BANKING

Operational Excellence in Banking

Faster, focused, data-driven results with Process Mining

SUMMARY

- As banking processes evolve, they become cluttered with waste: unnecessary steps, extraneous controls, duplicated resources, and manual workarounds.
- Process engineers often start with optimism but often become frustrated without the tools or support, they need to be effective.
- Operational excellence enables faster credit decisions with fewer missed settlements, both reducing revenue leakage and delighting the customer at key moments of truth.

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Operational Excellence is Transformational

Banks are under significant financial and competitive pressure. Their customers' expectations are being shaped by the digital giants and Fintech startups. They are facing increased regulatory scrutiny and oversight. Their staff are demanding new ways of working. The response to date has seen banks grappling with transformation on multiple fronts:

- Digital transformation
- Risk and compliance transformation
- Customer journey transformation
- Organizational transformation

Underpinning all of these is operational excellence. This paper sheds light on how process mining can support operational excellence initiatives in banking. It is the first paper of a series dedicated to process mining in banking. It is the first paper of a series dedicated to process mining in banking.

Each of the above transformational topics will be covered in a separate paper, where the foundation role of operational excellence will become more apparent as each topic is explored in-depth. See Apromore.com to find these additional resources.

Operational excellence itself is transformational. Whether it is implemented as a dedicated, centralized program or a business-as-usual activity supported by a small center of excellence, operational excellence has become the primary lever for driving out costs in a sustainable way.

The "sustainable" part is what makes operational excellence different from other cost reduction exercises. Sustainable operational excellence is not just a "run the lawn mower over the top and take x% of the headcount out" type of initiative. Service and quality are not seen as trade-offs.

Not only can they not be compromised, but it is also expected that the program will deliver both better customer and shareholder outcomes at the same time. That is what makes operational excellence equally challenging and rewarding. The principal toolset has been around for several decades now. However, the addition of process mining to that toolset both accelerates the time to value and delivers significantly enhanced insight and outcomes.

The Building Blocks

All organizations strive to create value. Processes are the building blocks for creating value. It is not surprising that improving processes lies at the heart of any operational excellence agenda. Irrespective of how the program is structured, the first two steps are always the same:

1. List your core, end-to-end processes; and
2. Document the "As-Is" for each

Improving processes lies at the heart of any operational excellence agenda

The traditional approach is to do this within a workshop environment. This is where the issues start. Processes in large, mature banks are fragmented and connected through a spaghetti-like network of teams, interfaces and applications. Very, very few people in the bank will understand how the process works end-to-end. For example, consider an everyday process like originating a residential mortgage. Even scheduling the workshop can be a challenge – subject matter experts from a cross-section of functions such as product, risk (first and second line as a minimum), compliance (consumer credit specialists, financial crime specialists), operations (onboarding, credit, documentation, settlements, reconciliations at least), technology (application developers, infrastructure, user access), distribution (branch, contact center, web and app channels, 3rd party distribution i.e., mortgage brokers), and probably someone from the finance function are all required to try and piece the end-to-end process together. It is not unusual for there to be more than 30 people in the room. Many will never have met before.

Many will have never considered what happens upstream or downstream from their own role. Many will still be responsible for their day-job and will be interrupted throughout the workshop. Trying to get this many people together for a couple of hours, let alone one to two weeks for a complex process like mortgage origination, is challenging to say the least. And that's without the frustration of dealing with the disruption caused by sick leave, vacation leave, SMEs moving to new roles, or being reassigned to a higher priority task.

Beware of the "Happy Path"

Even the best-trained process improvement facilitator, armed with an abundance of virtual "brown paper" and stacks of post-it notes, struggles to generate meaningful output. At best, a "happy path" is documented with a few common exceptions, i.e., tenants in common or a trust or a guarantor application. Less common exceptions, workarounds, and shortcuts will not be captured.

The output will rarely have any meaningful process data and will undoubtedly be limited in its ability to support simplification and re-design decision-making. At best, it is a communication tool and a means for people working along the end-to-end to connect and understand the handover points. In summary, it's expensive and frustrating for participants. It offers limited real value and by the time the "To-Be" is implemented the "As-Is" will invariably be out of date.

Now, imagine if the same task could be completed in a fraction of the time, showing all paths through the process, supported by meaningful operational data and metrics such as cycle time, frequency, time difference between the shortest and the longest path, common exceptions and less common exceptions, resource utilization, bottlenecks, rework, and other forms of waste.

