

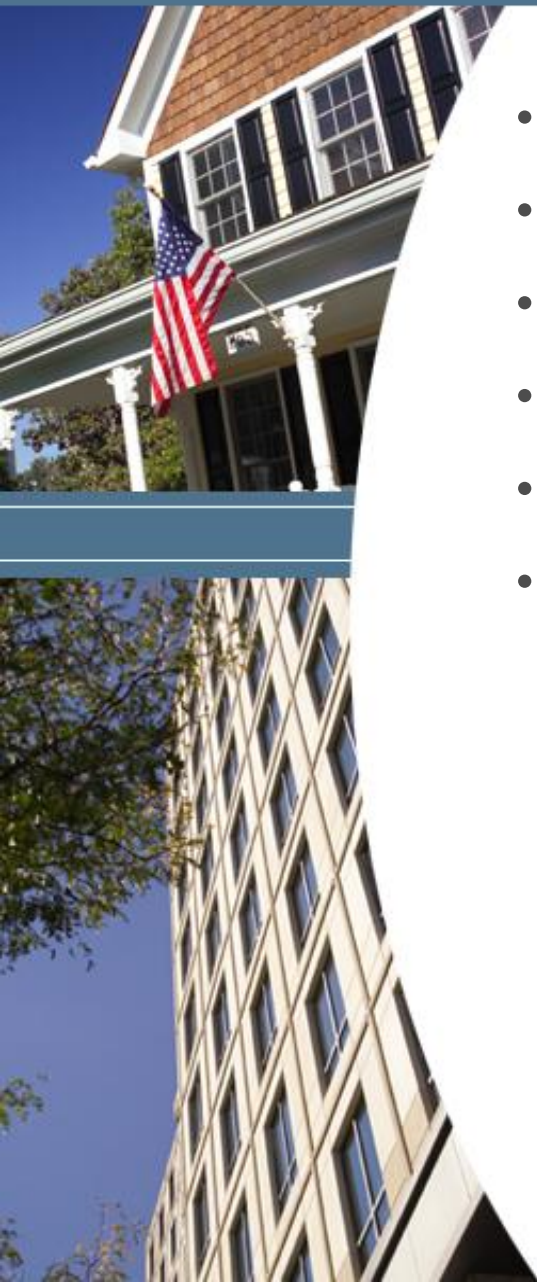


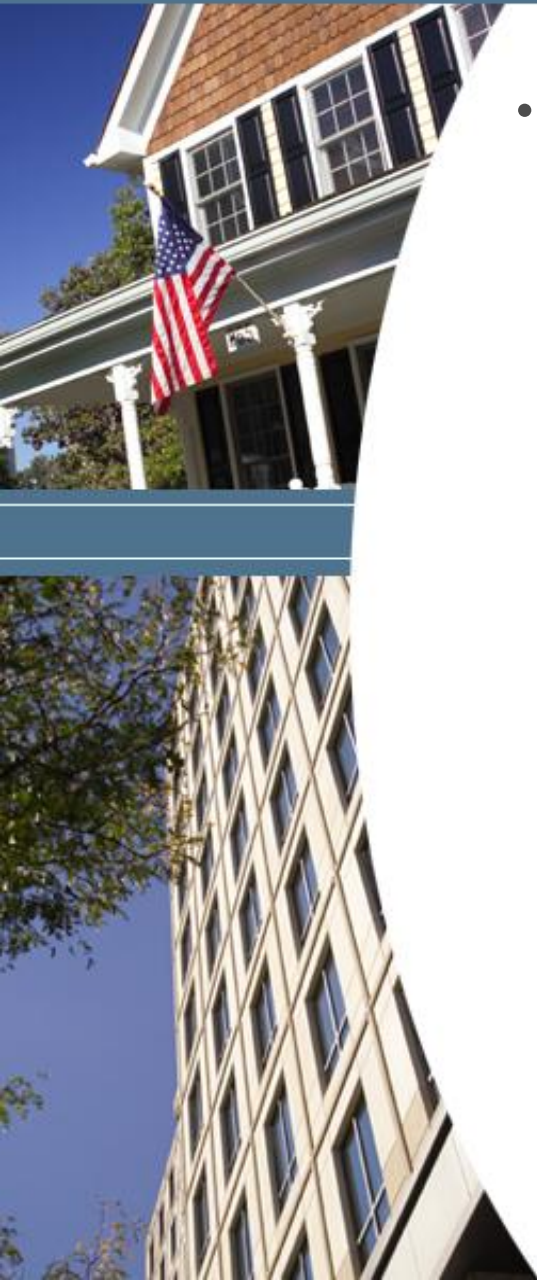
## From Ink to Insight

Automating Loan Reviews via Data-driven Workflow

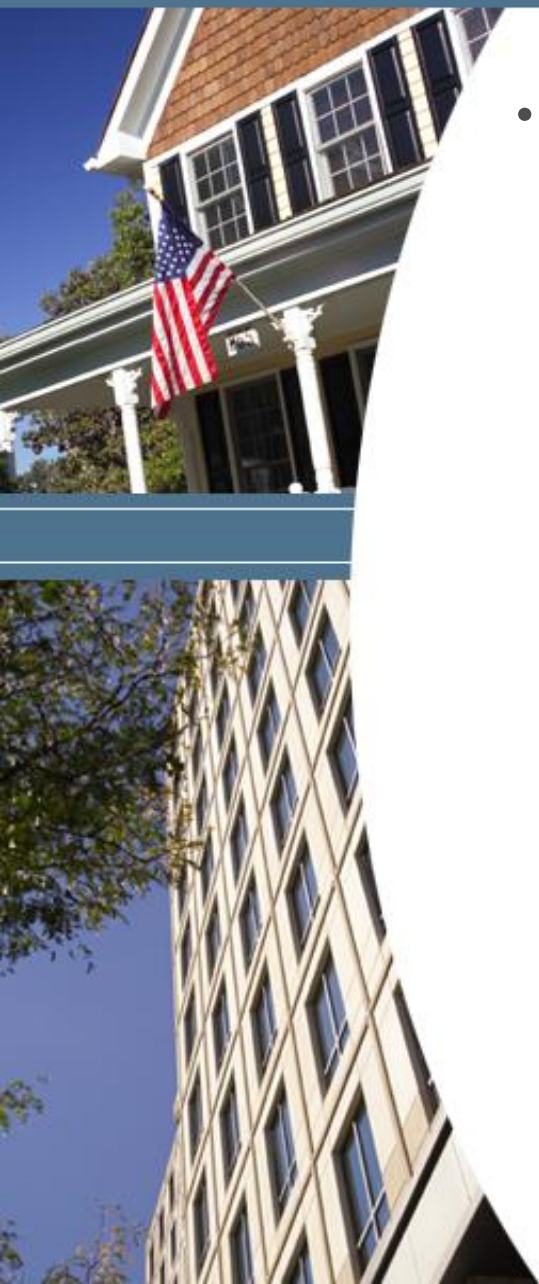


Quality remains a problem that must be managed

