

Building a Foundation for Transformation

How process mining supports the push for better digital services

Gaining a full understanding of agency business processes is essential as governments deploy more digital services to meet growing public needs. Agencies must have insights into existing processes before they can undertake digital transformation initiatives.

But discovering and evaluating existing digital business processes so they can be improved and scaled is difficult for several reasons. First, existing processes tend to be complex and poorly documented. Second, most agencies lack automated tools for finding and analyzing these processes. One study found that 72% of IT organizations use manual methods to discover the details of digital business processes.¹

Process mining technology enables agencies to automatically discover and improve digital business processes across their IT environment — where processes may be spread across hundreds of systems that don't necessarily play nicely together.

What is process mining?

The term “process mining” describes an analytical discipline for discovering, monitoring and improving digital processes on a continuous basis. Process mining technology scours event logs generated by agency business systems to automatically analyze how digital processes run.

Process mining uses artificial intelligence (AI) and machine learning (ML) technology to create a deeper understanding of digital business processes and identify inefficiencies and opportunities for improvement. The analysis also helps IT determine the best plan to remove bottlenecks, automate certain steps or reengineer the full process.

Process mining capabilities can be built into execution management platforms that automate process mining tasks such as data integration, process analysis and modeling, conformance checking, benchmarking, simulation, prescriptive automation and integrations with existing automation technologies.

Execution management platforms provide a real-time view of process performance by collecting and analyzing data across multiple systems and event logs. These platforms also offer tools for planning and simulating potential changes to business processes, which can help IT understand the impact of making process changes before implementing them in business systems.

More insights for better processes

The combination of automated process mining analysis and execution management gives IT two key advantages for process improvement.

First is comprehensive visibility into business processes. Process mining provides a complete, current view into how business processes run, including details on data, systems and connections at each step. Additionally, the analysis shows where processes need change. With this information, IT teams can focus on implementing improvements, not on searching for process gaps.

Second, the detailed process insights help IT move from a system-focused to a business-focused organization. An up-to-date and detailed view about business processes helps IT and process stakeholders make better-informed decisions about future automation efforts.

Automated process mining and execution management offer big advantages over manual methods. Manual reviews provide a one-time snapshot view, which makes it hard to gain a full understanding of process bottlenecks, failures and needed improvements. Most manual reviews are subjective and limited in scope, so they may miss important factors in process design. And even limited manual reviews can be time-consuming and costly because they typically involve multiple teams. By the time a manual process analysis is done, it may already be out-of-date due to changes in the IT environment or agency activity.

The practice and technology of process mining addresses these challenges in a way that overcomes

the limitations of manual review and supports ongoing process improvement. Government processes that can benefit from process mining include shared services such as finance and procurement, systems migration, and constituent services such as health and human services.

Developing a process modernization program

Establishing a formal program for process modernization will help support and accelerate a government's digital transformation efforts. Full understanding of business processes is essential as agencies adopt more digital services and scale them to meet growing public needs.

Process mining is a core element of a formal, maturity-focused program for process modernization.

Most government IT organizations are in the early stages of process maturity, which means they are starting to develop their process understanding or have begun standardizing some processes. Later stages involve optimizing and innovating the execution of business processes.

A process mining program can be adopted gradually, beginning with a trial project that analyzes modernization for one system. Analyzing a system that has high-volume, mission-focused processes will help to quickly identify the value of a process mining program.

An important strategy for this initial project is to appoint a process mining champion. This person can educate stakeholders across the agency about the value of process mining and how it can help the agency accelerate digital transformation.

Finally, set clear criteria to define success for the trial project, such as key performance indicator (KPI) targets and timelines. Include process stakeholders in the discussion to define these criteria.

Clarity to improve digital processes

Business processes that work well for users and streamline internal operations are core goals of digital transformation. Given the complexity of government processes, achieving these goals requires in-depth and ongoing analysis of how

Process mining principles

An effective program for process mining follows four principles.

- 1/ Data-driven acquisition.** Build in a process mining discovery effort when acquiring or making a significant upgrade to any system. Move data analysis from spreadsheets and traditional business process management tools to a software platform designed to handle data for process mining.
- 2/ Process-led program strategy.** Use process improvements as a core perspective for IT investments. A process focus avoids problems such as excessive and overly complex technology deployments.
- 3/ Mission-focused automation.** Automate only those process elements that will deliver a quantifiable impact on the agency mission. Avoid sustaining bad processes simply because they were once placed on a list for automation.
- 4/ Process-centric Center of Excellence (CoE).** Create a process CoE with the responsibility and tools to improve how digital business processes serve the agency's operations and mission.

well processes work now and how they can be improved to work better. By adopting technology and a process mining program, the agency will be better able to focus on improving operations, adapting to change, and meeting new citizen needs and expectations.

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1. Forrester Consulting study for Celonis, January 2022

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