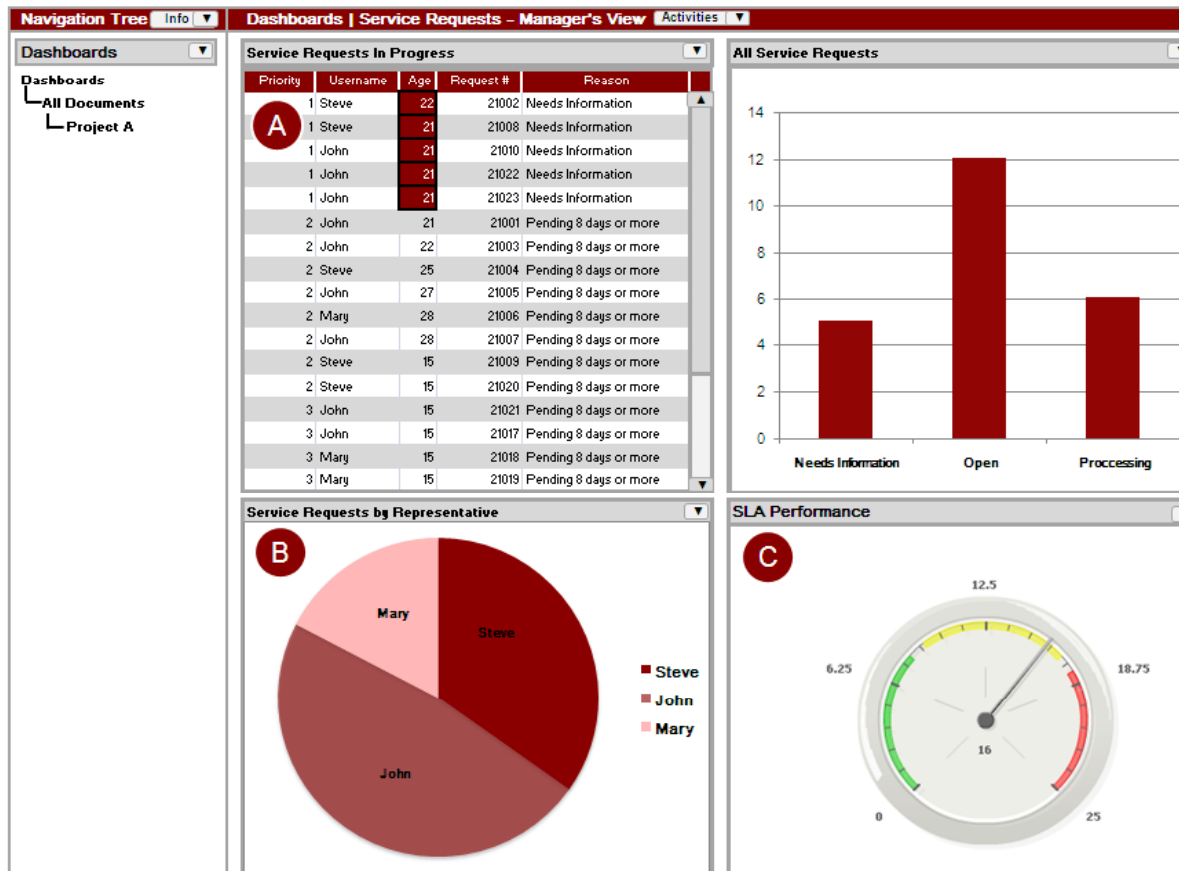
- Documents are lost or difficult to obtain in a timely manner, which ultimately results in delays
- Service ordering dependent on manual intervention can cause delays
- Compliance defects based on manual compliance checks
- Lack of visibility into processor and underwriting work queues and performance

BPM solution:

- Imaging system installed on the front end capturing the loan applications and the bulk of the supporting data and documentation. Creates a single repository of images and associated data from multiple sources.
- Create business rules that interpret the data and allow for automated requests for the appropriate level of service from the correct provider. Examples include automated identification of the appraisal type and/or automated underwriting system and vendor of choice.
- Create business rules to monitor and check for compliance.
- Implement business activity monitoring (BAM) for real-time operational visibility and workflow management reporting. Automate monitoring and alerts. (See next slide)

A framework for response

Example of business activity monitoring dashboard—manager view



The dashboard improves visibility into the fulfillment process by providing:

- Throughput monitoring
- Visibility into work queue
- An overarching view of the process

The dashboard can be tailored depending on the needs of the user. For example, a manager dashboard:

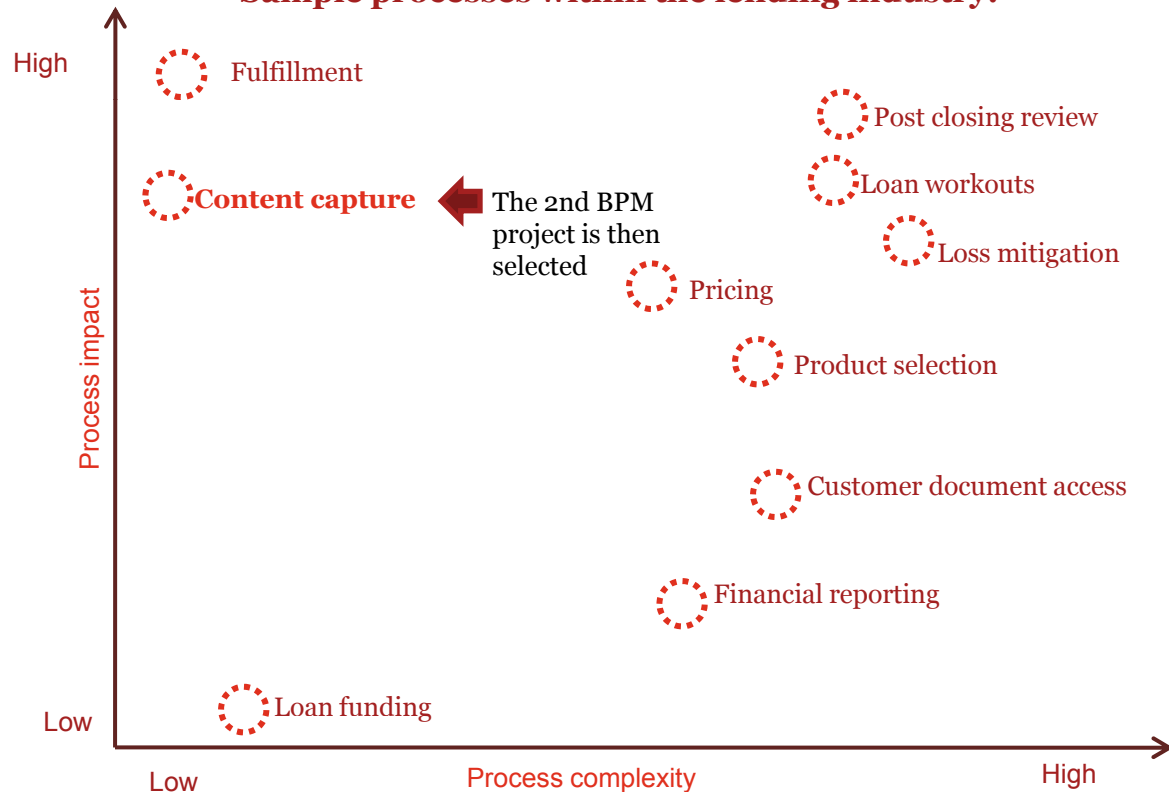
- Provides a holistic view of all associates' work
- Allows managers to see how associates compare with one another in terms of work

A framework for response—continuing the BPM rollout

As BPM is an iterative process, the next project selection should also be based on a combination of process impact and process complexity.



Sample processes within the lending industry:



To sustain the BPM initiative and manage future BPM projects, firms should build the organization, tools, and methodology to achieve continuous improvement.

For example, establishing a BPM center of excellence (COE) allows a core group of individuals to provide structure and guidance across the BPM lifecycle.

Having a team in place helps ensure that the implementation of BPM projects is consistent with overall business objectives and that all projects are coordinated and efficiently managed. This enables the organization to take full advantage of BPM and reduces the likelihood of silos.

Section 4

How PwC can help

How PwC can help

We have significant experience helping our clients implement BPM. We utilize a full project life-cycle approach to BPM programs leveraging toolkits that can be tailored to each project's needs.

