

# DEEP DIGITIZATION IN MORTGAGE ORIGINATION A MIDDLE-OFFICE IMPERATIVE

*Indecomm and FinLocker provide a critical perspective on the value of bridging front-office point-of-sale innovation with middle- and back-office digitization in mortgage operations.*

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# STATE OF INNOVATION

## About the Authors

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## MORTGAGE INNOVATION: A WORK IN PROGRESS

US residential mortgage industry saw an explosion of consumer experience initiatives in the mid-2010s. FinTechs and incumbents alike invested heavily, innovated, and truly moved the needle on our industry's origination process, enabling the consumer to initiate loan applications directly and participate in the workflow. Driven by the explosion in the growth of online and mobile banking, improvements to the speed of the internet, and maturity of data analytics, the point-of-sale cadre of companies, products, and services transformed how consumers participate in the mortgage transaction.

However, in most instances, our industry cleaned up and painted the front porch but left the innards of our businesses doing the same manual work, or worse, added a hodgepodge of point solutions that stymie true productivity and adversely impact the work experience of our loan officers, processors, shippers, and many others who serve the consumer one way or another. It is not surprising to see that many of the mortgage industry's digital transformation initiatives did not yield a strong ROI, and consequently, the cost to originate continues to rise.

Front-office innovation by way of newer consumer-direct initiatives is only half the battle. In a contractionary market, the real battle is in the automation and digitization of the middle- and back-office functions. While having a digital borrower experience has become "table stakes", the chasm between the digital front-office and the manual middle- and back-office leaves borrowers with a fractured and disillusioning experience.

## THE OPPORTUNITY AHEAD

Strategic technology and automation investments in the mortgage middle office will significantly improve productivity and quality in processing operations for mortgage lenders that recognize the opportunity.

In this paper, we delineate the front-office, middle-office, and back-office mortgage origination process, and identify opportunities to create a seamless workflow in middle-office using automation and digitization. Cutting through the hype and emerging technology buzzwords, this paper offers insights into real-world applications that create value for our businesses and move the industry closer to the elusive straight-through-processing nirvana.

# DEFINING THE MIDDLE-OFFICE

## DELINEATING THE MORTGAGE VALUE CHAIN

The mortgage value chain can be segmented into three key operational areas, each identified by the dominant persona (or role) that drives workflow in that operational segment:



\*To keep the scope of our discussion focused, we are setting aside the servicing side functions for now\*

The activity in the loan origination middle-office is principally focused on loan set-up, processing, and underwriting. There are several consequential tasks that take place in the middle-office that influence borrower experience, loan pull-through rates, product pricing, and turnaround times.

## INTEGRATED BUT FRAGMENTED

While today's POS and LOS systems are increasingly sophisticated and well-integrated, there are a number of 'asynchronous' activities that occur between the borrower and loan processor, especially since lenders deliver tailored products to consumers based on investor product offerings and the borrower's eligibility. In fact, there is a range of activities that occur at various times and sequences, and through multiple channels, such as:

- Clarifications on submitted documents;
- Requests for submitted corrected or updated information;
- Collection, and compilation of investor stipulation material

Even if a well-designed consumer self-serve portal is fully adopted and leveraged, the loan processor will still be required to respond to various document uploads from the consumer, while also tracking other third-party collateral such as appraisals, fraud reports, flood reports, and more.

Moreover, these third-party reports may come in from other lender systems and portals, adding another layer of fragmentation. If these activities are not streamlined, digitized, and automated, the end consumer experience can still be disjointed, not to mention the friction created for the lender's processors, closers, and shippers.

