Process mining

Enabling digital transformation through data-driven insights

Abstract

As business environments rapidly disrupt and evolve, organizations are transforming to keep up with the change and gain a competitive advantage. To remain competitive in a fast-changing and disruptive market, organizations need to transform themselves to be agile and adaptive with processes that are effective and efficient. Most organizations are engaged in digital transformation initiatives with the realization that the world is increasingly becoming digital and recognizing the potential for business to benefit from them. As organizations increasingly depend on technology to drive business transformations and build business capabilities, there is a strong case for focusing on the value realization of these initiatives and investments. Understanding business processes is key to transformation and realizing value from digital transformations.

Process Mining is a powerful tool that can uncover and accelerate the process of understanding current business processes in an objective manner and deliver deep, powerful insights for transformation, thereby cutting short the time often spent in inaccurately analyzing existing processes through discussions in boardroom meetings, without data and an objective evaluation. This paper discusses the emerging field of Process Mining, and how it can help organizations transform their business processes and capabilities through data-driven insights.

What is process mining?

Process mining is a method of analyzing business processes by using the data from the digital footprint and traces in applications on which processes run. The digital footprint in the form of 'Event logs', is extracted from IT applications and reconstructed into visual process maps by tools to discover actual processes. Process discovery is performed to event logs as a fundamental analysis, and it captures business processes in a process model. The model is visualized by using business process maps, which show the process flow of all the activities occurring in the operations. Since process mining uses actual transactional data from business processes, it provides an objective overview of business operations, eliminating guesswork and time-consuming efforts to discover processes through traditional methods of interviews, standard operating procedures and validation that are often misleading and inaccurate.

One other variant of Process Mining that is rapidly emerging is 'Desktop Process Mining' (DPM). DPM is a Process Mining method that entails the capability of the tool to discover processes by capturing information from users' keyboards, mouse, and actions on desktops/laptops to reconstruct processes. This is particularly useful in activity-intensive operations such as shared services operations, where repetitive tasks are performed and need to be analyzed for discovery and improvement, and is especially useful in identifying opportunities for automation.

Process mining capabilities

Process Mining is rapidly emerging and evolving as a technology with a number of features continuously being added to enhance process intelligence and BPM capabilities. Some of these emerging capabilities are listed below:

- Desktop Process Mining
- Pre-Configured connectors for integrating with major ERP & applications, Standard APIs
- Automated Data extraction & Transformation
- Process interventions, automated workflows & execution of tasks from mining tools to ERP/applications
- Automation insights
- Multi-level process mining integrating multiple applications, instances, workspaces
- Simulation, Predictive analysis & Compliance
- Automated root cause analysis
- Process-based Intelligence

Leveraging process mining in digital transformation

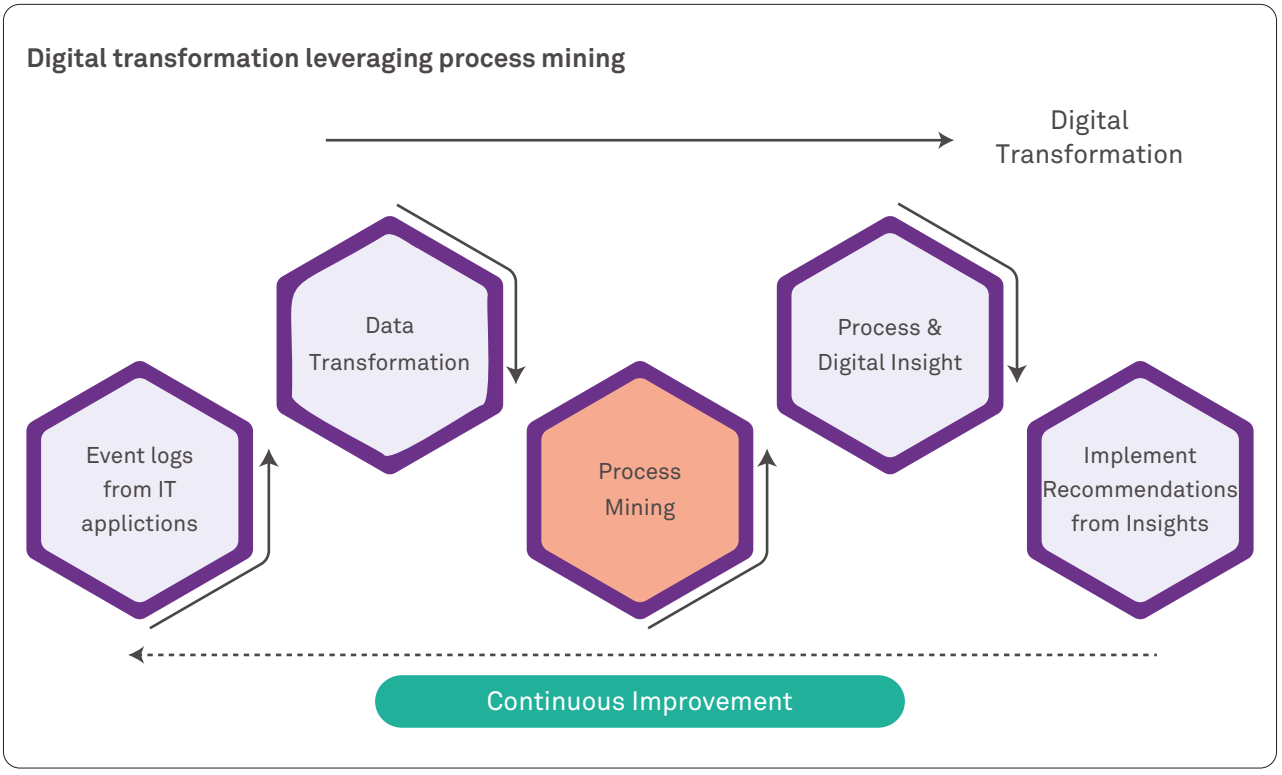
Process Mining is increasingly being adopted as tool in digital transformation, as it has the ability to enable process discovery that is objective, data driven and helps to draw deep process insights necessary to enhance Business & Process Capabilities and drive digital transformation that can deliver business benefits and value realization. The most common use cases that are currently prevalent are given below.