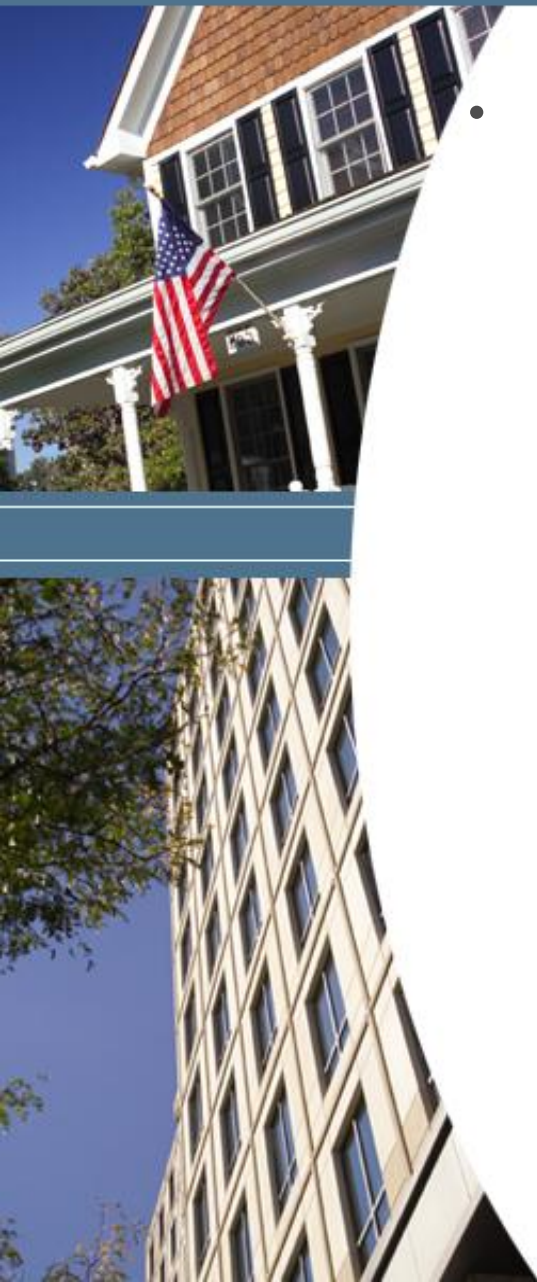
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- Quality
  - Paper mortgage industry
  - Multiple stakeholders addressing quality
  - Extended cycle times
  - Scalability and expense risks
  - Customer satisfaction