# FROM THE MIDDLE TO THE FRONT-OFFICE



## MIDDLE-OFFICE IMPACT TO THE BORROWER

- Customer frustrations
- Missed rate locks
- Delayed closing
- Extensive ping-pong with various reps on data, and documentation needs
- Multiple modes of communication with the lender leading to missed deadlines and docs



## MIDDLE-OFFICE IMPACT TO THE LENDER

- Low borrower satisfaction scores
- Loss of the customer/ Low pull-through rates
- Increase put-backs, lower profitability, reputation risk
- Processing delays, manual rework, increase costs and potential fraud
- Disjointed and siloed internal experience across systems, tasks, and functions

These outcomes are costly to a mortgage lender. In the middle-office is where a loan processor ensures tight synchronization between the work completed in the loan origination system (LOS) to fulfill processing tasks and the work completed in the consumer-facing point-of-sale (POS) system.

The challenges in middle-office origination are also extensive at underwriting. The time it takes to compile and compare data and documents, and analyze that information for risk, creates significant delays in the overall response times to the borrower. Additionally, the sheer volume of data and documentation is cumbersome. The risk of overlooking an important data piece could create challenges further down the line with loan salability, fraud, and put-backs.

Fortunately, automated underwriting software of today extends beyond what traditional data-driven automated underwriting systems (AUS) can deliver. Modern systems provide full-scale automated decisioning of the most complex components of the loan manufacturing process and effectively synchronize data and document processing.

Lenders currently using any of the automated data verification services must explore solutions that utilize the digitized data generated from these sources to automate downstream processes like processing and underwriting. The utility of such automated verifications is greatly minimized if the lender is merely consuming PDF reports of such verifications into their eFolders or document management systems to “eyeball” and process loans. Deeper automation can eliminate the ‘stare and compare’ expense and yield higher quality in the loan manufacturing process.

With the mortgage industry expertise, automation developed and implemented by experts, we are confident that the entire borrower experience, right from identification of potential borrowers through prequalification, underwriting, closing, secondary execution, and beyond- can all be fully automated and digital with originators only handling exception driven processing and workflows.

# MIDDLE-OFFICE EMERGING TECH

## OPPORTUNITIES AND DRAWBACKS OF EMERGING TECH IN THE MORTGAGE MIDDLE-OFFICE

Fannie Mae's Day 1 Certainty program catalyzed the mortgage industry to embrace online, real-time verifications. Providers such as data aggregators and modern consumer engagement platforms have given lenders access to digitized data for credit, asset, income, and employment verifications. However, in today's industry operations the effective usage of that data does not extend beyond obtaining Reps & Warrants from GSEs.

The opportunity to automate some of the most cumbersome functions of the middle-office and leverage direct-to-source digital data for servicing engagement is a big miss for the industry. Effective use of digitized data can further drive automation of the lifecycle of a mortgage. However, technology can cause more harm when used tactically rather than strategically. The risks of introducing new solutions that further disrupt connectivity, transparency, and visibility of data, documents, and processes can not be understated.

As mortgage technologists, we each have first-hand knowledge of how emerging tech has advanced the mortgage industry. However, it would be remiss to say it has been all rainbows. While we advocate for the use of well-defined, industry-specific, tested solutions, there are a lot of solutions out there that have muddied the waters.

Mortgage technology hype, combined with shortsighted innovations has created some setbacks for middle-office mortgage operations leaders and talent. Lenders considering the use of emerging technology should keep in mind potential pitfalls and failings when including these solutions in their overall tech stack.

### DO YOUR DATA, SYSTEMS, AND TECHNOLOGIES TALK?



#### Data & Documents

- Leads
- Customer data
- Loan data
- Property
- Credit, Assets, Income
- Compliance
- Third-party data (flood, fraud, etc)



#### Systems & Integrations

- Point of Sale
- Borrower apps
- CRM
- Loan origination platform
- Compliance systems
- AUS
- AVM
- Imaging



#### Emerging Technologies

- Artificial Intelligence
- Data Analytics
- Machine Learning
- Robotics Process Automation
- Optical Character Recognition
- Cognitive Workflow
- Blockchain

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“If you cannot automate a task end-to-end, you shouldn’t automate at all. Partial automation does not save money or time for middle-office loan processors and underwriters. An effective solution has to be holistic, not piece-meal, and effect deep-digitization, not surface automation.”

