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5 Must-Haves for a Process Intelligence Solution Today
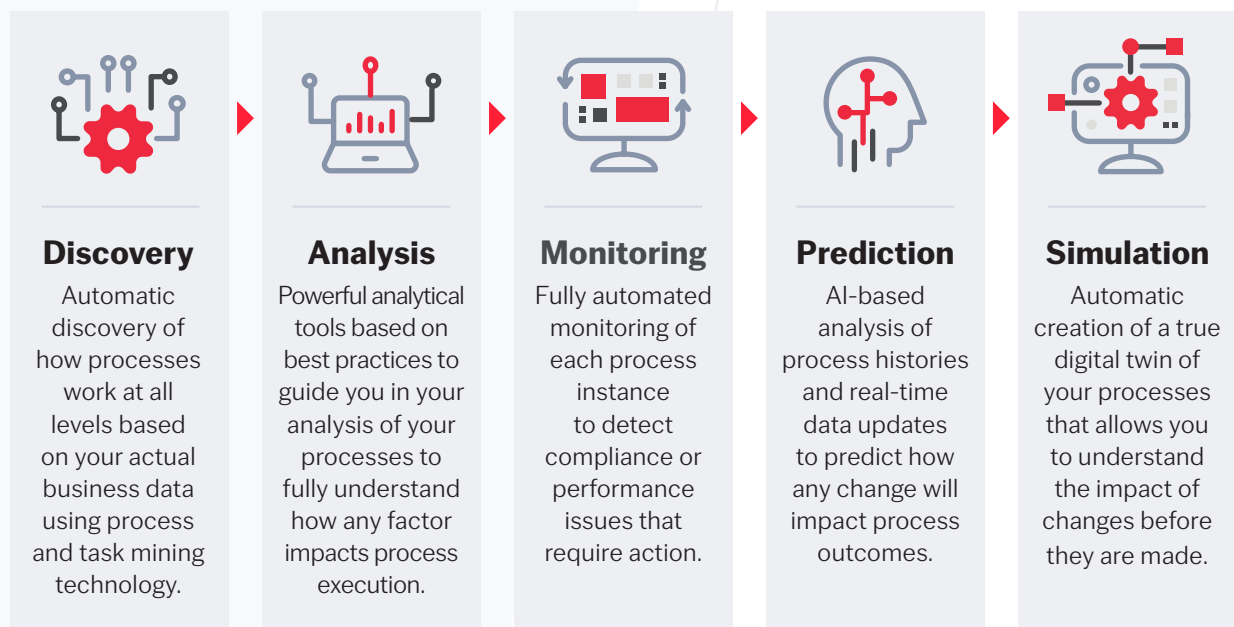
A buyer's guide for navigating process and task mining solutions

Is your process mining solution delivering everything it should?

In the current competitive business environment, streamlining and optimizing business processes is crucial for an organization's success and long-term advantage. Many businesses have realized by now that a lack of effective process analysis tools can potentially result in the introduction of significant risks. But even when process-related information exists—organizations often lack the understanding of how to put it into action. **This is because not all process analysis tools on the market are the same.** Many legacy or traditional process mining and task mining tools alone fall short of their promise to solve process problems outside of rigid applications and functions such as finance and procurement.

The limitations in the first generation of process mining and task mining offerings have led to the emergence of more comprehensive "process intelligence" platforms, designed to fully meet the demands of today's enterprises and go beyond surface-level issues. Modern process intelligence solutions today comprise the following five key pillars: process discovery, process analysis, process monitoring, process prediction, and process simulation.

Discovery
Automatic discovery of how processes work at all levels based on your actual business data using process and task mining technology.

Analysis
Powerful analytical tools based on best practices to guide you in your analysis of your processes to fully understand how any factor impacts process execution.

Monitoring
Fully automated monitoring of each process instance to detect compliance or performance issues that require action.

Prediction
AI-based analysis of process histories and real-time data updates to predict how any change will impact process outcomes.

Simulation
Automatic creation of a true digital twin of your processes that allows you to understand the impact of changes before they are made.

Does your current process mining tool, or the one you're considering, offer all of these capabilities? Is it delivering the ROI you expected, or does it require costly and scarce programming resources, elongating time to value?

Use this buyer's guide to assess whether or not the process analysis tool you're considering can deliver true process intelligence.

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What are the benefits of process intelligence?