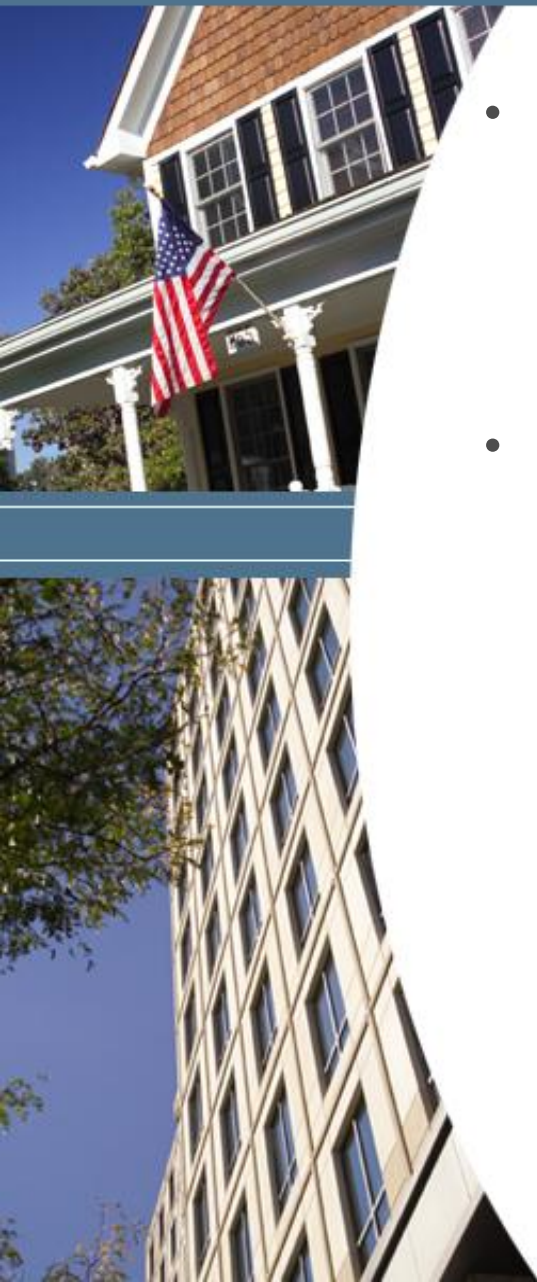


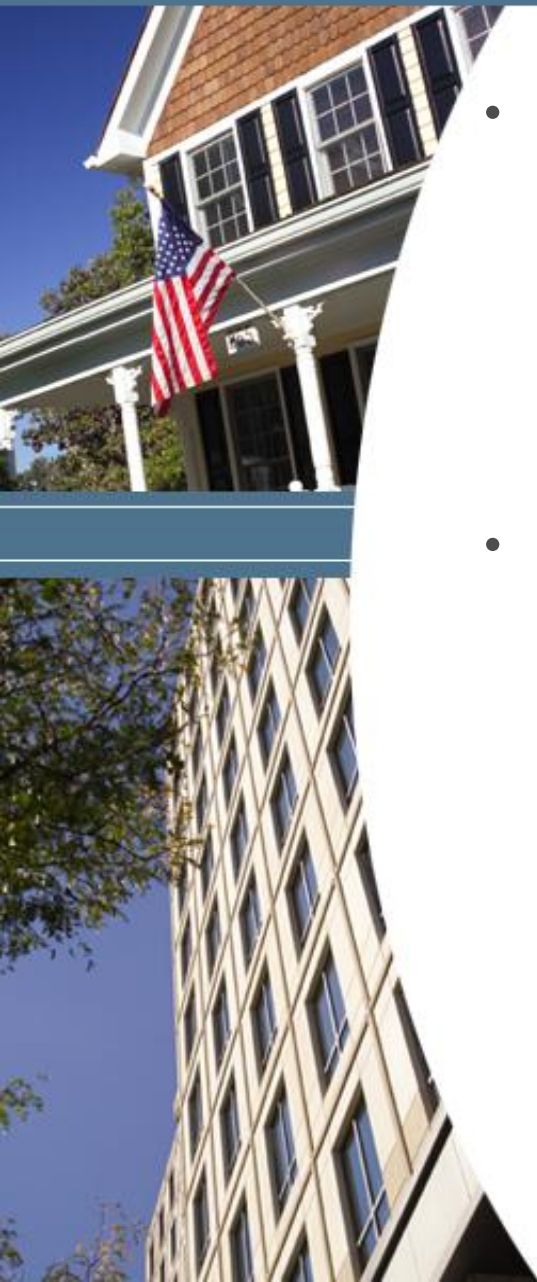
- Quality continues to present challenges.
  - » Lack of robust interfaces between systems
    - LOS, Post Closing, Custodian, Pooling, Servicing
    - Multiple points of data entry
    - Must ensure that systems that affect customer and investor tell the same story
  - » Multiple stakeholders touching loan documents
    - Loan officer, underwriter, closer, settlement agent, attorneys, customers
    - Control is lost, thus data accuracy is uncertain
  - » Stakeholders use different rules & procedures
    - Forms; address and signature standards
    - Due date schedules; Fee descriptions

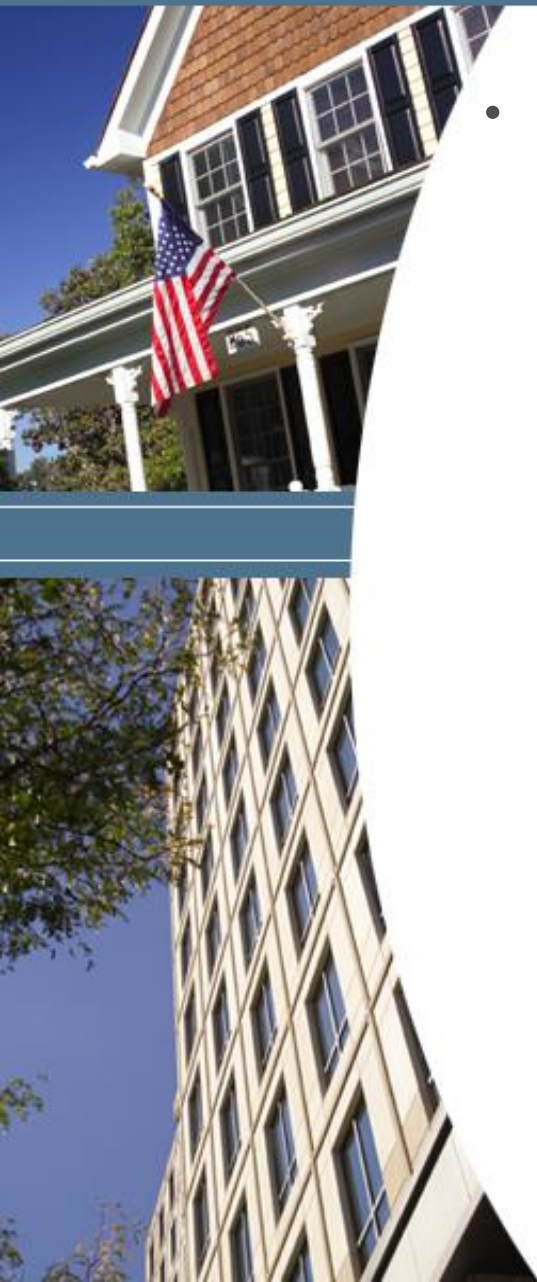


- Vast majority of loan production is still paper-based, and likely will be for several years to come.
  - » eMortgage adoption is slower than we would like
  - » Capital investment in a tough market
  - » Technical resources focused on keeping up with industry changes
  - » Complexity with multiple production sources
  - » Need to balance the efficiency of having a unified workflow with remaining competitive

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- Operations such as Post Closing, Document Management, Custodians, and QA teams are often responsible for assuring data integrity and complete loan document files.
    - » Risk of rework or undoing someone else's work
      - Lack of clarity for who owns what data or document
    - » Risk of lost documents or information security breaches

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- Competition for access to the loan file
    - » Who gets the file first, second?
    - » Loan Delivery, Government Insuring, New Loan Boarding, Auditors, Due Diligence Review
  - Completion of all quality reviews may take months
    - » Sequential handoffs involve multiple touches to the same documents
    - » Physical handoffs of files are difficult to manage
    - » Increased risk of impacting customer or stakeholder

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- Scaling capacity is difficult to manage
    - » Ramping up increases onboarding costs
    - » Significant expense for periods of no production
    - » Ramping down can mean layoffs
    - » Very stressful to both staff and leaders
  - Expense and cost per unit volatility
    - » Wide swings in expense are difficult to explain
    - » Complexity in understanding efficiency

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- Failure to complete critical loan reviews timely may result in risk to reputation, penalties, and overall competitiveness.
    - » Customer impact (payment or address problems)
    - » Inability to sell or insure loans (liquidity and balance sheet risks)
    - » Compliance violations (penalties or sanctions)
    - » Delays in Servicing functions (escrow setup, billing)



