Catalonia’s Administration Boosts Efficiency and Speed of Service Delivery with Process Mining

Catalonia’s challenge: Rapidly digitize complex service delivery

The pandemic challenged public sector organizations to rapidly adapt and scale digital processes to continue to serve constituents. Since this change, support for digital solutions has grown in volume and complexity, involving new services, internal and external suppliers, and technical teams. The ability to strengthen public sector organizations post-pandemic will depend on an organization’s ability to quickly identify areas for improvement in service delivery and efficiently determine which actions will impact customer satisfaction more.

Changing compliance and service providers create dynamic digital processes

The Open Administration Consortium of Catalonia (AOC Consortium) promotes the digital transformation of the Catalan administration and furthers agile collaboration across governmental organizations. To ensure that people can enjoy quality public services and live in an open society, the AOC created the User Service Center, which provides administrative groups, citizens, and companies a way to direct service requests and queries.

In 2020 and 2021, the service exceeded 60,000 requests for support per year and included the participation of different units of the AOC Consortium, technical offices, and external suppliers. This complex collaboration, multiplied by the volume of types of services, generates a wide variety of workflows for responses to requests for support. Additionally, the Consortium must verify response and resolution time to meet new compliance requirements.

Reductions of up to 42.5% in response times, post-pandemic

Significant reductions (20% of FTEs) in the effort required to handle service requests

Optimized processes enabled the AOC Consortium to do more with less

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In cooperation with Iterem, a process management consultancy firm based in Barcelona, the AOC Consortium launched an initiative to explore opportunities to use advanced analytics and artificial intelligence to improve public service delivery. First, the Consortium needed to benchmark service performance and identify areas for organization or technical improvement, such as automation. The Consortium also wanted to be able to measure the impact of the proposed actions on various areas of improvement and simulate how performance would change when there were changes in demand, like what occurred during the pandemic.

**Process mining shortens the time to identify and plan effective process improvement**

In parallel, a pilot was also carried out with the electronic file management service offered by the Girona Provincial Council to about 150 municipalities in the province. Iterem used Apromore process mining software to automatically discover and map the existing processes from more than one million activity records in the systems of the Electronic Administration Support office of Girona Provincial Council. Iterem also used Apromore to simulate and measure the impact of potential changes, such as the number of people assigned to different units of the AOC Consortium.

**Discovering and analyzing more than 306,000 cases in less than three months**

1,324,963 activity records were analyzed corresponding to 306,181 requests for AOC support for a period of activity 01/01/2017 to 11/11/2021. Process mining can help public sector organizations speed up the time and reduce the effort to discover processes and measure process cycle time. Analyzing accurate process maps provides teams with accurate data on process performance and insights into ways to reduce waiting time and eliminate non-compliant cases.
“Using Apromore process mining software gave us a complete view of the process and its actual execution that could not be analyzed with other techniques,” said Carlos Rodriguez, head of the AOC Consortium Support Unit. Process discovery established the starting point for how processes are executed and enabled better decisions about redesign. The initial pilot used only one group of data and took less than three months but was able to identify various insights. Applying the advanced analytical capabilities in Apromore allowed the AOC Consortium to uncover and analyze thousands of process variants and identify potential risks that could be improved by training initiatives.

"By comparing pre- and post-pandemic activity, we were surprised to see that there has been a 42.5% increase in efficiency after the pandemic, offering confirmation of efficiency choices made during their response," Rodriguez continued. Simulation capabilities in Apromore gave the team the ability to evaluate the potential impact of changes in process performance, including the possibility of freeing up 20% of workers focused on this process by reducing the number of people involved in managing a task during the 2020-2021 period.

**Process mining underpins efficiency in public sector service delivery**

Public sector organizations implemented wide scale changes during the pandemic to digitally meet consumer needs. Data that exists in digital processes can be used to discover, map and measure process performance, and further analyze the potential impacts for change. AOC Consortium, focused on digital transformation in Catalonia, conducted a successful process mining pilot in under three months with Apromore process mining software. The outcomes help the Consortium to see how it can better serve consumers and improve the efficiency of its processes, as well as identify ways to reduce risk.

**Acknowledgment**

This case study is based on a blog entry and conference presentation in the Web site of the AOC consortium: https://www.aoc.cat/en/blog/2022/aoc-mineria-processos/