

Opportunities and Challenges for Process Mining in Organizations:
Results of a Delphi Study

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KEYWORDS :

Business process management, opportunity, challenge, strategic alignment, governance, methods, forecast

The study aimed to identify and understand the challenges and opportunities related to the use of process mining in organizations and therefore in business process management. It is based on the Delphi study, which consists of a panel of expert who study several parameters of process mining.

The paper provides definitions for "opportunity" and "challenge" in the context of process mining.

Definition 1 (Opportunity) An *opportunity* is a favorable circumstance or an expected benefit for an individual, a team, or an organization enabled by the use of PM in organizations.

The study considered the six core elements of Business Process Management (BPM) as a potential lens to structure opportunities and challenges.

Definition 2 (Challenge) A *challenge* is a difficulty or an obstacle that arises when using (or intending to use) PM in organizations, and that requires a lot of energy and determination from an individual, a team, or an organization to overcome.

These core elements are : **strategic alignment, governance, methods, IT, people, and culture.**

The main contribution of the study is a comprehensive list of 30 opportunities and 32 challenges, emphasizing diversity and covering technical, managerial and cultural aspects speaking about data treatment in process mining.

Some of them for example are :

Opportunities

One of the opportunity of Process Mining in business process management is that it allows to focus on customer-centric strategies, using process mining to analyze and enhance business processes to better serve customer needs. Through process mining, organizations can achieve greater transparency in their operations, providing stakeholders with a clearer view of their business processes. Then, the methodology of process mining also facilitates the evaluation and optimization of business process performance, ensuring efficiency and effectiveness. Intuitive visualizations (=forecast based on predictive process model) created through process mining enhance communication and decision-making for business users. Opportunities also lie in identifying and eliminating inefficiencies, benchmarking processes for continuous improvement, and fostering evidence-based decision-making.

Challenges:

Poor data quality, where events lack meaningful labels, poses a hindrance to accurate analysis and interpretation in the process mining context. The complexity of preparing data for process mining is a challenge, requiring meticulous attention to ensure accuracy and relevance, to provides quality event logs and therefore a useful business process model.

The opportunities and challenges are classified according to the fundamental elements of BPM. In particular, the study identifies challenges that have persisted for more than a decade, highlighting the need for further research to address challenges related to data, cost, quality, intuitiveness and orientation.