

5 Best Practices to Unleash Your Agency's Process Modernization

Harnessing the power of process digital twins

Digital twins were originally conceived to virtually replicate real-world physical objects and processes such as turbine engines or manufacturing facilities. Process digital twins, meanwhile, automatically reconstruct and model digital business processes. They do so by using process mining software, which discovers and ingests data from existing IT systems and workflows to construct a dynamic, end-to-end model of processes. State and local agencies can visualize their process flows in real time and apply artificial intelligence and machine learning to data to identify areas for improvement, explore various solutions and automatically execute desired changes.

For example, process mining solutions can digitally reconstruct an organization's procurement process in real time by tracking every purchase order across various source systems and create a digital twin of that process. The digital twin immediately reflects any changes or additions to the system so it is always complete and up to date. It can also expose process deviations and exceptions across fragmented IT landscapes. For example, some government organizations can have up to 100,000 process variants. Process mining software can sift through these to find the most common variants impacting performance.

In general, digital twins have the greatest impact when agencies use them to explore and optimize complex systems with many disparate moving parts. These include procurement; finance and collections; enterprise resource planning (ERP); constituent services; health and human services; building and asset management; law enforcement and public safety; transportation and more.

5 Best Practices for Success

These strategies will help agencies get started with process digital twins and process improvement.

✓ 1. Solve a mission challenge.

Start with a value tree that defines drivers such as strategic priorities, legislation, executive mandates, and auditing and compliance. Identify mission objectives that feed into those drivers. For each objective, prioritize the challenges that hinder fulfillment of the goal, and then identify opportunities for improvement.

The value tree helps keep process improvement on track by providing a clear line of sight from goals and processes all the way down to opportunities for improvement. It also helps leaders prioritize projects based on their criticality and impact on the organization's mission so they can get the most value from their investment.

✓ 2. Find a process excellence champion.

To achieve and sustain a culture of continuous improvement, it's vital to identify a process excellence initiative owner at the leadership level. The sponsor can see how the mission challenge under their purview connects to the investment and how it impacts objectives. They provide strategic guidance and help model (and enforce, when necessary) the mindset and behavior necessary to achieve staff buy-in and adoption.

"It's important to have leaders stepping forward and daring their employees to believe that things are going to be different in the future," says Center for Digital Government Senior Fellow Sean McSpaden, who previously served as the deputy CIO for the state of Oregon.

✓ 3. Build a process backlog.

Digital twins allow organizations to intelligently improve an ever-growing inventory of business processes as needs change and new opportunities arise. Organizations should establish a framework that helps prioritize, organize and scale process transformation use cases and initiatives. Starting with small, iterative projects allows organizations to schedule optimization of process backlogs on an ongoing, manageable basis.

"Many organizations start with procurement because of the renewed emphasis on fiscal responsibility. Then they scale into other finance and citizen service areas, as well as some back-office administration functions. They're building digital twins for five to six processes in the first eight to 12 months," says Chris Radich, vice president of Global Public Sector Solution Engineering at Celonis, which works with public- and private-sector organizations to implement process digital twins.

✓ **4. Establish a center of excellence for process improvement.**

A center of excellence (CoE) provides a home for dedicated staff to own and mature process mining and digital twin capabilities. It fosters a community of practice where members share ideas, use cases, best practices and lessons learned across the enterprise. The CoE for process excellence can be embedded within existing CoEs for IT, operations or an individual agency.

“The center of excellence should be placed within the direct sphere of influence of the project sponsor or champion,” says McSpaden. “In that way, the program can receive the leadership support and resources that are needed — both at the outset and to sustain the program over time.”

✓ **5. Staff data experts.**

Given the rapid pace of change, the ongoing wave of retirements and the central role of data in digital process improvement, it's no longer practical to rely solely on process experts with institutional knowledge. To improve digital processes and cultivate a center of excellence, organizations need data experts who can work with large data sets. It's important to develop a staffing or contracting strategy to fill data analyst and engineer roles appropriately. In many cases, database administrators have the skills needed to build data models and perform other data-related tasks.



Conclusion

Process digital twins address a myriad of mission challenges by helping organizations quickly understand and correct process inefficiencies and other issues. State and local government leaders can get a head start on their process improvement initiatives by engaging with strategic partners that have proven technologies and processes in place for successful execution of process mining and process digital twins.

This piece was written and produced by the Center for Digital Government Content Studio, with information and input from Celonis.

1. <https://webinars.govtech.com/Government-Guide-to-Process-Mining---How-to-Build-a-Digital-Twin-and-Improve-Services-141048.html>
2. Ibid.
3. Ibid.

Produced by:  CENTER FOR DIGITAL GOVERNMENT

The Center for Digital Government, a division of e.Republic, is a national research and advisory institute on information technology policies and best practices in state and local government. Through its diverse and dynamic programs and services, the Center provides public and private sector leaders with decision support, knowledge and opportunities to help them effectively incorporate new technologies in the 21st century. www.centerdigitalgov.com.

Sponsored by:  celonis

Celonis helps organizations reveal and fix hidden inefficiencies. Powered by its market-leading process mining technology, the Celonis Execution Management System (EMS) x-rays a company's entire business operation to show, in real time, how the business really works then acts as a brain, orchestrating across systems, processes and people to fix inefficiencies silently killing performance. To learn more, visit celonis.com