

***ISG** Provider Lens™

Aprimore's Roundtrip Process Mining Solution:

A digital twin for business
process transformation

AUGUST 2024 | BRIEFING NOTES



Table of Contents

Background	01
Briefing Notes	01
Net Impact	06
Associated Insights	06
ISG Placements and Recognitions	06
About the Author	07
Summary Facts	08

About ISG Research™

ISG Research™ provides proprietary research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. ISG Research™ gives business and technology leaders the insight and guidance they need to accelerate growth and create more value.

© 2024 Information Services Group, Inc. All rights reserved. Reproduction of this publication in any form without prior permission is strictly prohibited. Information contained in this report is based on the best available and reliable resources. Opinions expressed in this report reflect ISG's judgment at the time of this report and are subject to change without notice. ISG has no liability for omissions, errors or completeness of information in this report. ISG Research™ is a trademarks of Information Services Group, Inc.

For more information, please email contact@isg-one.com
call +1.203.454.3900, or visit research.isg-one.com

Background

With recent advances in AI and ML, process mining is starting to pivot from its traditional focus on analyzing existing processes to predicting and simulating organizational systems. In this new context, process mining becomes an indispensable tool for enhanced decision-making and designing business processes. With a distinguished record in cutting-edge research, Apromore is at the forefront of this revolution. Its roundtrip process mining platform creates a digital twin of organizational processes, enabling enterprise decision-makers to assess the potential impacts of major IT or business system transformations, such as a new

CRM system or mortgage lending platform, quickly and without risk. The Apromore platform has already been used to simulate key business processes for banks, insurance providers and manufacturers in Europe, the United States and Oceania. Its no-code design is ideal for business analysts and operations professionals who need to evaluate how different process designs impact key metrics such as resource usage, costs and consumer experience (CX) scores. With the latest addition of co-pilot capabilities, Apromore is likely to become a vital tool for many enterprises in their digital transformation efforts.

Briefing Notes

Modelling the Unknown

Business leaders across industries must navigate numerous decisions on how to best design and structure their digital transformation programs. How will moving from a legacy on-premises IT system to a cloud-based model affect CRM and ERP processes? How will a new, highly automated consumer loan platform impact the consumer experience of applying for a loan? How robust will that system be to seasonal demand swings and what compliance or process traps could hinder progress?

Given the risks and uncertainties, digital process transformation can seem like a leap into the unknown. While process discovery and task mining applications have made tremendous bounds in recent years, providing insights into existing processes and potential bottlenecks, these applications work well only for processes that are already known. Digital transformation, however, is about creating entirely new processes and ways of interacting with customers, suppliers, producers and employees — along with the uncertainties X and dependencies those changes entail.

This need to understand, model and design largely unknown future states drives Apromore's process mining solution. Apromore is a process mining and AI-driven business process improvement company founded in 2019 by two process mining professors — Marcello La Rosa and Marlon Dumas, and their computer science colleague Dr Simon Raboczi. Its platform, born from over a decade of research at the Universities of Melbourne (Australia), Tartu (Estonia) and others, is distinguished by its focus on modelling and designing future process states, significantly reducing the information gap faced by business leaders in transformational programs. As Prof. La Rosa notes, "In most business transformations, you want to obliterate the current state and replace it with a completely different one. But first, you need to simulate the desired future state and understand the dependencies — which IT systems will be affected, which business processes, which business units, and so on. For example, if I transform a certain process, can I still meet my SLAs to the customer? So we actually call this **organization mining** because it is about much more than just modelling particular processes."



Apromore's Roundtrip Process Mining: How it works

The Apromore process mining approach involves four key stages, as illustrated in Figure 1.