Strategy

- Developing vision and mission
- Designing stakeholder analysis
- Mapping process to stakeholder objectives
- Producing key performance indicators (KPIs) and targets
- Linking process KPIs to objectives
- Matching processes to corporate criteria and prioritizing
- Performing process value-chain development
- Meeting with designated business executives to confirm the priority and timing

Design

- Developing detailed requirements and design
- Reviewing and documenting current and emerging business environment as it relates to BPM strategy
- Reviewing and documenting current client BPM technology environment
- Creating future-state BPM vision that aligns with the client-stated business objectives
- Performing a gap analysis between BPM current and future state
- Assessing BPM tools
- Creating BPM value creation roadmap and strategy report to include project definition/scope and estimated implementation costs
- Building a business case

Execution

- Performing unit testing, integration, and system testing
- Deploying solution
- Organizing, managing, and executing implementation of BPM, including:
 - Current/future-state application environments and capabilities
 - Gap analysis and transformation diagrams
 - Guiding principles
 - Leading practices
 - Conceptual views, design guidelines, and application development patterns
- Managing change

Optimization

- Providing post-implementation support
- Building a BPM center of excellence
- Defining industry practices and determining how client can effectively utilize leading BPM practices to enable business optimization
- Reviewing and confirming the proposed BPM future-state capabilities and future process optimization opportunities

How PwC can help **Our market-tested approach**

PwC offers value across all aspects of the BPM program.

Dimension	PwC value
Mortgage process knowledge	Deep mortgage business application and process knowledge
BPM implementation expertise	Extensive experience defining and leading BPM solutions Collaborate and assist on providing oversight of best practices for implementation and framework
Center of excellence/program governance	Design and rollout experience, structured methods and support tools including management of risks and controls
Business process improvement	Certified experts: business process reengineering, Lean Six Sigma extensive change management experience, methods, and tools
Benefit drivers and value realization	Integrate metrics and measures to ensure goals are monitored, measured, and achieved
Program, project and vendor management	Structured processes, tools, and best practices Independent vendor management expertise plus established track record and communication channels
Enterprise architecture	Extensive experience integrating BPM with service-oriented architecture (SOA) frameworks and legacy application and data architectures

How PwC can help

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Section 5

Select qualifications

Select qualifications

Leading mortgage and home equity originator—loan origination BPM integration

Issues	PwC was engaged to help assess, design, and develop an integrated imaging-loan origination system (LOS) solution in concert with the implementation of a new loan origination system.
Approach	<ul style="list-style-type: none">▪ Led high-level requirements gathering and phase-zero assessment, producing a high-level roadmap and approach.▪ Completed high-level design quick-wins for the integration of FileNet P8, MQ middleware, and Gallagher LOS applications.▪ Completed high-level capture architecture supporting a centralized scanning approach via Captiva, including the integration of Right-Fax services.▪ Provided project management office support to project leads for LOS, infrastructure, and imaging workstreams.▪ Completed a technical proof-of-concept initiative designed to prove out the high-level technical design and demonstrate base level connectivity between components.▪ Completed development of ten FileNet service components to add and update documents and metadata in FileNet repository.▪ Built a centralized capture facility including infrastructure, hardware and software, Captiva capture solution, policies and procedures from doc-prep through doc-shredding, and custody vault.▪ Built five new FileNet environments and migrated existing production to new environments.▪ Designed and built a message-based integration solution between LOS application and FileNet repository.
Benefits	Productivity increased by more than 50%, and cycle time was reduced by more than 30%. Process errors and misplaced document errors were greatly improved as well.

Select qualifications

West coast-based bank—BPM solution for loan origination process

Issues	PwC was engaged to help design, develop, and implement a small business loan origination BPM solution for a large west coast-based financial institution.
Approach	<ul style="list-style-type: none">▪ Facilitated business requirements definition workshop and documentation of current-state processes for post-closing functions (document review, collateral monitoring, draw/funding, trailing docs, flood, utility, insurance, CAP, and spreads).▪ Conducted workshops to document future-state business processes for post-closing functions (document review, collateral monitoring, draw/funding, trailing docs, flood, utility, insurance, CAP, and spreads).▪ Created detailed design documents representing business and technical requirements/specifications.▪ Developed eight interfaces for client host systems utilizing the FileNet P8 Component Integrator to validate, exchange data, and upload loan information to servicing.▪ Created business event components to launch business process flows based on document arrival, system message, or manual processes.▪ Developed customized FileNet P8 BPM process maps and sep processors using Workplace/Struts presentation layer.▪ Created process analyzer reports to measure and monitor work in progress and employee productivity.▪ Designed, coded, tested, and deployed the application into client pre-production environment for end user review and validation.
Benefits	<ul style="list-style-type: none">▪ Increased throughput and productivity by load balancing critical resources via skills/matrix-based routing of work, resulting in cycle time reduction of 30%-40%.▪ Automated work assigned based on role and location.▪ Reassigned 12 FTEs through the automation of two manual applicant data validation processes .