Boss



Customer



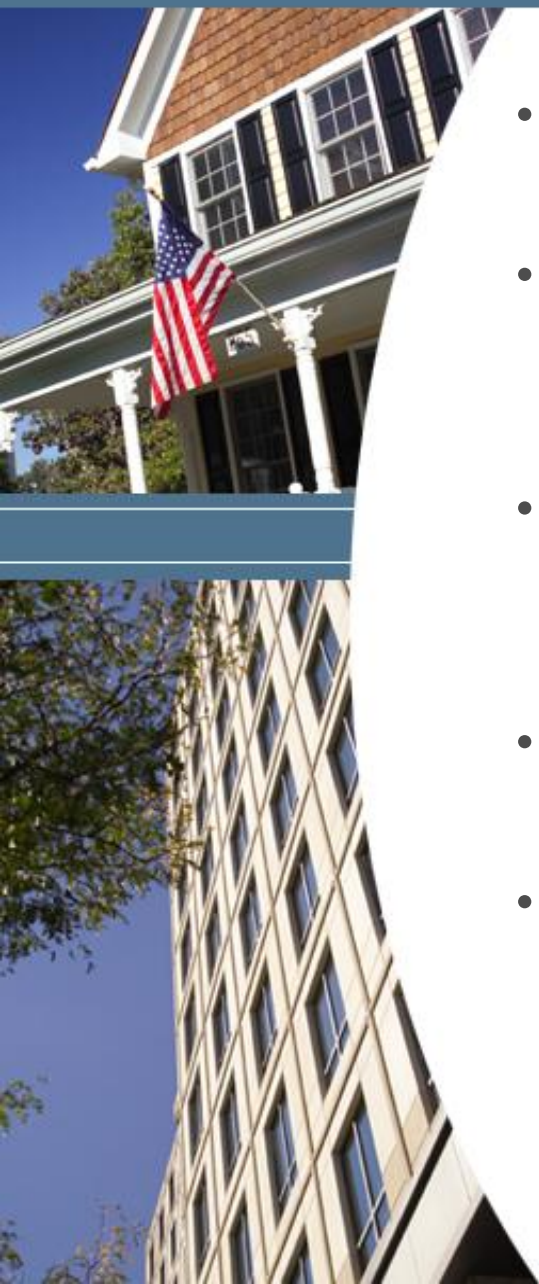
Expense



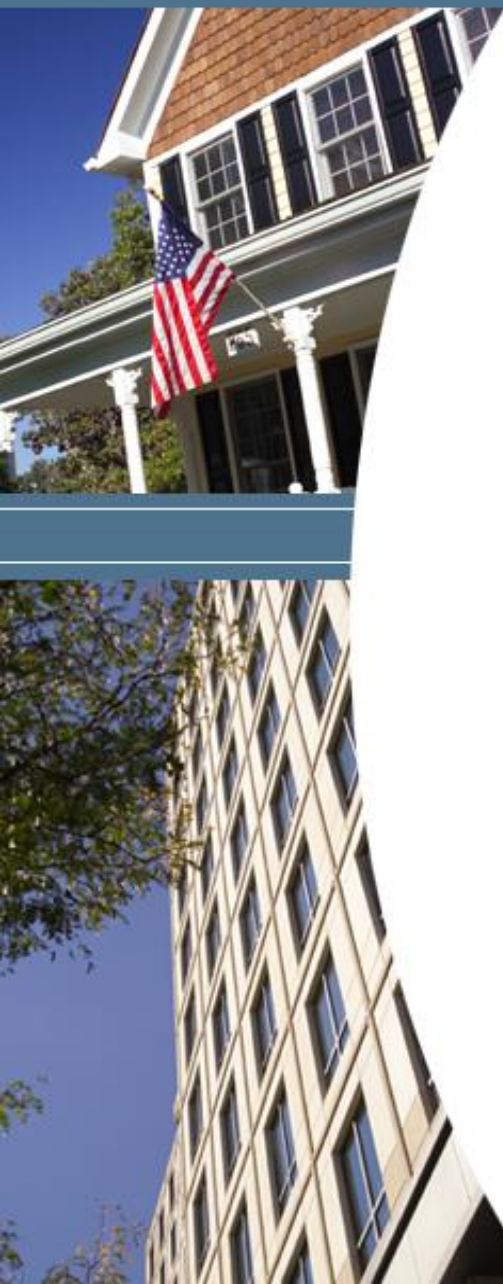
Poor Post Closing Worker



Auditor

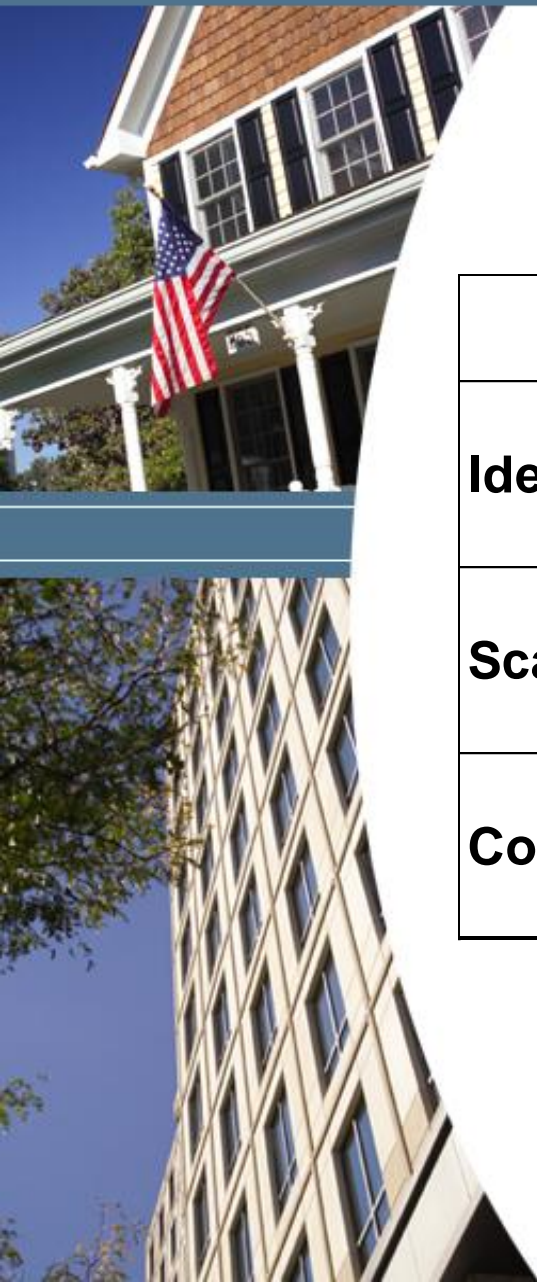


- How can I achieve high **data integrity**, and assure that I have possession of a **complete file**?
- How can I avoid touching every loan that I produce, get **exception-based** and focus my resources on the loans that actually have problems?
- How can I **collect data** from multiple paper documents, and apply that against multiple systems of record to **identify data discrepancies**?
- How can I minimize the number of loan reviews, and shrink the cycle times for selling and insuring loans?
- How can I ensure sufficient review **capacity**, while keeping **costs** low and **efficiency** high?