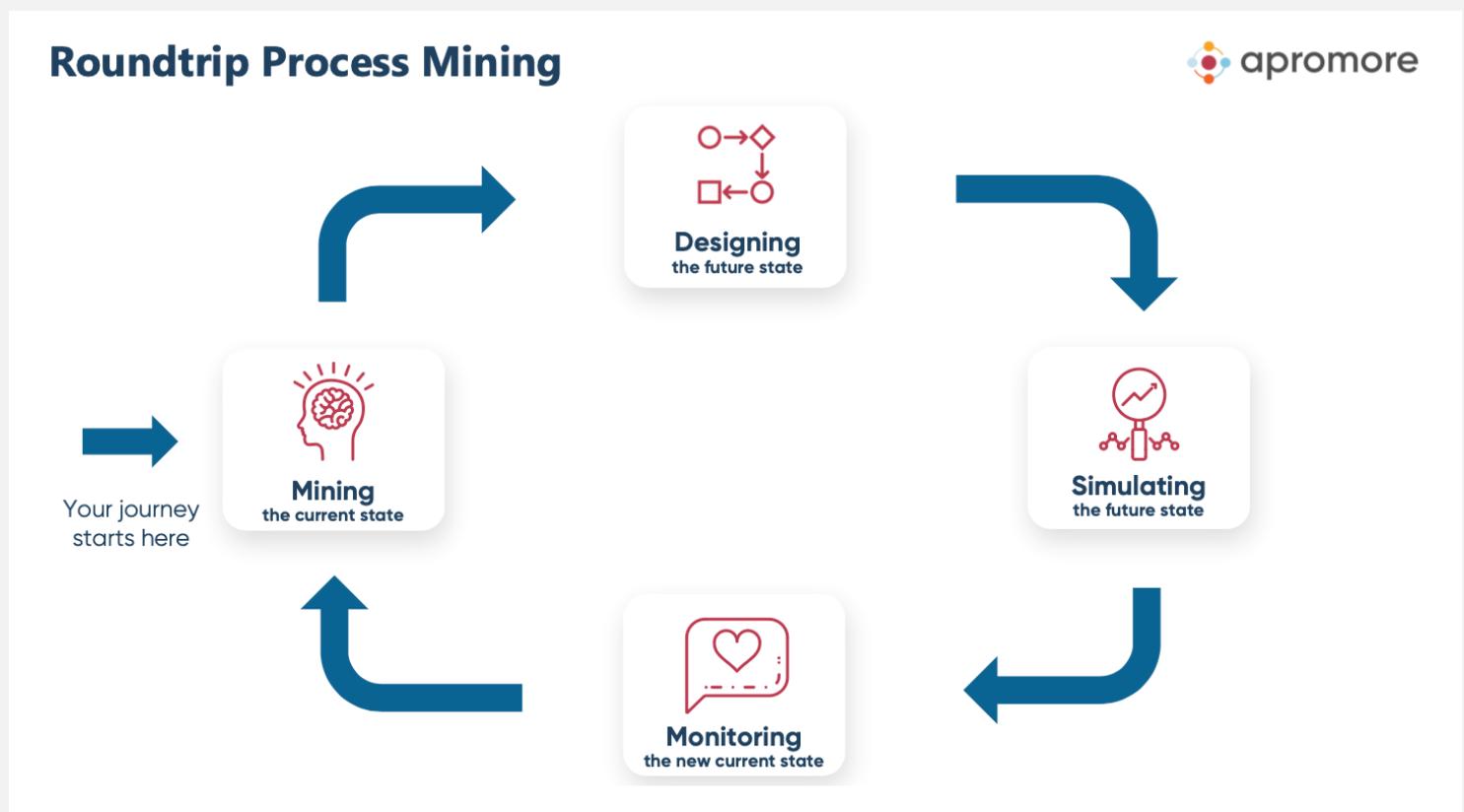
Unlike some alternative platforms, which often begin with business process mapping based on organization and human inputs, Apromore starts with automated process discovery through detailed log event analysis. As Prof. La Rosa explains, "You still need to start by mining the current state because you need to understand the constraints, what might be a system constraint rather than a business constraint. You do not want to fall into the trap of reimplementing the same constraints in your new future business state."

This process mining stage produces a detailed map of organizational processes, automatically generated and provided to clients for free.

This mapping alone yields a passel of metrics for incremental process improvements by identifying hotspots, friction points, rework loops, potential fraud and compliance issues. More importantly, it provides an as-is picture of processes, avoiding the idealized view that often comes from organizationally derived process maps, which often conceal hidden off-road work and manual adjustments.