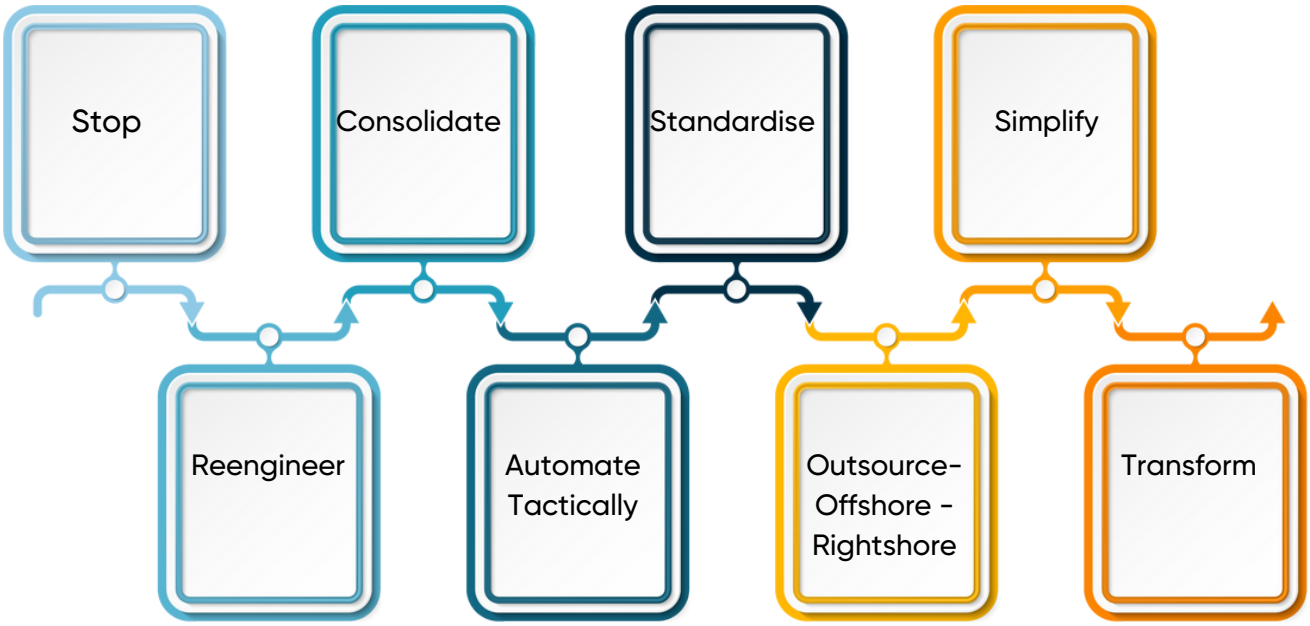
All ready to be validated and critiqued by SMEs in a few hours, not weeks.

There is no need to spend hours trying to jog the memory of an SME or cool the temperature when opinions get in the way of facts. Even the time and energy saved from not arguing about whose data is more accurate can be a significant benefit on its own. Add to this the fact that the maps and models can be re-run whenever there are changes and you have a foundation for some serious, value-driven process analysis.

That's precisely what one of the key process mining techniques – automated process discovery - does. Whenever a process runs in a bank, the supporting applications capture not only the required data to run the process but also critical events and when they happened, i.e., a customer hits submit to initiate a payment. These events and their associated timestamps are captured in event logs, which process mining analyzes to automatically generate the process map. It provides not only a picture of the "happy" or most common path through the process but all paths through the process and the supporting data, i.e., how long each task took, the wait time between tasks, which resources worked on which tasks, how much the process costs to run, etc. With accurate maps, reflecting what actually happened, a robust fact base, plus tangible and practical operational metrics, executing an operational excellence agenda then becomes faster, easier, more efficient and effective, with lower risk, and more sustainable.

Operational Excellence Pathway: The Cost Reduction Lever

In a low interest rate world, bank revenue is under pressure. At the same time, the need to reinvest in digital transformation and cost headwinds in areas like financial crime and compliance are adding to the earnings pressure. It's no surprise that one of the most common operational excellence goals is cost reduction.



Operational Excellence Pathway

Armed with fact-based, data-driven process maps and models, all the typical techniques in a process improvement specialist's toolkit can be executed with greater precision and at pace.

Stop Doing Non-Value-Added Work

One of the quickest ways to benefit is to stop doing non-value-added work. This is not about simplifying or re-engineering a process (more on those topics later). It is about not doing work that is no longer required but is still being done out of habit, i.e., a start-of-day task for the Financial Markets team to load exchange rates into an application that the Payments team no longer uses. This type of change is fast and very easy to implement – far easier to stop something than to start something or do something differently. The discovered process model not only makes it easier to identify these options, but also makes it easier to quantify the benefits.

Consolidate

Delivering a consistent customer experience at a lower operating cost is a hallmark of the digital giants and Fintech startups. One of the reasons why this is so hard for large, mature banks to emulate is because over time, as operating models have changed, existing products modified and new products introduced, processes have become both fragmented and distributed across multiple teams. A critical step towards operational excellence is to consolidate like processes, activities, and teams.