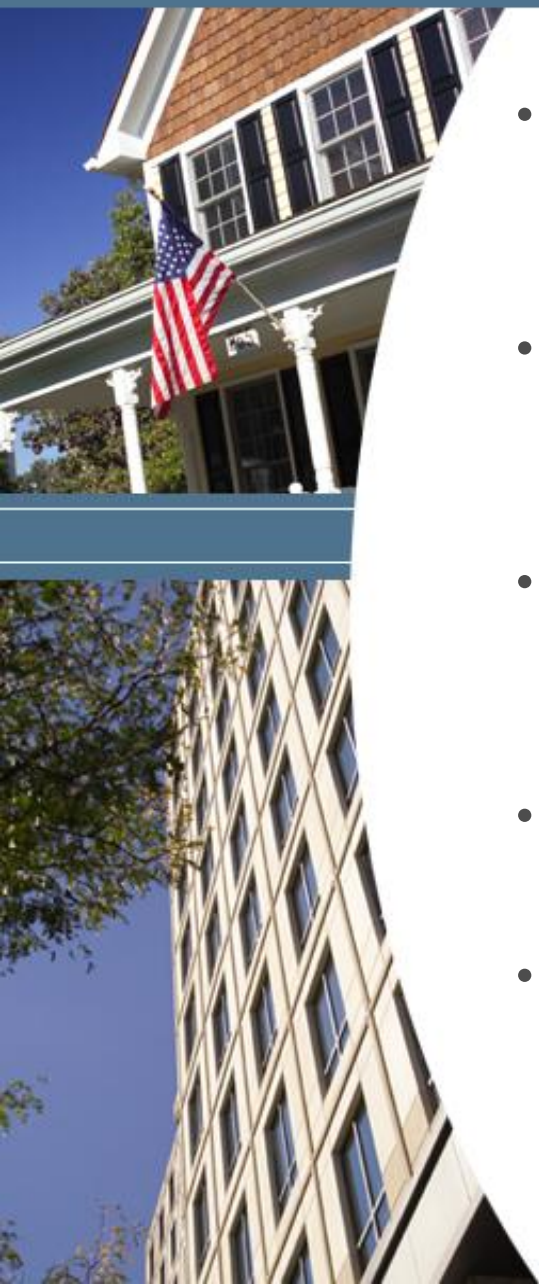


<b><i>Business Need</i></b>	<b><i>Implementation Tactics</i></b>
<b>Data Integrity</b>	<ul style="list-style-type: none"><li>- Use defect metrics</li><li>- Provide actionable feedback</li><li>- Continually refine review scope</li><li>- Challenge facts for why reviews exist</li></ul>
<b>Complete File</b>	<ul style="list-style-type: none"><li>- Document Imaging</li><li>- Deep indexing</li><li>- Critical docs not on record</li></ul>
<b>Exception-based</b>	<ul style="list-style-type: none"><li>- Doc-to-data compares</li><li>- Data-to-data compares</li><li>- Illogical conditions</li></ul>
<b>Data collection</b>	<ul style="list-style-type: none"><li>- High speed keying from image</li><li>- Optical Character Recognition (OCR)</li><li>- Extract from system of record</li></ul>

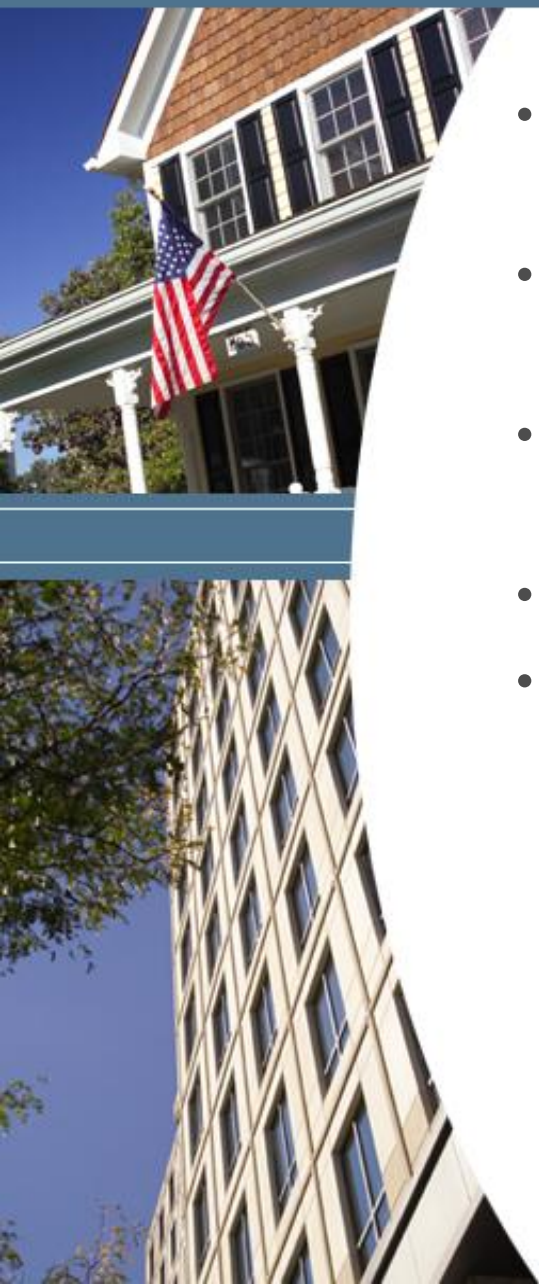
# A hypothetical approach...



