Automated Process Discovery improves business processes at a leading photonic solutions company

CHALLENGES: The first challenge was to improve the production cycles while driving down the cost of finished goods and inventory. The second challenge involved uncovering potential inefficiencies and improving customer satisfaction, while keeping costs low.

SOLUTION:

The Fujitsu Automated Process Discovery (APD) service was picked as a mechanism for identifying and visualizing the "as is" business process, while pinpointing potential deficiencies in the existing SAP-related processes.

BENEFIT

ESI identified 22 process improvement initiatives of which 77% were as a direct result of the APD exercise.

"We were impressed by how the problem was visualized," said Greg Mueller, manufacturing systems analyst with ESI. "The Fujitsu Automated Process Discovery service produced visualizations based on what is actually happening, making it easy to understand and allows us to make future decisions based on evidence rather than perception."

Founded in 1944, and headquartered in Portland, Oregon, U.S.A., Electro Scientific Industries, Inc. (ESI) is a publicly traded company and one of the world's leading suppliers of photonic systems for microengineering production applications. ESI strives to improve their customers' production cycles, while driving down the cost of finished goods and inventory. The company decided to review best practices within its organization so as to streamline the integration of new product lines, locations, and customer bases.

The key business processes that track the conversion of "opportunities-to-orders" at ESI are tied to a customized SAP system. ESI wanted to get a better understanding of their existing processes, uncover potential inefficiencies, and ensure that these inefficiencies were corrected. The goal was to zero-in on areas for improvement that would boost customer satisfaction while keeping costs low.

Visualizing the "as-is" process as it really is
The traditional approach to uncovering the "as is" processes within an organization involves lengthy workshops with the various task owners to discuss how they believe their piece of the process works and then, mapping the original vision to reality. However, this approach often fails to provide an analysis of the exceptions to the process and the frequency at which they occur.It also falls short of providing insight into process bottlenecks as the information is usually disjointed and based on anecdotal evidence.

The APD service overcomes this limitation by tracing factual evidence within system interaction data in the organization's application data stores to build a dynamic picture of the process as it happens. The resulting visualization of thousands of customer cases combined with usage frequency and cost analytics is time-intensive, cost-prohibitive, and almost impossible to replicate using the traditional approach. ESI chose to leverage this service because of the APD service's ability to get quick visibility into their existing opportunity-to-order process with a complete efficiency analysis based on factual evidence while keeping costs low. ESI also wanted to analyze the trends around processes followed by different divisions within the company and track the changes in processes from year to year.

Uncovering additional opportunities for process optimization
In a short period of time, a blueprint detailing the typical opportunity-to-order process path and the exceptions to the norm combined with relevant performance metrics were rendered using the IT system logs.

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The APD service uncovered several areas for process optimization:

- Repeated steps, loopbacks in the process, and the presence of several alternate flows indicated there were opportunities to plug leaks in business value. The APD engagement provided ESI with metrics and measures to help the company identify how much each deviation from the standard process was costing the organization and whether it needed to be streamlined. Results from the engagement also brought to light the previously invisible costs the company was incurring as a result of reacting to changes in orders.

- The results of the service indicated that there was an opportunity to compress the time between the receipt of an order and its shipment. A focus on reducing the transition time between these steps would help improve customer satisfaction.

- Metrics on the opportunity-to-order conversion rate were delivered. The APD exercise provided visibility into the number of opportunities that were a) getting converted into quotes; b) getting converted to orders; c) getting cancelled; and d) were staying open for long periods of time. This provided ESI with concrete evidence to engage in a much more focused discussion within the company on means to improve the conversion rate.

- The process visualization exercise also showed the need for checks to make sure manufacturing instructions were undone once an opportunity was registered as "lost".

- Visual evidence of multiple configuration changes to the order through the process was indication that the current approach was potentially impacting productivity and the cost of delivery. ESI recognized that there was an opportunity to zero in on the reasons for these multiple changes and remediate the situation. A further analysis of the cost/ process to uncover the hidden costs of frequent changes in the build cycle and its impact on profitability is planned.

- The costliest process flows were identified to help ESI get a better understanding of how to manage its operational costs.

- The results showed that official procedures for capturing certain attributes of the sales order were not being followed consistently and there was scope for further standardization of the process.

The project was hailed as a success as ESI found the adjustable level of detail represented in the process flows allowed for selective inspection of individual steps and the service pinpointed areas for further optimization thereby setting the stage for high impact process management initiatives. ESI benefited from additional details brought to light that could help them further save on costs. The overall value to ESI is the ability to make process improvement decisions quickly based on evidence. The added benefit to ESI was that APD produced the diagrams at a fraction of the resources ESI would have used.

ESI is considering the Fujitsu APD service in a wider initiative to further optimize business operations.

Enabling value driven process optimization initiatives

ESI was able to get detailed findings along with analyses and recommendations around its opportunity-to-order process. From the findings uncovered, ESI has gained more intimate knowledge of their processes. This will allow for tactical fixes within the current SAP environment and better decision making as the new SAP environment is built to support the delivery of components at lower costs and higher quality while ensuring improved customer satisfaction.

Whether the task is restructuring a whole organization or simply evaluating a smaller unit, it is essential to have a good understanding of 'as-is' operations and processes. An accurate picture of existing processes facilitates focused improvement initiatives resulting in a greater impact. The Fujitsu Automated Process Discovery service using the BPM-e tool is both front-end and middleware agnostic, and will work with any underlying system. This helps companies gain actionable insight into complex business problems and uncovers a complete picture of real process issues, priorities, benefits and the most effective improvement path.

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