Traditional approaches to business process improvement rely on manual observations, interviews, and surveys, all of which can be subjective and time-consuming. Process intelligence accesses an organization's system data and interaction data to drive process optimization and automates the monitoring that enables continuous improvement.

By leveraging process intelligence, organizations can realize a broad range of benefits, including:

Improved efficiency and productivity. Process intelligence helps organizations identify bottlenecks, inefficiencies, and redundant steps. By using these insights to optimize their processes, businesses can streamline operations, reduce manual work, and enhance overall efficiency and productivity.

Data-driven decision making. By providing valuable insights into how different process execution patterns correlate with specific outcomes, process intelligence enables organizations to make informed choices based on real-time and historical data.

Enhanced compliance and risk management. Process intelligence can detect compliance lapses early on and provide tools to rectify issues, reducing the risk of penalties and legal consequences.
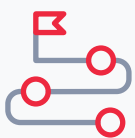
Continuous process improvement. With process monitoring and analysis, organizations can continuously monitor their processes and identify areas for improvement. This iterative approach allows for ongoing optimization and adaptation to changing business conditions.

Cost savings and improved experience. By identifying and eliminating process inefficiencies, organizations can reduce operational costs. Process intelligence enables cost-effective resource allocation and helps avoid unnecessary expenses associated with manual intervention or errors.

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Soon after implementing a process analysis solution, you should be realizing all of the benefits above, and more. But, if instead, your team is asking questions such as...

- Why does this platform require so much coding to accomplish anything?

- Was this a good investment, considering its complexity, cost, and limitations?

- How can I get ahead of my processes and see issues before they occur so we can take action?

...it is time to re-evaluate your needs and your options.

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5 non-negotiable capabilities of modern process intelligence solutions

① **Process discovery:** Visualization of even the most complex, messy processes that run your organization

Process discovery is the foundational step in understanding how a process actually operates. It comprises process mining and task mining. Process mining is used for reconstructing processes from events recorded in logs, while task mining fills process gaps by mining user desktop activities.

For example, a healthcare provider may use process mining to reconstruct the patient admission process by analyzing the electronic health record (EHR) system's event logs. Simultaneously, task mining can be used to observe and analyze the actions of administrative staff on their desktops to fill in any gaps in the process not captured by the event logs. This comprehensive approach is essential for identifying bottlenecks, redundancies, and deviations, ultimately leading to improved efficiency and patient satisfaction.

First-generation process mining tools were based on the assumptions that processes were fairly well structured and variations were truly the exception. They use the schema method of process analysis, which involves converting process data into a flowchart (schema) and then analyzing the flow of all iterations through that schema. The shortcoming of this approach is that few business processes fit into a well-organized flowchart. This resulted in serious problems whenever the tools dealt with real-world business processes found in core operational operational functions, such as case management, where high degrees of variability is the norm. By the time all valid variations to a process are considered, the schema often becomes a tangled mess with limited usefulness.

By contrast, a "timeline" approach to process mining creates an unfiltered, unedited visual history of every process end-to-end, even when some steps are performed using multiple systems. These timelines are then analyzed so that they can be compared, filtered, searched, aggregated, etc., similar to how a business intelligence (BI) application analyzes records in a table.

The timeline approach offers the opportunity to view a process in multiple ways, depending on the nature of the process and what you are trying to understand. As compared to basic process mining, which only works well on processes with little variability in terms of the sequence of steps, next-generation process intelligence tools should be able to ensure that even the most ad-hoc processes deliver predictable results and do not cause unintended consequences.

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2 **Process analysis:** Root-cause analytics and point-and-click pattern search