In the design stage, users can model the future state. Where Apromore excels, however, is in the simulation stage. The platform is ambidextrous, capable of modelling and simulating incremental, operational changes, such as automating a discrete process, or designing and simulating completely new future business states, such as a bank's transformation to a cloud-based model. As the platform ingests new data, it continually updates the future-state simulation, increasing the model's predictive power and providing a fine-grained view

Figure 1. Roundtrip Process Mining: Overview



Source: apromore

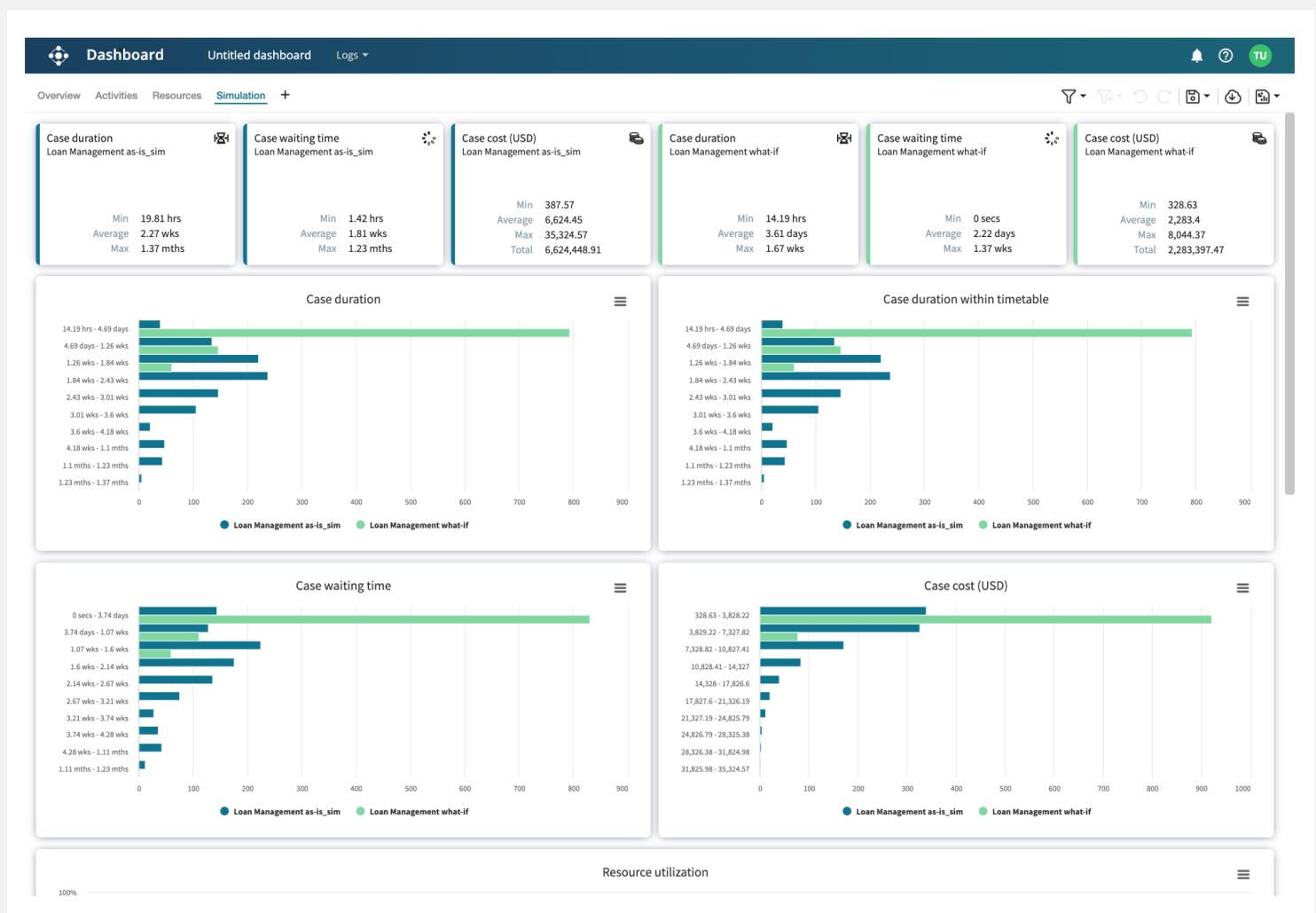


of the effects of business process transformation – hence the **round trip** moniker.

