



Celonis Builds on Top of Process Mining Foundation with a New Execution Management System and Automation Acquisition

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IDC's Quick Take

The introduction of Celonis' Execution Management System (EMS) is well timed for the current climate where there is strong interest in driving down operating costs and removing obstacles that make an enterprise difficult to do business with. Celonis is significantly extending its portfolio past process mining and process intelligence to improve real-time control over process execution. With the acquisition of Integromat, EMS customers will be able to combine rapid detection of problems with low cost and rapid development of automation aimed at fixing those problems.

Product Announcement Highlights

Celonis introduced [Execution Management System](#) and announced the \$100+ million [acquisition of Integromat](#) at its Ecosystem Day event on October 14, 2020.

The purpose of EMS is to increase the process execution capacity of its customers. Execution capacity is defined as the measured amount of activity that a person, machine, or process can do over a period of time compared with a best-in-class standard or benchmark. Or, more simply:

Execution capacity = outcomes/input (time + cost + resources)

EMS includes:

- **Celonis Execution Instruments — consists of 170 prepackaged blueprints used in process mining to identify execution gaps and assess how well a process performs.** The blueprints include a BPMN model of the process and definitions of key performance indicators (KPIs). Process and development teams use the results of this module to repair technology based-based execution gaps by making changes to the underlying technologies that enable the process.
- **Celonis Execution Applications — data-driven applications that continuously monitor and assess execution capacity and gaps, provide decision support for planning, communicate with process workers, and take action to fix problems related to day-to-day process execution.** The execution applications use templates to support specific roles in departments. Celonis Opportunity Management is packaged for the sales rep, sales leader, sales executive, and sales ops analyst. Accounts Payable (AP) is packaged for the accountant, AP team lead, VP of accounting, and financial analyst. Collections Management is packaged for the collector, collection team lead, VP of accounting, and financial analyst.
- **Celonis Studio — low-code development environment to create custom execution instruments and build custom execution applications.** Designed for both customers and partners, Celonis partners also introduced their own execution applications: Demand Driven Material

Requirements Planning (MRP) Value Mining by Camelot, Controls Excellence by Protiviti, and Value Added Tax (VAT) Control by Zailution.

EMS acts as a process control layer connecting to and interacting with the transactional applications that support the business process.

The processing layers include:

- **Knowledge Model** — contains the set of definitions, policies, and rules and metadata that capture all of the knowledge about how the process runs. This includes the BPMN process model, KPI definitions, targets, benchmarks, business dimensions, and machine learning models. The underlying data architecture is built around managing the state of the knowledge model as data is continuously delivered, processed, and correlated into EMS.
- **Core Mining Engine** — processing engine that uses the knowledge model to determine conformance or nonconformance of the current process compared with the BPMN model. Exception-based logic identifies process exceptions, which Celonis refers to as execution gap detection.
- **Automation Engine** — automated tasks or actions that are triggered to apply the control policy by sending tasks and instructions to workers that ensure compliance with the policy, automating actions to help workers perform their tasks more efficiently, or orchestrating a series of steps to fully automate a task. Integromat is a core mechanism for these orchestrations.

Celonis Execution Applications includes role-based templates that align with the roles supported in each process: Control View (VP role), Steering View (director or team lead), Action View (individual contributor), and Analyst View (for analyzing and discovering processes). The UI features include:

- **Dashboard:** Monitors real-time situational awareness and shows the status of KPIs, with automated alerts letting stakeholders know when there are problems with process execution that will negatively impact a KPI
- **Process Visualization:** Process mining visualizations used for planning and decision making, including identifying the root cause of an execution gap
- **Actions Buttons:** Manual onscreen activities that, when invoked, trigger an automation managed in the automation engine or initiates use of another application, such as clicking on the collaborate button to initiate a chat session

Based in Prague, Integromat will operate as a Celonis subsidiary, continuing to support and grow its customer base as well as become a central part of the EMS automation engine.

Founded in 2012, privately held Integromat has more than 350,000 users and 10,000 paying customers and grew 400% in 2019. Annual revenue was less than \$10 million. The company provides a free tier of services and a paid tier. With a catalog of more than 500 APIs, customers use Integromat to build and run automated workflows using a simple, recipe-based design paradigm that is usable by end users with minimal training. Integromat competes with Workato, Zapier, and Microsoft Power Automate.

IDC's Point of View

EMS is an ambitious product portfolio that has the potential to modernize business operations, allowing customers to gain competitive advantage by being able to out-execute competition. By that, we mean

customers adopting EMS have the potential to outperform competition with lower operating costs, faster process execution, and simpler business practices that gain and retain customers.

Most vendors that build data-intensive applications, such as IoT platforms, recommendation engines, and predictive analytics, start first with thinking through the application logic and then focus on collecting the data. The data is always the most difficult challenge. Celonis is the opposite in that process mining is heavily organized around data collection as a primary activity and not a secondary concern.

Essentially, EMS is a logical progression from Celonis' roots. Teams originally began using process mining for business process reengineering or process improvement planning. Process mining evolved to encompass process monitoring and intelligence used by teams to identify and solve problems in near real time. Customers then began working on automating responses to common problems. They often work on one process that identifies problems in an upstream process. And the cycle of visualizing, improving, and automating response begins again in that adjacent process.

Celonis saw the opportunity to work with its strategic customers to develop out-of-the-box solutions that combine all elements of its portfolio to replicate what customers were doing on their own.

We are seeing increasing interest in and sponsorship of process mining at the senior executive level that gets pushed down to teams to figure out how to use it to improve process performance. In conversations with our clients new to process mining, this is an entirely new way of thinking and they have to learn how to use these tools and associate them with their existing and new types of KPIs to successfully demonstrate the business value of improvement. We expect the Execution Instruments to make it much easier for new customers to adopt and benefit from process mining because the KPIs are included and directly tied to the process mining.

Another challenge is building the execution environment. Proactively identifying exceptions and responding to them can be complex, creating a new and expensive workload for employees without automation support. That means the automated responses are as important as the insights. While Celonis has had the concept of its Action Engine for some time, driving down the cost and improving the speed of building automated actions became a critical issue with the introduction of Execution Applications.

Integromat and its competitors have been around for several years and have not scaled their businesses the way everyone expected when they were launched. It seems intuitive that combining broad catalogs of APIs with simple-to-use guided software would mean that end users would embrace this type of automation. But that hasn't been the case.

With this acquisition, the use of Integromat will be much more purposeful than end-user ideation on how to use these types of services. With EMS, the requirements of automated actions are defined by how to solve the exceptions. Business users will be involved with describing how those are solved.

The question is whether business users will be the ones automating the responses using Integromat. The idea of citizen development has been around for a long time, and there have been some successes. But this type of effort has not been broadly successful for different reasons. Enterprises investing in or planning to invest in end-user automation programs will be able to monitor the purposeful uptake of Integromat and, perhaps, be able to use this knowledge to apply this type of consumer-grade low code to other parts of the organization.

Subscriptions Covered:

[Intelligent Process Automation Software](#)

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