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Mitsubishi Electric Engineering Co., Ltd.

Visualizing the benefits of SAP ERP deployment and improving operations with Signavio

Mitsubishi Electric Engineering (MEE) leads research and development for Mitsubishi Electric, an electrical appliance manufacturer. As MEE prepares to upgrade its current SAP S/4HANA environment, they are working to improve operations by visualizing points for improvement across the system using SAP Signavio, a process mining tool.

Challenge

- The current system needed to be thoroughly evaluated in preparation for the SAP S/4HANA upgrade in 2025
- Fujitsu heard requests for improvements from business groups based on their current challenges, but first had to understand how they were using SAP
- Launching a large project when the company had just completed its ERP implementation proved extremely difficult

Solution

- SAP Signavio visualizes and analyzes business processes to objectively assess current operational issues
- Fujitsu's proprietary analysis service was used to evaluate operations and identify issues linked to process mining, and to work towards improvements
- A simple assessment and detailed analysis were conducted for each area, and solutions were selected in cooperation with business groups

Outcomes

- Signavio's wide range of features, connectors and accelerators helped identify challenges in as little as a month
- By using concrete and objective data, we were able to identify fundamental improvement points that satisfied the needs of the business groups
- The establishment of a small team for each operation created a sense of unity with the field divisions, while establishing a system to facilitate business reform

"A huge differentiator is that Fujitsu provides analysis as a service, whereas other companies are only concerned with how to use tools and run projects."

Takahiro Ichinose, Group Manager, Mitsubishi Electric Engineering Co., Ltd. Information Systems Department Business System

SAP conversion woes: "What exactly are we trying to solve?"

Mitsubishi Electric Engineering Co., Ltd. (MEE) designs and develops products and systems that play a crucial role in all aspects of society, from household appliances to products related to aerospace development. The company is currently working on a project to construct business improvement lifecycle infrastructure, with the goal of driving standardization to advance business transformation management (BPM) in preparation for the upgrade of the current core systems. In 2022, MEE began running SAP's core system, SAP S/4HANA, in some parts of their business. The goal was to help visualize management information in real time, accelerate decision making, standardize and optimize business processes, and strengthen internal control and compliance.

One example of a concrete outcome from this rollout was the ability to restructure the workflow of sales, purchasing, and accounting as a common system to reduce workload and comply with Japan's Electronic Books Maintenance Act. By standardizing various business flows, MEE has reduced the number of days involved in monthly accounts and strengthened governance, among other benefits.

MEE's current ERP was initially implemented as a 'fit-to-standard' model without any add-on development. However, the company has many plants since they produce diverse products and parts at different locations. As a result, add-on development was unavoidable during the implementation process, and the company had business processes that were handled by systems other than the SAP solution. That meant that the current core system alone was not sufficient to fully articulate the company's management resources. MEE is looking to upgrade SAP S/4HANA, since support is scheduled to be terminated in 2025. Before then, MEE needed to identify issues such as whether the business flow established at the time of ERP introduction was still appropriate, whether it was being fully utilized, and whether the add-on development content was appropriate. Of course, reducing operating costs was another consideration in making the upgrade.

To evaluate the operation of the current core system, MEE began conducting a survey, focusing on interviews with business groups. What they found was that there were many requests for improvement based on the current business flow, making it difficult to objectively evaluate business operations. This meant that they had to start investigating methods to promote business evaluation, including gathering opinions from third parties.

## Deploying SAP Signavio to determine the necessity of major improvements

Takahiro Ichinose of the Information Systems Department hit on the idea of using 'process mining' to identify improvement points. This method of analyzing system logs and applications used by employees and visualizing business processes to understand the current situation is useful in making business improvements. He discovered that SAP Signavio, a business process management solution from SAP, is an ideal tool for this purpose. Signavio was designed to help improve and simplify business flows, providing visibility across an organization's entire business process and identifying bottlenecks. The product offers three main business process modules: (1) Analysis, (2) Design, and (3) Sharing. As the first stage of the project, MEE worked on identifying and mining issues using the functions of SAP Signavio Process Insights and SAP Signavio Process Intelligence in the Analysis module.

Ichinose explains why he chose Signavio: "Now that the ERP rollout is complete, we are finally able to drive operations with SAP solutions. That being the case, we weren't eager to launch another company-wide business improvement project that would take up a lot of resources to find improvements. We wanted a way to objectively assess whether such a major improvement project was really necessary and whether there were specific challenges in the current operational model. That's why we learned about process mining and decided Signavio was the perfect fit for our project."

Fujitsu is the first Japanese company to be a premium supplier of RISE with SAP, providing support for the implementation and analysis of Signavio. MEE chose Fujitsu because it provides analysis as a service, whereas other companies only focus on helping companies use tools and run projects, Ichinose said. In addition to this project, MEE also wanted to evaluate its business flow based on SAP's best practices and scrutinize add-on development. In this respect, the participation of Fujitsu members who are highly knowledgeable in SAP solutions and the ability they possess to evaluate operations and identify issues in conjunction with process mining were major factors in the selection of the company.