Select qualifications

Top 20 bank—commercial lending project

Issues	The client relied on a manual, paper-based process to manage its commercial loan credit offerings. The client established a vision for a seamless, Web-enabled application that would reduce the cycle time needed to create new offerings and increase capacity. The client engaged PwC, as it required assistance from consulting professionals with industry experience and the ability to integrate a number of technology components within an accelerated timeframe.
Approach	<ul style="list-style-type: none">▪ PwC formed a cohesive team with client resources to design, develop, test, and implement a robust deal management system (DMS).▪ The engagement team used the rational unified process (RUP) and technology components from BEA and FileNet P8 to meet the client's goal of building an infrastructure that would help to automate workflow for its credit-related processes.▪ PwC helped the client prepare training materials in advance of the release of the DMS to the potential 2,000 system users.
Benefits	As a result of this project, the client reduced cycle times by up to 30% in the following work flows: creation of new offering from existing offering, pre-validation, electronic approval, and alternative approval. Additionally, the client experienced a reduction in support staff needs of up to 35% in the loan booking, document scanning, and workload balancing areas.

Select qualifications

Captive automotive finance company—five-year IT strategic plan

Issues	<p>The client was in the process of redefining the company through new financial products and services that included banking, and indirect and direct lending. The company needed a current-state assessment of its enterprise content management (ECM) capabilities, a gap analysis against industry leading practices, and a conceptual architecture and roadmap to prioritize future ECM investments to improve its ability to create new financial products. The client engaged PwC to help identify BPM and ECM capabilities, future-state strategy, and a five-year strategic plan to reposition the company.</p>
Approach	<ul style="list-style-type: none">▪ PwC focused on outlining capabilities across the auto finance lending lifecycle and creating an ECM strategy.▪ The engagement team provided vendor and market insights as well as future-state capabilities to refine the focus and scope of the client's strategic goals, and align key capabilities with the client's current market position.▪ PwC reviewed the client's high level future strategy and identified key capabilities necessary to compete and reach its future goals.▪ The engagement team prioritized and categorized future-state business processes and technical capabilities, and identified potential business impacts and benefits. PwC then measured these potential benefits by comparing future-state capabilities to current performance matrices, policy and procedures, and approved/funded project initiatives.▪ PwC designed an ECM roadmap and conceptual architecture linking key future-state capabilities to the strategic vision.
Benefits	<p>PwC provided the client with the necessary data and directional insights to help it present a future-state roadmap for funding approval by the company's executive committee. The client used the information to develop projects to streamline its processes, saving the company over \$4 million annually.</p>

Select qualifications

Retail automotive finance and leasing company—strategic analysis and implementation of BPM

Issues	<p>The client wanted to determine if integrating BPM into its infrastructure could result in improvements in cost reduction, straight-through processing, quality management, and cycle time. The client challenged PwC to satisfy the following:</p> <ul style="list-style-type: none">▪ A strategy to make its business more efficient by identifying opportunities for business process automation.▪ Development of the company's own capability to implement all aspects of future BPM projects including project management, business analysis, technical architecture design, code development, testing, and transitioning activities.▪ A roadmap that prioritized opportunities to automate processes with BPM to optimize return on investment.
Approach	<p>PwC's strategy consisted of a governance and business process modeling approach and a technology implementation roadmap with a detailed five-year plan. Specifically, PwC helped the client by:</p> <ul style="list-style-type: none">▪ Modeling business processes using Savvion Process Modeler. Each process was then analyzed to estimate benefits of implementing BPM to automate the workflow. All processes were then prioritized for implementation based on estimated ROI and interdependencies.▪ Working with the client's subject matter specialists to identify, gather, and validate data and business requirements for five complex processes to model future state and calculate the value of change.▪ Providing the business with technology recommendations based on its current-state architecture and future goals, identifying software and hardware that could be leveraged or were in need of upgrading.▪ Participating in design proof-of-concept meetings with third-party service providers to identify integration points, data, and process gaps, and to propose solutions.▪ Assisting the client in developing replicable and detailed business processes, requirements and rules, use case scenarios, and functional and technical design documents.▪ Completing the technical design to integrate FileNet, legacy systems, and third party providers of lockbox and bulk printing services.
Benefits	<p>A phased-implementation approach to accelerate implementation and manage implementation costs and risks was developed, providing the client with a detailed five-year roadmap indicating when each initiative should be made, how long each initiative should take to implement, and the respective cost estimate. It was determined that the value of implementing the future state for all processes was \$21 million over 5 years, with an NPV of \$12.9 million. Ultimately, PwC assisted the client with implementing the first five processes, providing a 70% increase in productivity.</p>