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## PITFALLS OF EMERGING TECHNOLOGY IN MORTGAGE OPERATIONS

### Cure-All to Fail-All



Many in the mortgage industry have promoted RPA, AI, and Machine Learning as a sort of “cure-all” for any problem facing a lender. Unfortunately, the damage caused by buzzwords and hype is hard to quantify as the adoption of these solutions are often paired with lengthy consultant fees and IT intervention. Unfortunately, integrating emerging technologies that go from cure-all to fail-all have made it more difficult for lenders to distinguish between legitimate solutions and snake-oil.

### Shortsighted Solutions



One of the key reasons so many emerging technologies fail the mortgage middleoffice is that they are built by, implemented, and managed by general technologists that have little experience in the very complex world of mortgage banking. RPA, machine learning, and AI need to be industry-specific and well-defined based on expert knowledge of mortgage operations such as borrower profiles, functions, processes, products, tasks, and interdependencies.

### Build vs. Built



When built based on practical knowledge of the middle-office, automation saves time and money. One of the trends we see from providers of AI, RPA, and ML includes the promise to “build” something unique to the lender. While the concept of a unique solution may appeal to the concept of competitive differentiation, it is more likely that the cost, time, and resources required to build it will eliminate any benefit gained. Lenders seeking a competitive advantage can get the benefit of automation by working off of proven, tested, pre-built solutions based on global mortgage middle-office best-practices and overlaying customizations. This cuts back on implementation timelines simplifies management and accelerates the speed-to-use of practical solutions.



# DEEP-DIGITIZATION AND RESPONSIBLE AUTOMATION

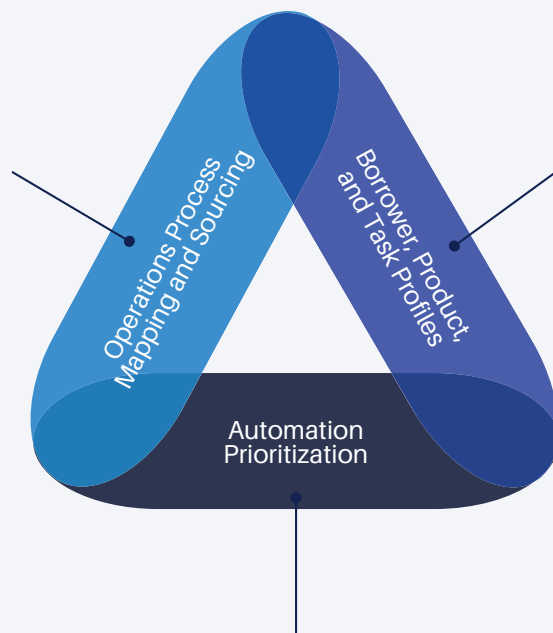
Digital data capture, direct-to-source where possible, and integrated technology like RPA should lead the automation effort in the mortgage middle-office. However, adoption strategies often fall short. As lenders focus on speed to use, the quality and functionality of the solution suffer.

While speed-to-implement is important, we are confident that this can be achieved by ensuring the solution's features and functions meet high performance and quality standards. We advocate for "responsible automation" adoption, which comprises three simple steps.

## 3 STEPS QUALITY PROCESS:

### Step 1:

We look at the originator's business process and technology stack and develop an operations process map detailing the tasks and steps your most efficient loan processor takes. Having mapped out workflow and processes for hundreds of lenders, we can then source the most "like" automation build to start with to avoid a "from scratch" solution.



### Step 2:

We then normalize the map by documenting multiple loan origination flows to adequately cover the variety and mix of consumer profiles and loan types and establish an inventory of tasks, and the conditions that trigger those tasks.