Process analysis involves using specialized tools to visualize and analyze process data, in use cases such as an insurance company identifying bottlenecks or inefficiencies in its claims processing system. Process analysis tools should be accessible to both technical and non-technical users, so that all stakeholders can participate in the analysis and decision-making process. In order to fully understand a process, you need access to a variety of advanced features within the process intelligence tool--which should be available without the need for any coding.
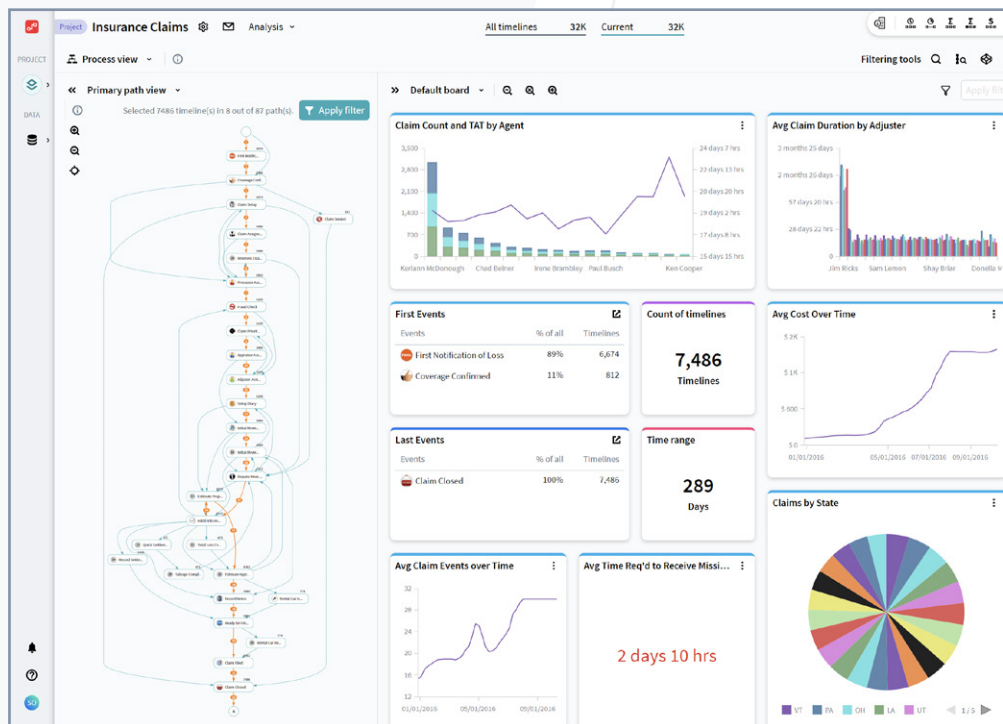
Process analysis tools should be pre-built and readily available in the tool to use as soon as the data is loaded. These tools make it easy for you to analyze your "as-is" processes and understand why and how the processes behave as they do. Extensive filtering capabilities should enable you to drill into identified issues and evaluate in-depth process performance, allowing you to build your own hypothesis and formulate a backlog of opportunities to test.

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Examples of pre-built process analysis tools:

Timeline Analysis

Visualize your end-to-end process from reconstructed process instances, even across multiple back-end systems.

Schema Analysis

Automatically visualize process schemas in both structured and ad hoc or case management business process environments.

Path Analysis

Easily compare variations and highlight outliers that may be costing you more than expected, or introducing operational risk.

Process Query

Access a simple graphical interface for defining search conditions to find all events that match any search condition (time, sequence, dimension, etc).

Protocol Analysis

Analyze and monitor processes to ensure defined process steps are followed and identify any deviations from the prescribed path.

Detailed Case Analysis

Drill down into any timeline and all its relevant sub-processes to identify unexpected problems and potential root causes that drive process behaviors.

3 **Process monitoring:** Automated alerting of process deviations and compliance risk

Process monitoring allows the user to define specific process patterns that should be detected either when they occur or when they are deviated from, and then either alerts the organization or triggers an action in another system to automatically respond. For example, a bank may define a specific sequence of steps that must be followed when approving a loan. A process monitoring tool will automatically detect whenever this sequence is not followed, allowing the bank to quickly identify and address any deviations. This proactive approach helps minimize risks associated with non-compliance, reduce processing times, and ensure a consistent, high-quality customer experience.