Section 6

Appendix—More about PwC

More about PwC

Client needs and issues

We look across the entire organization—focusing on strategy, structure, people, process, and technology—to help our clients improve business processes, transform organizations, and implement technologies needed to run the business.

Client needs	Issues we help clients address
Build effective organizations	<ul style="list-style-type: none">▪ Rethinking strategy in terms of markets, geographies, channels, and clients▪ Restructuring organizational models in terms of structures, policies, and roles▪ Establishing effective strategic sourcing and procurement▪ Realizing competitive advantage through effective sales operations inventory planning▪ Transforming the close and consolidation process to work for rather than against you
Manage risk, regulation, and financial reporting	<ul style="list-style-type: none">▪ Building a risk-resilient organization▪ Implementing and realizing benefits of ERM▪ Managing ERP investment and project execution risk▪ Safeguarding the currency of business; keeping sensitive data out of the wrong hands▪ Affirming capital project governance and accountability▪ Assessing and mitigating corruption risk in your global business operations▪ Accounting and financial reporting▪ Third-party assurance▪ Compliance with tax law and regulation
Reduce costs	<ul style="list-style-type: none">▪ Driving efficiency through shared services▪ Redesigning finance to realize efficiency and competitive advantage▪ Taking control of cost through effective spend management and cash forecasting practices▪ Driving sustainable cost reduction
Leverage talent	<ul style="list-style-type: none">▪ Defining and implementing an effective HR organization▪ Rethinking pivotal talent
Innovate and grow profitably	<ul style="list-style-type: none">▪ Reshaping the IT function into a source of innovation▪ Transforming business information to drive insight and fact-based decision making▪ Evaluating acquisition and divestiture strategies to position for the future▪ Realizing deal synergy and value▪ Developing sustainability programs that add value



More about PwC

Our Financial Services practice

Multi-disciplinary approach

PwC stands alone in its ability to assemble and successfully manage multi-disciplinary teams with deep skills in strategy, technology, operations, human capital, risk, finance, accounting, tax and regulation. In the United States alone, we are able to call upon our 800-person Financial Services Advisory practice and more than 3,000 financial services professionals. With financial services consulting businesses in the United States and Japan, as well as Chinese and Indian Global Development Centers, PwC is a global market leader in all relevant aspects of business consulting.

Accountability and cost effectiveness

Our thorough approach to serving our clients provides them with a single point of accountability, which creates an efficient and effective day-to-day working arrangement and, most importantly, best positions our clients for success. We have significant experience in helping to drive complex programs and feel strongly that we can work successfully in a cost-effective manner to meet your organization's needs and objectives.

Relevant experience and knowledge

PwC is advisor to 44 of the world's top 50 banks, 46 of the world's top 50 insurance companies, and the leading service provider to investment managers, pension funds, and hedge funds around the world. This diverse client base provides us with unique access to develop peer insights and to understand from experience what works in specific client circumstances. We also have invested in developing relevant thought leadership, methodologies, templates, and tools in a number of areas.

Trusted brand

PwC offers a truly independent view, without prejudice or favor regarding specific vendors, solutions, or approaches. We approach each situation and develop the most appropriate solutions depending on the client's individual circumstances.

Global footprint

PwC works with our clients in a globally integrated manner. This benefits our clients in terms of consistent service delivery and quality by taking advantages of the best ideas, resources, and solutions from around the world.

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