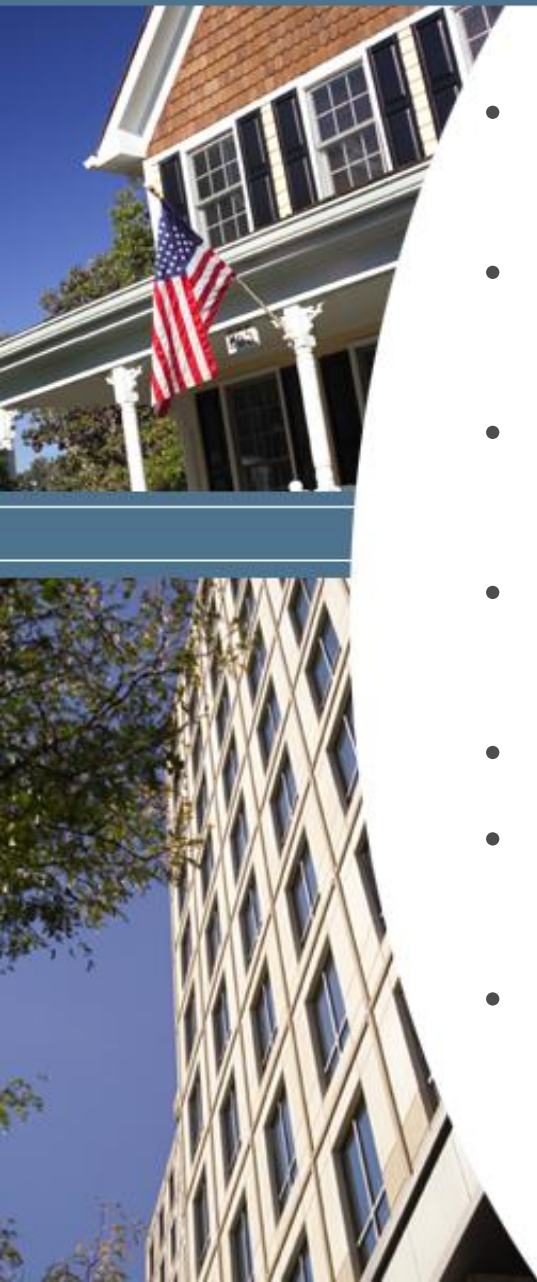
<b><i>Business Need</i></b>	<b><i>Implementation Tactics</i></b>
<b>Identify discrepancies</b>	<ul style="list-style-type: none"><li>- Use technology to manage compares</li><li>- Exceptions to queuing application</li><li>- Loans with no defects are complete</li><li>- QC straight pipe to assure effectiveness</li></ul>
<b>Scalable</b>	<ul style="list-style-type: none"><li>- Exception management easier to train</li><li>- New employees producing more quickly</li><li>- Working defects becomes a commodity</li></ul>
<b>Cost-effective</b>	<ul style="list-style-type: none"><li>- Eliminate cost of reviewing good loans</li><li>- Benefit inversely proportional to defect %</li><li>- Fast recognition of root cause of defects</li><li>- Working exception faster than loan review</li></ul>



- Wells Fargo Home Mortgage's first implementation of straight-through and exception-based processing was for the New Loan Boarding Function.
- In 2001, our industry was approaching the biggest refinance wave in its history, and the required business processes weren't scalable.
- Post Closing processes were sequential in nature. Cycle time from receipt of a file to completion of all loan reviews was better than 60 days.
- Implementation of document imaging on the back end did not pay dividends back into the process.
- Challenge was to identify a process that was an appropriate proof of concept.



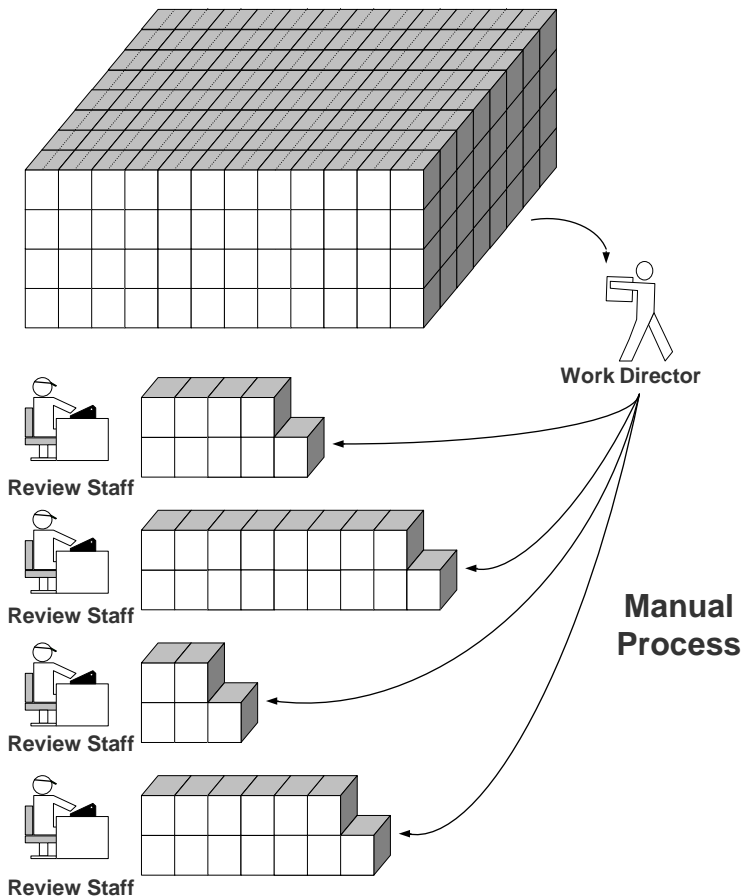
- Review loan docs against servicing system screens to assure servicing data integrity.
- Paper dependent, required possession of original loan file.
- Steep learning curve - strong dependency for knowledge of loan documents and servicing system.
- Difficult to scale to volume peaks and valleys.
- Process prone to backlogs – caused unnecessary wait time in other processes.

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- Implemented document imaging on the front end of the post closing process.
  - Applied high-speed keying for specific data elements on key loan documents.
  - Created automated system-system compare between data keyed and comparable field on system of record.
  - Discrepancies recorded to tracking system for follow up by exception management team.
  - Loans with no defects flagged as complete.
  - Enabled concurrent processing for multiple loan reviews
  - Regular QC sampling of clean loans to ensure that process was working as designed.