When businesses run traditional process mining applications, users can review the output to identify present and past deviations that could lead to compliance issues. This approach, however, relies on the expertise of the users reviewing the data.
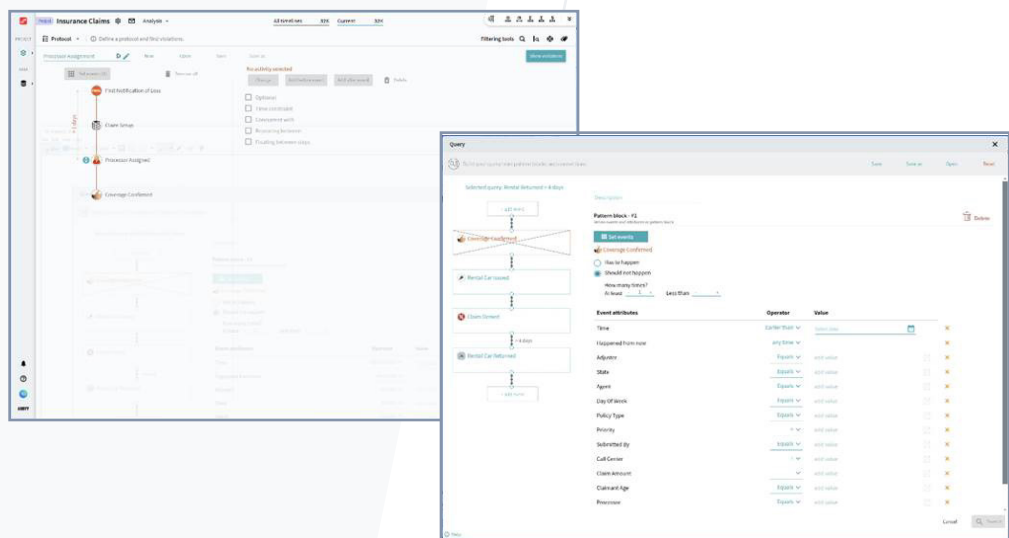
Process intelligence enables users to define process rules that align with the organization's compliance requirements and to instruct the system to watch for violations. When one or more of those rules is broken, the system alerts users right away, enabling them to take immediate action to rectify the deviation and to ensure that it will not happen again.

Process intelligence alerting rules can also be defined to call a human or digital service when an alert is triggered, to automatically deal with the problem. This capability can mean the difference between discovering an issue just in time, before it affects a business' compliance status, and finding it when it is too late to be fixed and has already caused problems elsewhere in the workflow—or worse, learning about it after a violation has been reported.

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4 **Process prediction:** Data-based insight for continuous improvement

It's one thing to understand what has happened in your processes in the past and even better to understand what is happening at the present moment. But even more powerful is the ability to understand the future of your processes—the direction that things are moving, and what is going to happen in the process before it actually takes place. This is what process prediction offers—the fact-based data that is needed to mitigate or better prepare for what is ahead.

Traditional process mining is focused on looking at historical data. While this approach can offer valuable insights into what worked well and what didn't, it falls short of offering solutions for present and future iterations.

Process prediction uses historical execution patterns to train an artificial intelligence (AI) engine to predict the likely outcome of a process very early on. For example, an insurance company may use this approach to predict the likely outcome of a claim based on historical data. This proactive approach allows the company to address any potential issues early, leading to faster claims resolution, reduced costs, and improved customer satisfaction.
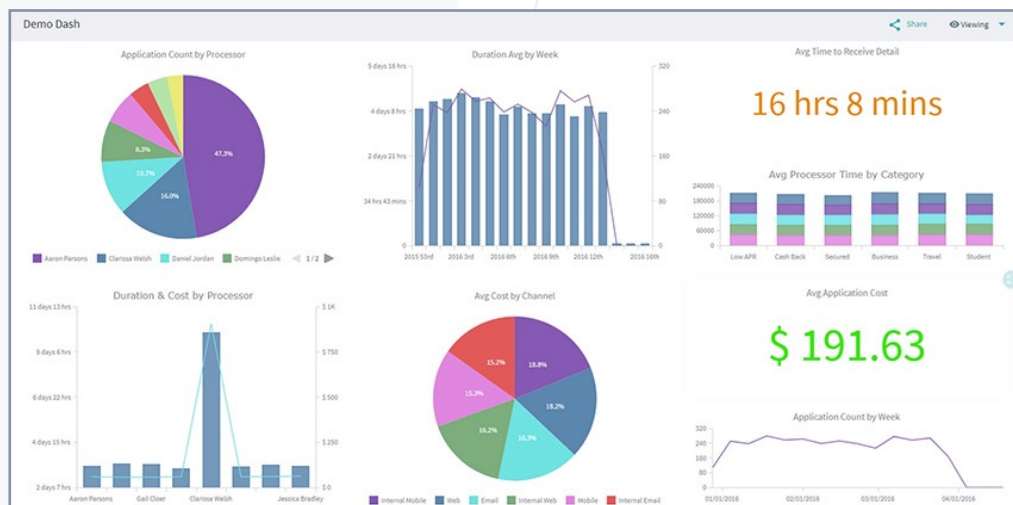
5 Process simulation: Assessment of process optimization success

Before effecting changes for process optimization, test those changes to make sure that they will give you the intended results. With process simulation, you are able, for the first time, to realize the outcomes that optimization will bring before disrupting the actual operation.