Workshops to identify issues and suggestions for improvement:

No.	Insights	Results
1	End-to-end process blocker	• 65 issues reported in data linkage (31 processes) • Analyzed in workshops
2	Benchmark comparison	• Of the 9 benchmarks (automation rates) one was below the median compared to other companies.
3	Suggestions	• Made 83 recommendations that could be implemented in the customer environment • Create heat map for guidance • Create two roadmaps for up to 90 days, and 90 to 120 days
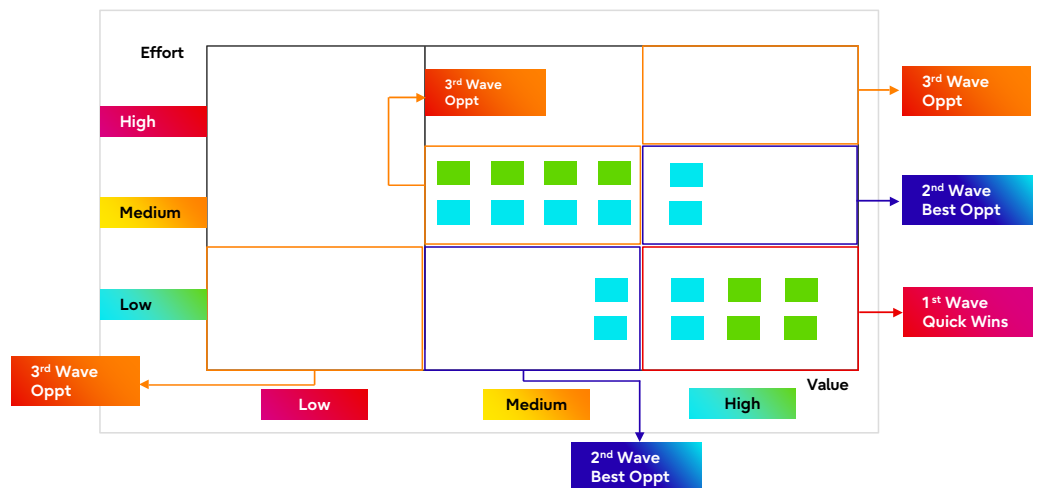
1 month

Time spent on identifying issues

Diverse functions, connectors, and accelerators help identify issues quickly

In the actual project, MEE's in-system log data is used for analysis, while business flow visualization was based on extracted data. This method helps sort out issues in the current process. Based on the business process visualization, objective data were shared with business groups in a session format, helping them identify issues and take improvement measures.

The first step was a simple assessment. SAP's standard table log data is linked to Insights to quickly and easily visualize current business performance. Based on this information, MEE discussed issues and selected business areas requiring detailed analysis.

Next, in addition to SAP's standard tables, log data including add-ons was imported into Intelligence for process mining. Based on the visualized business flow of each process, the cycle time (e.g., the time required for receipt creation and approval) and process variations were identified, and discussions were held to identify fundamental issues. Finally, the extracted issues were sorted out, enabling a thorough examination into the ideal form of the next-generation mission-critical system.

Normally, it takes many people-hours and time from data collection to analysis and development of improvement plans. But with Signavio, Insights WS PoC was able to get the information they needed in the short span of one month.

"When launching a business improvement project, setting KPIs is an important first step. But it takes a lot of effort to define KPIs in the first place, and to prepare to collect and make that data visible. Intelligence's mining tools leveraged a wealth of connectors and accelerators to quickly identify what the KPIs should be and where the challenges lie." Ichinose said.

At the same time, the fact that MEE was able to obtain objective and specific data, which enabled smooth communication with business establishments, was another major benefit of using Signavio.

Lead-to-Cash implementation results summary

Process mining revealed issues with "automation rate" and "invoice change rate"

Metric	As-is	Example	Impact	Suggestion
Automation	• Automation rate in invoice creation 33.7% (not high)	• Office with highest rate: **90%** • Office with lowest rate: **20%**	• Increased number of processes, quality failure	• Interview with employees in highly rated office
Change rate	• 90.38% of invoices	• All invoices of front offices had some kinds of changes	• SAP S/4HANA's merit not utilized	• Investigate items with changes

About Mitsubishi Electric Engineering Co., Ltd.

MEE is an engineering company involved in the design and development of products and systems for a wide range of fields. Based on technical capabilities and experience, MEE provides products and services that meet the needs of customers. In recent years, they have been actively involved in reforms utilizing digital technology and have promoted the introduction of SAP S/4HANA to improve business efficiency.

Creating an organization that implements business reforms as part of the company's lifecycle

At present, the simplified assessment and detailed analysis of sales and purchasing areas have been completed, and the scope of analysis will be expanded to include accounting areas. Based on the results of these analyses, we are working with business groups to determine solutions to problems and aim to construct optimal core systems and digital infrastructure. At the same time, MEE is in the process of developing mechanisms and rules to ensure that the initiatives will not end as a one-off project, but rather become embedded as part of the lifecycle.

The medium- to long-term aim is to increase the ability of the information systems division to develop business visualization methods and skills using data as a reference, and to raise issues and discuss improvement measures with business groups. By doing so, they can strive to establish a system that can smoothly promote business reform in cooperation with field departments and bring about a stronger management support system.

MEE and Fujitsu will continue to collaborate on reforming their operations, with Ichinose commenting, "The results obtained from Signavio will be shared with each department, and we plan to develop a system to carry out business reforms through in-depth analysis of each process based on KPIs. We would like to see these activities take root as part of the company's lifecycle, and we are looking forward to Fujitsu's continued support to make it happen."

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