### Step 3:

Finally, we identify opportunities to apply automation where will be most beneficial including across routine, rules-based tasks as well as decisioning analyses that require complex human judgment. We look at this in the context of the full mortgage loan lifecycle, ensuring that any recommendations made will be made to help advance the ultimate goal of seamless, straight-through processing and data interconnectivity.

# CONCLUSION

Considering the pitfalls associated with the adoption of generalized automation solutions and emerging technologies, lenders should set the bar high for the technology chosen for their middle-office automation. Selected technology solutions should support complex workflow tasks, decisions, and analyses necessary for their business. In addition, the chosen solution should seamlessly integrate with their POS, LOS, and other systems that generate task lists, capture documents, and complete workflows and checklists.

If you cannot automate a task end-to-end, you shouldn't automate at all. Partial automation does not save money or time for middle-office loan processors and underwriters. An effective solution has to be holistic, not piece-meal, and effect deep-digitization, not surface automation.

Current market conditions demand mortgage lenders and technology vendors rise to the challenge of lower volumes, lower margins, and weak demand. Improving operational efficiency is a key lever in a contractionary market. Innovation on the front-end of the mortgage origination business process has not fully translated into time or cost savings for companies due to a disconnect between front-office digitization and middle-office/back-office digitization. Direct-to-source data and intelligent automation are the powerful one-two punch that will tame the cost and complexity beast in our manual/paper-driven industry.







## ABOUT THE AUTHORS

### [Narayan Bharadwaj](#)

Narayan Bharadwaj is the Senior Vice President of Automation at Indecomm. Narayan has over 27 years of experience in the Banking & Financial Services industry with an extensive concentration on consumer lending. His career spans executive leadership positions for tech companies like Cognizant Technology Solutions, Wipro, and Docutech Corporation; and as a technology executive in financial services organizations such as GE Consumer Finance, and Citibank Global Consumer Bank.

### [Prabhakar Bhogaraju \(PB\)](#)

PB is Executive Vice-President leading Strategy, Product and Application Development at FinLocker, LLC. PB has over 20 years of mortgage technology and consulting experience, with ten years in executive leadership positions at Fannie Mae in product development, data management, and digital business architecture. PB also has extensive experience in customer engagement, design thinking, digital business strategy, and in underwriting, pricing and servicing technologies.

### [Brian Vieaux](#)

Brian Vieaux is President and Chief-Operating Officer at FinLocker, LLC. Brian has over 25 years in bank lending and mortgage banking operations across a range of origination channels including retail, wholesale, and correspondent. He was SVP Third Party Originations, Wholesale & Correspondent Lending at Flagstar Bank; SVP at Aurora Bank; SVP at Indymac Bank; and National Sales Director at CitiMortgage.

### [About Indecomm](#)

Founded more than 25 years ago, Indecomm blends intelligent automation with deep mortgage banking expertise to deliver groundbreaking mortgage innovations that help businesses optimize operations and achieve competitive advantage. Backed by 1500-strong global workforce, mortgage organizations benefit from Indecomm's automation-as-a-service approach, which enables better borrower experiences by streamlining middle and back-office operations.

Indecomm takes an automation-first approach, partnering with large and mid-sized lenders, servicers, mortgage insurers, and title companies to create efficiencies at every phase of the mortgage lifecycle. Specifically, Indecomm products and services leverage robotics process automation (RPA), supervised automation, and machine learning to tackle the industry's most complex operational challenges.

### [About FinLocker](#)

FinLocker is a secure financial fitness tool that aggregates and analyzes a consumer's financial data to offer a personalized journey for the consumer to achieve loan eligibility for a mortgage and other financial transactions. Consumers benefit from personalized recommendations, homeownership and mortgage education, credit score, credit report and monitoring, cash flow analysis, budgeting, goal planning, data sharing, real estate search, and more. Mortgage lenders, originators, and other financial institutions can private-label FinLocker to generate and nurture leads, streamline the loan process, cross-sell valueadded products, reduce costs, and create customers for life.