# New Loan Boarding Workflow – Before & After

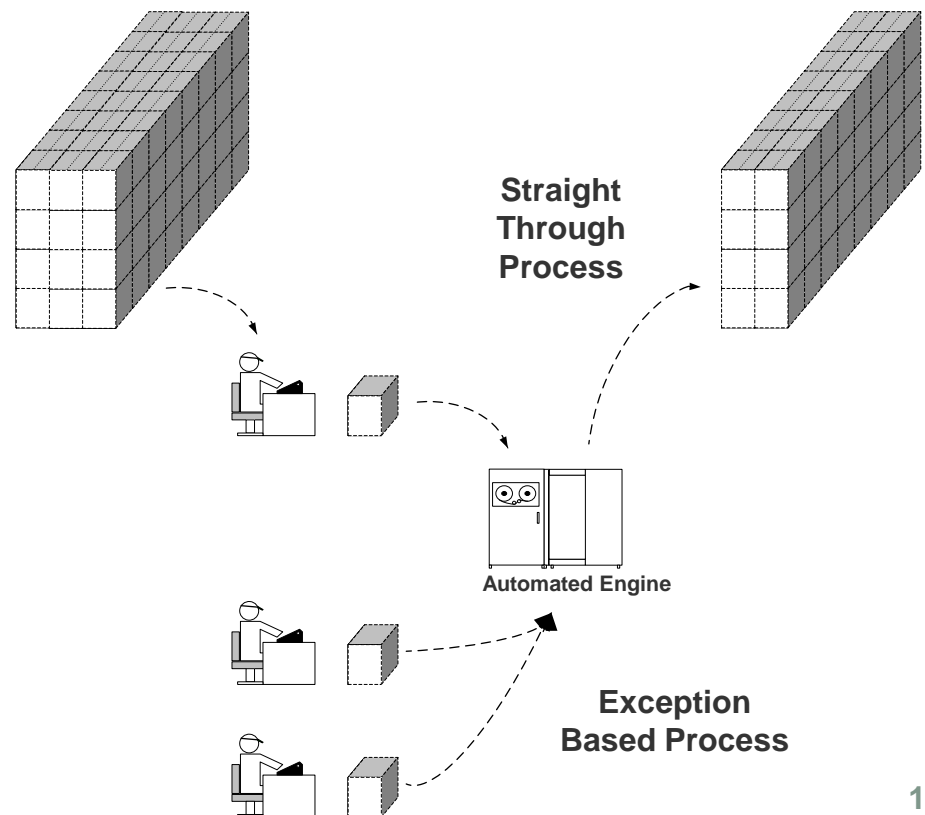
## Before Implementation

100% loan-level review
30 day cycle time
Defect rate - 35%

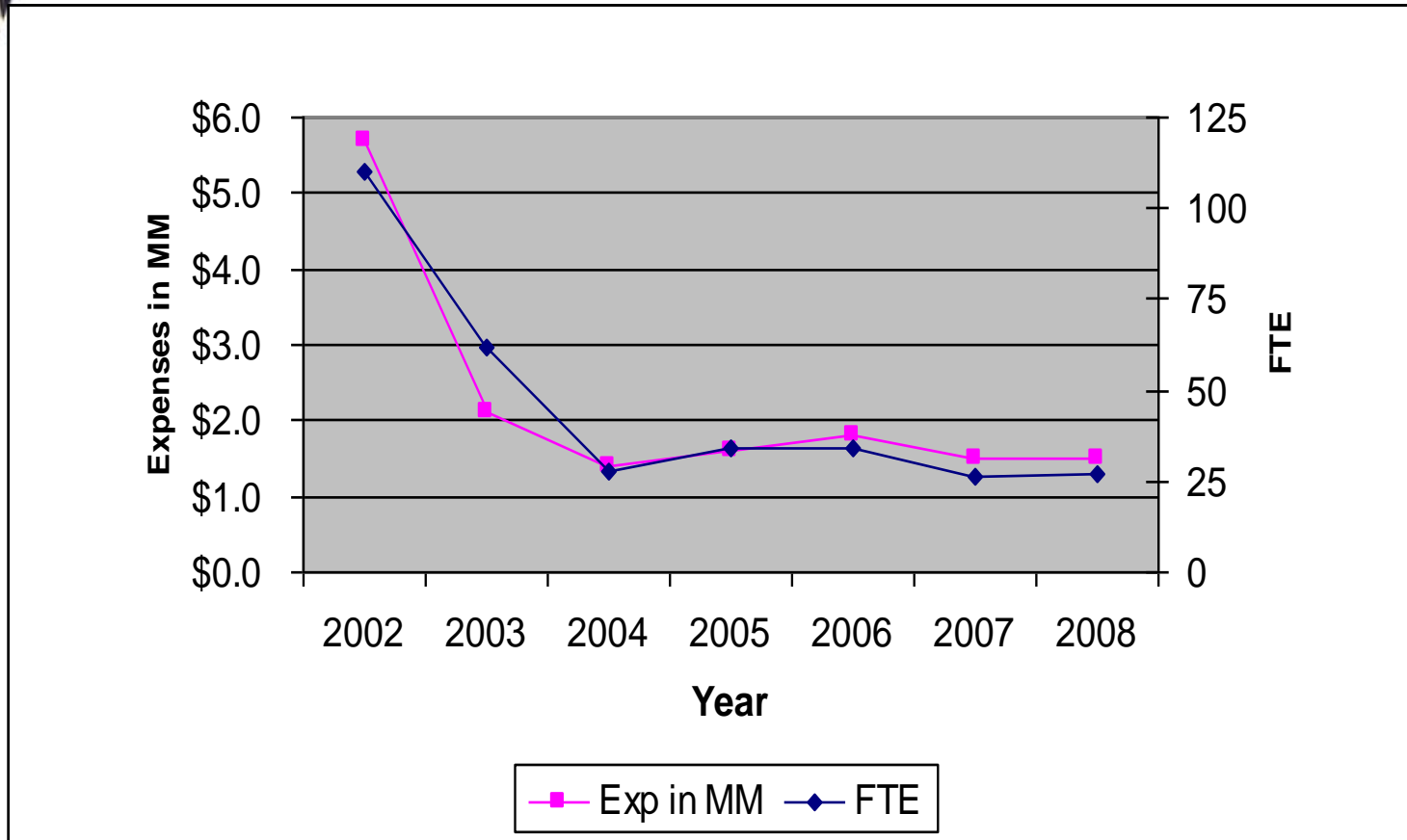
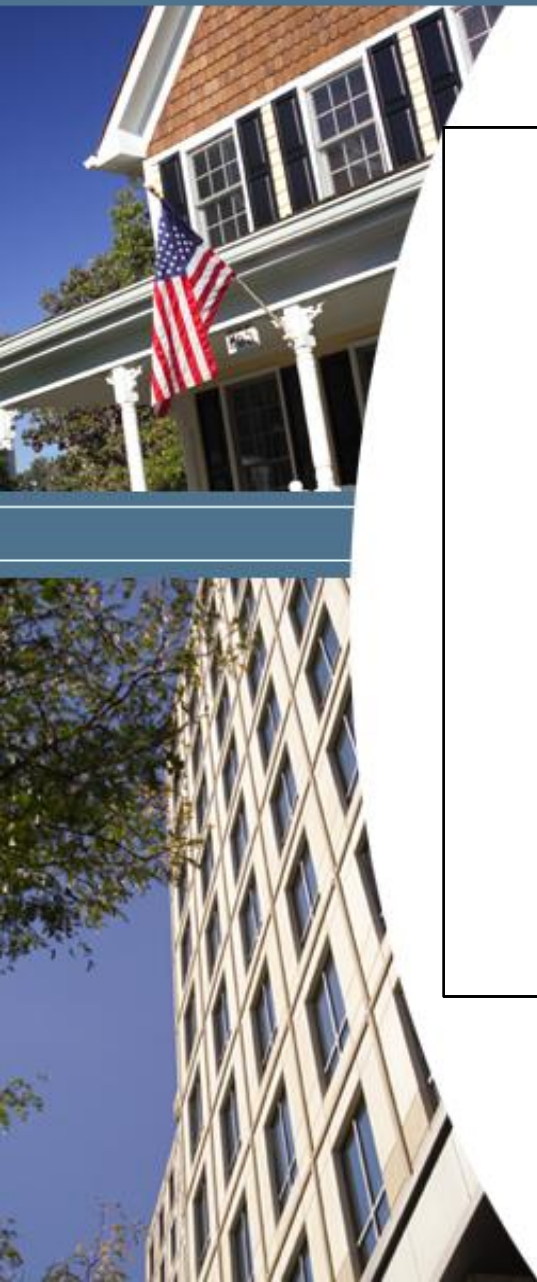