On the monitoring side, the platform enables users to assess the effectiveness of their new process implementation against the expectations built during simulation. Monitoring also provides continually updated dashboards for tracking performance, compliance trends and deviations over time (Figure 2: Simulation Dashboard).

One of the platform’s biggest benefits is its role in decision-making. Essentially, it creates a **digital twin** of organizational designs — a digital replica that dynamically adjusts to changes in organizational and system processes. Just as a digital twin of an aircraft engine or laboratory process enables engineers or scientists to experiment with different designs and solutions, the Apromore platform allows executives to experiment with different business transformation designs in a fast and risk-free environment.

Figure 2. Simulation Dashboard



Source: apromore



Key Differentiators

The Apromore platform offers several key features that make it ideal for rapid understanding and simulation of organizational processes:

No-code, citizen-oriented approach: The Apromore platform is a no-code solution designed explicitly for business analysts and operations specialists, with an intuitive user interface and a one-click approach throughout. This enables operations teams to run process analyses and simulations without needing coders or software developers. As a result, time to value is relatively short, with small teams able to carry out many more simulations, and much faster, than with platforms that require extensive developer involvement.

AI-led approach: AI and ML are integral to every part of the Apromore platform. AI is used in process mining for root-cause analysis, identifying characteristics or attributes likely to cause problems, such as non-compliant cases in a mortgage approval process. Statistical ML is crucial in simulation, predicting activity duration distributions that affect process efficiency. ML models are also deployed in monitoring, particularly in predictive modelling of process problems and prescriptive recommendations.

Apromore's strong academic provenance ensures that its team leads in AI and ML research. Two of

its co-founders are professors in process mining, supervising PhD students researching areas including predictive and prescriptive monitoring, providing insights and techniques that can then be integrated into the platform.

GenAI: In July 2024, Apromore released an LLM-powered co-pilot for discovery and analysis. This feature enables business analysts to ask questions in natural language — such as, “What are my biggest bottlenecks?” or “Which are the biggest areas of rework?” — and get instant answers. Further co-pilot innovations are in the product road map. In October 2024, a simulation co-pilot will be released, allowing users to model different interventions, such as automating or removing a particular task in a process. By 2025, Apromore plans to launch a more prescriptive co-pilot that will generate recommendations and actions for decision makers.

Cloud-native: Customers can access the Apromore platform flexibly via a SaaS deployment on the AWS cloud, with maximal security features like the ISO27001 and SOC2 Type 2 certification for managing information security and for secure software, and compliance with the GDPR.

Pricing flexibility: Apromore offers several subscription and licensing models depending on the user, including annual enterprise subscriptions, project-based licensing for consultants and free access for students, researchers and educators. A free trial of the platform is also available.



Client Impact: Examples

Apromore's roundtrip process mining has been used to reimagine processes across industries and sectors.

Banking is one sector ripe for process discovery and simulation. Banks increasingly face competition from digital-native challengers, making digitalization a strategic imperative. They struggle with costly, time-consuming manual processes and extensive compliance and regulatory requirements, often absorbing up to a quarter of their revenues.

For a major bank in Oceania, the challenge was to create a separate transformation bank built with best-in-class digital technology — best CRM system and best product origination systems — ultimately offering new value propositions to customers. One of the first steps was to create a new home loan process using the latest digital technology. This was a high-stakes transformation, as home loans accounted for about 60 percent of the bank's business. The immediate challenge was modelling a new home loan platform that did not yet exist — simply analyzing existing processes or layering new technologies on old ones would not work. A complete reimaging of the home loan platform was needed. After an intensive RFI process, Apromore was selected to lead the simulation effort. A key attraction for the project leaders was Apromore's no-code platform, which obviated the need for coding skills to access the underlying data. The team's vision was for process discovery to become an intrinsic part of their operations capabilities. Equally important was the platform's simulation capabilities. During the RFI phase, Apromore demonstrated that its digital twin simulations could match those from manual analyses with high accuracy and speed. As Ron van Rooij, Apromore's VP of Solution Engineering, observes, "The bank did some of the simulations the traditional, analyst-intensive way and we did the same simulations using the Apromore roundtrip approach. It took about four months the old way and about two weeks using our simulation

capabilities. And, side-by-side, the two simulations were less than ten percent apart in predictive ability."