Process discovery: Process Mining provides an objective of the current process performance based on real-world objective transactional data of an organization, thereby eliminating the need for time-consuming process discovery that is often misleading and inaccurate. Process discovery is the first key step in understanding the process, identifying opportunities for improvement, digital enablement and transforming them into effective and efficient capabilities.

Process compliance: Most process mining tools possess the ability to compare processes with standard process models and assess compliance against them. This is especially useful in assessing variations, non-compliances to critical activities, risk assessment and audits

Process enhancement: Process mining provides the ability to enhance processes by using various capabilities such as Variant analysis, Straight through analytics, Reworks in process, identifying bottlenecks, opportunities for automation etc. that can provide deep insights to improve process capabilities and outcomes that are critical to achieve business and digital transformations.

People enablement: Process mining tools provide comprehensive resource analysis capabilities, which unearth opportunities of employee training and development. These, in turn, play a critical role in any digital enablement and transformation exercise.



Process Mining provides key capabilities and addresses issues that are critical and essential to driving Digital and Process Transformations

Objective analysis of current state: Since process mining is based on actual transactional data, it is objective and eliminates the traditional process of discovery that is very subjective and often inaccurate. Discovering current processes is often carried out by interviewing people in the process, studying documentation such as Standard Operating Procedures etc. that are very often misleading and prone to disagreements and debates in an organization.

Speed of analysis and scalability: Process mining becomes simpler once carried out the first time. It is rapidly scalable, as most tools provide open APIs and capabilities to integrate with ERP systems and applications that accelerate data extraction, Transformation & Integration in the journey of discovery and analysis. Process mining vendors are also developing and deploying 'out of the box' process models, KPIs and configurators that accelerate the Insights process.

Process modeling: Process-mining tools provide the capability to define Standard/To-be process models and document them. This also allows comparison of the operating processes and the ability to identify non-compliances and their root causes.

Results-driven Decision-making: Process mining enables faster, data-driven decision-making at the CXO level. Data intelligence helps leaders identify specific inefficiencies in the system and ensures effort in relevant areas for speedy improvement instead of a blind overhaul of the entire process. The data also helps organizations justify investments and efforts on relevant process transformations.

In summary

Process Monitoring and Digital Transformation are critical to organizations to help drive competitiveness and achieve market differentiation. Process mining as a capability is fast emerging as a powerful and critical tool in enabling digital transformation. Traditional methods of process discovery and transformation are far too time-consuming, inefficient and inaccurate to support digital transformations where speed is the key. Process mining as a technology is rapidly evolving with vendors adding new capabilities to support digital transformations. The market is rapidly assimilating these developments with ERP and application vendors integrating process-mining capabilities into their systems, underscoring the growing recognition and importance of process mining for organizations.

About the author

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Jayanta has 17+ years of experience in Digital / Business / IT Consulting & Solution Development and Process Transformation spanning Retail, Supply Chain, Logistics and Manufacturing domains. He has consulted with retailers across the world; primarily on supply chain execution processes and has competencies that cut across digital transformation, supply chain planning and execution, retail merchandising & next-gen future stores amongst others.

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