Process simulation provides a mechanism for utilizing process histories to automatically configure a simulation. This model can then be adjusted to reflect any proposed changes to the process or resource allocation, with the goal of understanding the impact of those changes before they are implemented. For example, a bank may use this approach to understand the impact of changing staffing levels in its loan approval department. This helps leaders make informed decisions regarding resource allocation and process changes, ultimately leading to optimized operational efficiency and customer satisfaction.

Process mining vendors have promised simulation capabilities for some time without delivering; a modern process intelligence solution should provide this capability.

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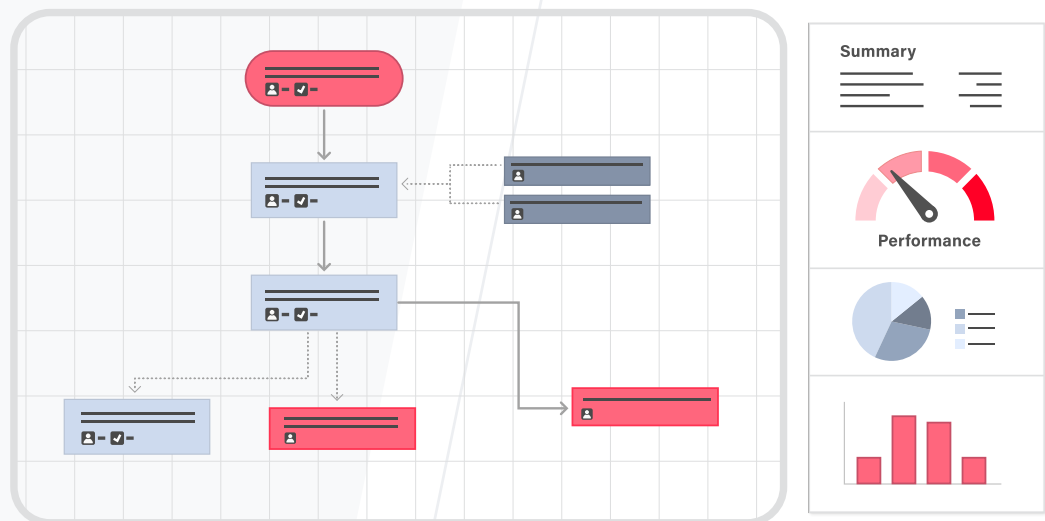
Process intelligence vs. traditional process mining tools

	Process intelligence	Legacy process mining
Type of processes supported	From simple to the most complex—a broad range, including ad-hoc case management	Best-suited for processes where exceptions are a small percentage of instances; little to support to complex operational processes
Implementation	Low-code/no-code; owned by process expert	Requires programming inside the tool with a specialized skill set
Features included	Ready-to-use, best-practice analysis tools, task mining, process monitoring, prediction, and simulation; ETL approach to make event ready, reducing time to discovery	Only legacy process mining; no task mining, no simulation without significant customization, and little prediction without developer support and investment
Delivery of insights	From the moment data is loaded, insights are presented in logical way, self-service to the user for real-time action	Requires work to put together insights from data loaded; initiates the high cost of development support to get the platform to give you meaningful feedback
Process monitoring	Alerts you when process rules are broken that could indicate compliance violation	Identifies past and present deviations that could indicate a compliance issue
Process prediction	True prediction using historical and present insights	Included on the feature list, but without a warning about requiring developer support and coding
Process simulation	Uses a digital twin of your process to simulate potential changes	Not actually available despite misleading vendor claims otherwise
Scalability	Easy and low-cost to scale to other parts of the business	Requires custom development to scale to other business processes
Time to value	Quick time to value due to low-code/no-code implementation and easy scalability without specialized resources	Long time to value due to high cost of coding and need for consultants in order to scale

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Expect more from your process mining tool

If your process mining solution requires specialized talent to support, excessive resources to scale, and too high a cost of ownership for the value that it's delivering...it's time to give ABBYY Timeline a try.

Our low-code/no-code process intelligence platform offers:

- 27 pre-built, best-practice process analysis tools, pre-populated from day one to give you immediate answers

- Ease in handling the messiest of processes and process data

- Task mining, process mining, process monitoring, process prediction, and process simulation—all out of the box

- Easy to scale to every part of your business

- Low cost of deployment

- Predictable licensing

- **Named a Leader in the 2023 Gartner® Magic Quadrant™ for Process Mining Tools**

Legacy process mining platforms are meant for the past. See clearly into your operations today, and in the future, with ABBYY Process Intelligence. **Claim your free trial.**