It is not unusual for banks to align operations teams geographically i.e., country-based Anti-Money-Laundering (AML)/ Counter-Terrorism Financing (CTF) teams for example. While there may be important differences within each geography, there are far more similarities than differences and consolidating teams, either fully or via a hub and spoke model, is a critical step to delivering a consistent experience. It may well be that the teams in each country, when reviewing account behavior or validating a customer's identity, perform the activities in a different order, using different applications, but the underlying activities are essentially the same. Bringing the teams together improves resilience (there's less chance of being exposed to key person risk), provides a natural growth path for the team to apply their skills in different markets, provides an opportunity to increase spans of control, i.e., reduce cost and sets up the team for the next improvement phase – it is almost impossible to standardize without consolidating first!

Yet consolidation is not without risk. Using process mining's variant analysis (a capability that allows one to compare different variants of the same process and focus on differences and their impact) both highlights where the opportunities for consolidation lie, what the benefits may be and just as importantly the risks involved. This level of transparency, along with the data to support the transition such as resource usage, demand profiles, bottlenecks, etc., significantly de-risk the consolidation for the leader and help establish the base for standardization.

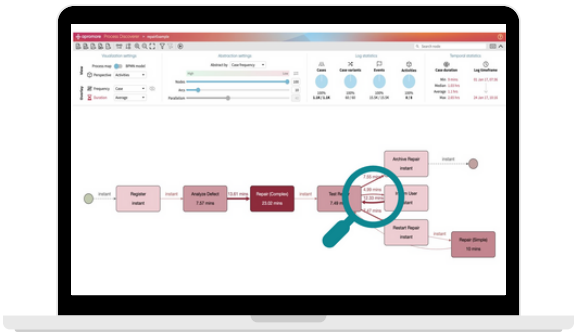
Standardize

Comparing how a team in one location executes a process relative to a team in a different location is always insightful. While people may share tips and checklists within their own team, it's rare that this happens naturally across sites or even floors in the same building and even less so over Zoom. The result is that the process quickly gets out of synch and a customer making an enquiry about the progress of their loan application can have a very different experience from one day to the next if the enquiry handling process is run as a multi-site model.

Simplify

Many bank processes have evolved over time to be strewn with waste - unnecessary steps, extraneous controls, duplicated resources and manual workarounds. Whenever something goes wrong, the instinctive response is to add another control, another checker checking checkers.

Or when the relationship team bends over backwards to win a new corporate deal, commitments are made that the current process is not capable of delivering and a range of unsustainable, error-prone manual processes are introduced. There is nothing more frustrating than sensing a process is riddled with waste but not knowing where to look to find it. There is nothing more frustrating than sensing a process is riddled with waste but not knowing where to look to find it. Process engineers from other industries who transition to banking, start their banking careers full of optimism sensing a “target-rich environment”, only to emerge months later frustrated and defeated. Knowing where and why the re-work happens in banking processes is not always obvious.



The visibility, transparency and availability of process models discovered by process mining with accurate representation of the flow and real process metrics allow analysts to quickly identify the waste. The transaction types that are slowing down the process, the duplicate controls, the non-value-adding steps, the broken or slow handoffs, the rework loops as poor-quality passes back and forth between team members, the wide range of exceptions with no real commercial reason to justify their existence, and so on and so forth. Removing this waste directly reduces cost, improves quality, delivering a better outcome to customers faster.

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Reengineer

By the time the process is consolidated, standardized and simplified, identifying opportunities to reengineer is usually the next step. This might include something like a common mortgage lending backbone that all channels feed into whether branch, private bank, contact center, app or broker originated, the application follows the same process once captured.

To do this successfully requires not only an understanding of each “As-Is” process for the relevant channels including the detailed process metrics behind them, but also a detailed understanding of all the possible exceptions. With reengineering the mortgage process, the devil is very much in the detail. Buying a home is stressful. A smooth mortgage and settlement process is a critical moment of truth for any bank and at the same time a significant source of revenue leakage for those applications submitted but never settled.

Process performance analytics play a critical role. For example, applying a Runners, Repeaters, and Strangers approach to ensure simple, straightforward applications are processed as quickly as possible without getting blocked by more complex applications requires a detailed analysis of applications and their characteristics. Drawing the data from an event log ensures that exceptions are not overlooked. This analysis can also help identify the points in the process where the leakage occurs and the difference between applications that complete and those that attrite.

Automate Tactically

There is no doubt that automating processes is a focal point for many banks. While a full transformation is underway, tactical automation is a common approach to deriving some of the benefits in the meantime. This may be modifying business rules, implementing Robotic Process Automation or Machine Learning models. Because of the underlying complexity, even a reengineered process that is built on the same technology stack is hard to automate tactically end-to-end.