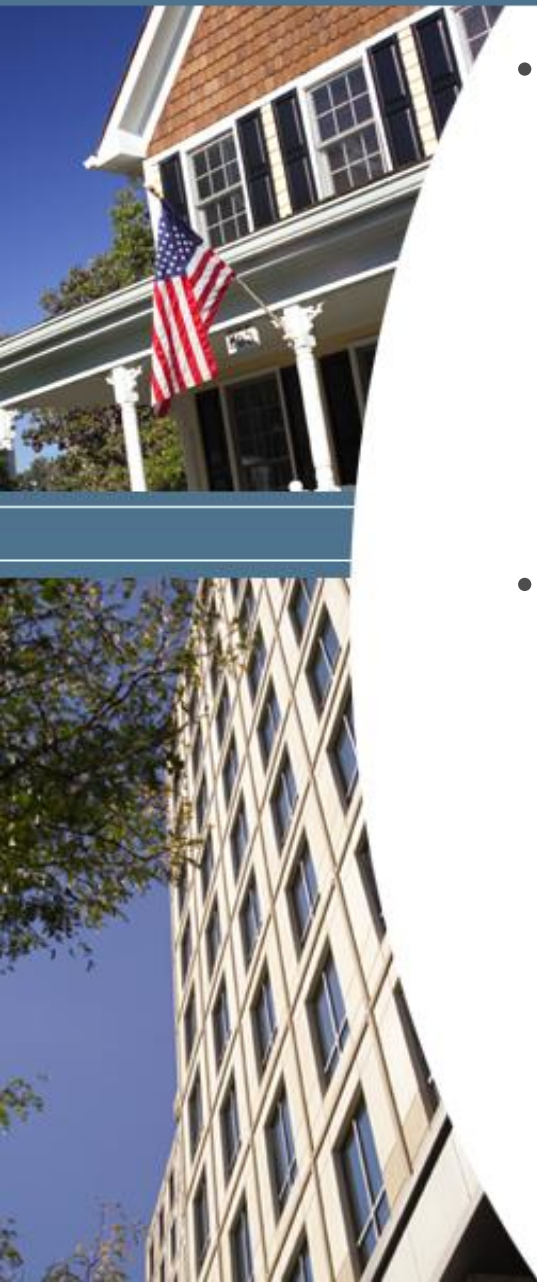
## After Implementation

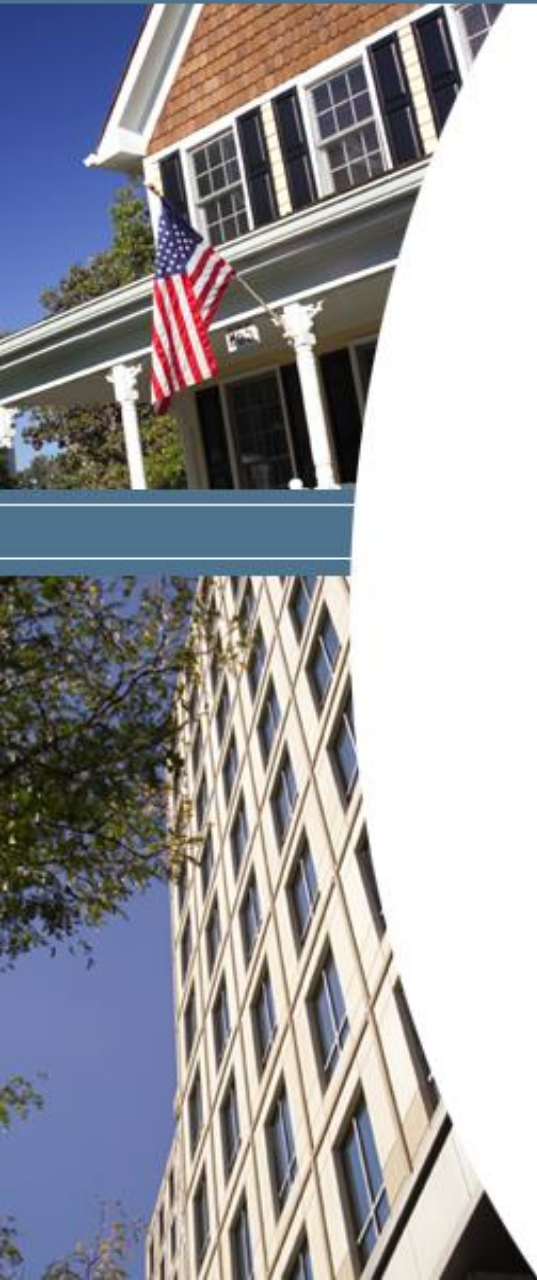
35% defect-level review
15 day cycle time
Defect rate - 35%



# New Loan Boarding – Expense / Staffing Trend



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- Positives
    - » Cost and cycle time takeouts were significant.
    - » Exception volume still tracks with origination volume, but much easier to ramp up/down.
    - » Opportunity to extend this capability to other processes (Government Insuring, Quality Assurance, Final Documents).
  - Negatives
    - » More difficult to change review scope
    - » False-positives (good & bad)
    - » Process worked well for highly-standardized documents. Did not work well for less common documents or old versions of common docs.



# Thank you!