These capabilities enabled the project team to see how variations in the customer path — such as automating a process like know-your-customer (KYC) validation — would likely impact CX on the new platform. Home loans demand is highly seasonal, which meant that Apromore also had to optimize the simulations to account for seasonality effects. The result was that 84 percent of repetitive, time-consuming tasks were automated, slashing the time for home loans applications from seven working days to less than seven hours.

Another example of Apromore's impact can be seen in the transformation of a major bank's mortgage-lending business in Oceania, involving more than 19,000 independent mortgage brokers. The challenge was to determine the manner in which the bank ensures that these brokers fully commit to a new secure portal, designed to streamline mortgage applications and inquiries. Apromore's process discovery revealed that there were wide variations in broker commitment to the portal, with almost 70 percent of broker activity, including manual notes and copy-pasting, occurring outside the portal, leading to inconsistent processes and errors. By identifying these inefficiencies, the bank was able to automate time-consuming parts of the mortgage approval process, significantly improving both efficiency and overall broker and customer experience.

Within Europe, Apromore has helped advance the digital transformation of clients, including Italy's National Institute for Insurance against Accidents at Work (INAIL). INAIL handles over 80,000 occupation accident claims and 260,000 contact centre tickets each year but struggled with a multiplicity of old, complex and non-standardized business processes. INAIL leveraged Apromore's process mining capabilities to analyze its procure-to-pay processes, gaining insights that reduced waiting times, eliminated non-compliant cases and saved substantial amounts of time.



Net Impact

For too long, process discovery technologies have been viewed mainly as precursors to automation and operational efficiency programs, with little regard to their wider strategic uses. This perspective largely stemmed from the technical limitation of earlier platforms. Now, with advances in AI and ML, process discovery is becoming an indispensable tool for strategic decision-making. It is less about the **what** and **why** of processes and more about **how** to envisage entirely new processes. With an illustrious background in process mining academic research, Apromore is at the forefront of this revolution. Its organizational

digital twin capabilities enable fine-grained simulation of business interventions and outcomes, allowing business leaders to model high-stakes business decisions in a risk-free environment. The icing-on-the-cake, however, is undoubtedly Apromore's resolutely no-code approach, which democratizes the technology beyond IT developers to a much wider population of business analysts, process designers and operations professionals. With the exciting addition of co-pilot capabilities, Apromore seems poised to blaze an even bigger path in the market in the months ahead.

Associated Insights

- GenAI is Redrawing Europe's Intelligent Automation Map
- Automation Platforms Spell Business Benefits for U.S. Firms (2022)

ISG Placements and Recognitions

ISG Provider Lens positioning: Apromore is recognized as rising star in the following reports for 2024:

ISG Provider Lens™ Intelligent Automation — Platforms and Products — Europe



About the Author

Mark Purdy

Principal Analyst

Mark.Purdy@isg-one.com



Mark Purdy is a Principal Analyst at ISG Provider Lens™ and brings more than 29 years of experience working on economics and technology research in business and government. Mark has a particular focus on next-generation technologies, especially artificial intelligence and intelligent automation, digital twins, digital olfaction, machine learning, virtual reality and edge computing. Before joining ISG, Mark was chief economist at a major consulting firm for 20 years, leading work on the economic impact of AI and business futures, amongst other topics. Before that, he was an economic adviser at the UK Competition Commission, the Consumers' Association (where he focused on telecoms regulation and competition policy) and Ireland's National Economic and Social Council. He has published widely in tier-1 media and business publications such as Harvard Business Review and Sloan Management Review on subjects such as the metaverse, digital twins, emotional AI, digital olfaction, the social impact of AI and techno-nationalism



Summary Facts



Headquarters

Aprimore is headquartered in Melbourne, Australia, with additional presence in New York, London, and Tartu (Estonia).



Revenue

It recently closed US\$15 million in extended Series B funding from existing investors with participation by Tin Alley Ventures, a joint venture between Tanarra Capital, the University of Melbourne and other investors. Its total Series B funding stands at US\$25.3 million.



Services

The Aprimore software incorporates research from 13 PhD theses whose findings have been published in more than 200 scientific publications and generated more than 2,500 citations.



ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 900 clients, including more than 75 of the top 100 enterprises in the world, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including AI and automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs 1,600 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry’s most comprehensive marketplace data.

For more information, visit www.isg-one.com.