Identifying the precise steps in the process where the most benefit can be derived requires a thorough knowledge of task time, resource utilization and resource costs. This is precisely where process modeling can help prioritize tactical automation efforts. It also ensures that time is not wasted on automating all exceptions.

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Each exception costs money to accommodate and based on frequency of use may not deliver a return. In many cases, the 80:20 approach is more effective, i.e. automating a step or series of steps for 80% of the cases and leaving the remaining to the team to handle manually. This is where process mining enhances the traditional approach: these automation opportunities, at the task or process level, can be identified via process mining, and the impact of their automation can be assessed quantitatively, based on hard data.

"The tool has been a transformative addition to our Process Intelligence team. It empowers us to make data driven decisions, optimize processes and help drive our business forward. I highly recommend to any organization seeking to gain a competitive edge through process optimization."

Outsourcing/Offshoring/Rightshoring

Moving a banking process from one location to another or from one business to another is not for the faint hearted. The receiving team rarely knows precisely the right questions to ask and the sending team may not always remember all of the exceptions that they handle. It's also easy to estimate how many people are required by just counting the number of people involved in the sending team.

However, this may not reflect unpaid overtime, it may not reflect the differences between what is expected and what is actually done, it almost certainly will not allow for the accumulated years of experience and knowledge and the productivity that goes with it. Running an automated process discovery exercise prior to transition ensures both sending and receiving teams are on the same page, there is a full understanding of all exceptions and the resourcing calculations that sit behind them.

The last step is to transform, which is dealt with in subsequent papers. See Apromore.com to find these additional resources.

Process Mining in Business-As-Usual (BAU)

While the focus of this paper so far has been on the role process mining can play in the improvement aspect of operational excellence, it can also play a critical role in supporting day-to-day control.

Many banks have implemented Business Activity Monitoring (BAM) in an operational command center to provide visibility over the process as transactions and applications are processed. While this is a significant step forward, BAM is not process-aware. It can tell you that queues are backing up and whether current volumes are in line with expectations, but it cannot provide much in the way of insight of how the process flows and where the next bottleneck is likely to be as transactions work their way through the system. More importantly, BAMs does not have the ability to predict whether SLAs will be met or provide advice on steps to take that will ensure they are met. Equally, identifying where resources should be deployed if a site goes offline, a system goes down or an adverse weather event or any other Business Continuity Planning event is an additional benefit that deploying process mining in BAU at runtime can enable.

Process Mining Underpinning Process Maturity

One final aspect worthy of note is the role that process mining can play in helping a team climb the process maturity ladder. Many banks still have a long way to go to achieve process maturity. One of the blockers is a lack of transparency and process data to help teams develop the detailed understanding of how their current processes operate.

The visibility and insight that process mining provides is far more realistic and stimulates far greater learning. Add to that the ability to use existing event logs as the basis for simulation and teams move very quickly up the learning curve.

Conclusion

Banks are being buffeted by headwinds on multiple fronts. An operational excellence program is pivotal to how they respond and execute their transformation. It also buys time and plays a critical role in delivering better outcomes for customers and shareholders while the transformation teams are designing and implementing their solutions.

Process mining enhances traditional approaches to operational excellence by automating the critical step of process discovery. The maps and models that are generated reflect business reality and are supported with operational data that is so often lacking.

With the discovered models as a foundation, the pathway to improvement then becomes far easier, more accurate, carries less risk, and is significantly faster.

Moreover, process mining does not just support the improvement aspect of an operational excellence. It can play a critical rule in day-to-day operational control and building capability and operational maturity.

Want to know more? Ready to explore the potential of Process Mining?

The Apromore™ platform is an easy-to-use, fast-to-deploy AI-driven process mining solution that enables business and technology teams to quickly visualize and analyze their business processes, and simulate proposed changes prior to implementation in order to measure impact and risk.

The result of over a decade of extensive research and innovation from leading universities, the Apromore platform includes no-code features and a simple UI that continuously delivers new insights into operational performance and compliance.

For more information, visit https://apromore.com/product

About the Author, Nigel Adams, Director at Hetton Advisory

Nigel Adams is a thought leader in service operations excellence, with deep experience in the banking sector. He has nearly 25 years of experience focused on creating enterprise value from operational improvement, risk management and performance optimization. Nigel is known for driving performance and transformational change at pace while leading large, multi- award-winning teams in complex delivery networks. In addition to a consulting career at KPMG, he has brought his skills to bear for leading banks, including NAB and ANZ, focusing on global payments and cash operations, financial crime, and business performance.

About Apromore

By providing an easy-to-use, fast-to-deploy process mining solution, Apromore enables business teams to quickly visualize and analyze their business processes to unlock value in existing processes or identify strategies for transformation or optimization. The result of over a decade of extensive research and innovation from leading universities, Apromore's mission is to help organizations maximize value from their business processes by leveraging the full potential of process mining.