

Enabling Savings for a Leading Canadian Energy Company through an ROI-Driven Approach to Automation

Overview

Our client, a Canadian energy company, wanted to set up an automation center of excellence (CoE) to deliver end-to-end automation solutions across various functions in the organization. Tech Mahindra, as the client's trusted IT partner, set up the CoE for robotic process automation (RPA) implementation. There were challenges for the client's automation CoE that were assessed during the continuous improvement monitoring. With our continuous delivery and deployment model, we helped enable real-time monitoring in hyper-care mode and provided an automation insights dashboard that offered data visualization and on-demand reports.

Client Background and Challenges

The client is a multinational energy company headquartered in Canada. They operate pipelines throughout Canada and the United States, transporting crude oil, natural gas, and natural gas liquids.

The client aimed to set up an automation center of excellence to optimize operations, reduce costs, enhance accuracy, comply with regulations, manage risks, and make informed decisions in a rapidly evolving industry. With this objective in mind, they established an automation CoE in partnership with Tech Mahindra.

However, the client's automation CoE faced various challenges, which were assessed during the continuous improvement monitoring process. These challenges included:

- ▶ Obtaining buy-in for the change (Bot implementation) from business stakeholders.
- ▶ Managing the scope and changes in requirements during the delivery process.
- ▶ Balancing the workload generated by the impact of application changes with ongoing developments.
- ▶ Dealing with multiple legacy ERP systems and multiple instances.
- ▶ Navigating the potential impact of another large transformation program running in parallel on RPA use cases.

Our Approach and Solution

The client partnered with Tech Mahindra to establish and operate an automation center of excellence (CoE). The primary objectives were to define the automation CoE, identify and evaluate new automation use cases, design automation solutions, develop and deploy new bots, and continuously monitor their performance. To implement these goals, we assessed over 100 existing ideas and selected the ones aligned with business priorities and ROI.

Together with the client, Tech Mahindra developed a use case estimation tool to determine the complexity of each business idea and estimate project effort accordingly. We formed a dedicated team to drive automation discovery within various functions such as supply chain management, finance and accounting, human resources, IT, and legal. This team utilized design thinking techniques to identify new automation opportunities.

To conduct a detailed process analysis, we recommended the use of a process mining solution, which enabled us to provide automation recommendations based on data analysis.

The deployment of the automation CoE occurred in four stages as follows:

DEFINE

- The client and TechM collaborated to define key building blocks for the automation CoE as part of the automation strategy. These building blocks encompassed:
 - Automation opportunity evaluation intake process
 - Discovery methodology utilizing design thinking techniques
 - Opportunity prioritization methodology, business case framework, benefits calculator, and ROI measurement methodology, along with ROI monitoring standards based on KPIs
 - RPA security standards
 - Delivery and deployment governance processes, including stage gates, risk and control checks, deployment checklists, and organizational change management (OCM) strategy
 - Support and continuous bot monitoring processes with standard operating procedures (SOPs) and KPIs

- b. TechM assessed each automation idea and made acceptance or rejection decisions based on its merit, particularly the three-year ROI. TechM employed its own tool to calculate the complexity of the use case and determine the ROI.

DISCOVERY AND ASSESSMENT

- i. **Assessment:** Within the automation CoE, a standardized front door process is established for evaluating ideas submitted through the idea tracker. Ideas are sourced through crowdsourcing, and an assessment team within the automation CoE evaluates each idea based on its merit, including three-year ROI, business priority, and technical fit for automation using RPA or OCR technologies. TechM utilized its automation expertise to develop a tool for calculating the complexity of each automation use case and determining the ROI. Based on this assessment, ideas are either accepted, rejected, or put on hold.
- ii. **Discovery:** While the assessment team focuses on analyzing and determining the suitability of ideas submitted through the front door for automation, the CoE formed a dedicated team to conduct a comprehensive discovery of key functions. This included executing multiple discovery sessions with functions such as supply chain management (SCM), finance, legal, and IT. The discovery process differed from the assessment approach. During discovery, the CoE employed design thinking techniques and conducted in-depth analyses based on the pain points of operational teams and wishlist items. Heat maps and customer journey maps were created to visualize the findings. The discovery team compiled a recommendation report that encompassed all the identified opportunities for automation, potential business process improvements, suggested operating model changes, and any system enhancements. Automation ideas derived from the discovery process were submitted to the front door for further examination by the assessment teams. Any remaining ideas were submitted to the respective business representatives to be addressed by the relevant client teams.
- iii. **Process Mining:** TechM collaborated with its partners to acquire a process mining solution utilizing event logs. This solution involved applying specialized data mining algorithms to analyze the event log data and uncover trends, patterns, bottlenecks, and other insights. The goal was to provide recommendations for automation or process improvements through process conformance analysis, frequency analysis, and performance analysis. Automatically generated visual process flows were utilized to facilitate this analysis. Tech Mahindra utilized multiple tools for the process mining activities.

DESIGN AND BUILD BOTS

TechM collaborated with the client to establish a robust delivery team, employing an onshore and offshore delivery model. This model followed a factory approach, enabling continuous discovery/assessment and continuous delivery within the automation CoE. The delivery model comprised several key features:

- I. **Agile delivery model:** Bots were delivered using an automation platform with well-defined stage gates, ensuring a structured and efficient delivery process.
- II. **Design sprints:** User stories were defined and process design documents were created during design sprints. These documents showcased business requirements, as-is and to-be processes, and solution architecture.
- III. **Development sprint:** The complexity of each use case, ranging from simple to very complex, as determined during the assessment, guided the development phase.
- IV. **Show and tell sessions:** The respective product manager, scrum master, and business analyst/product owner organized regular show-and-tell sessions with the client's business stakeholders. These sessions facilitated input gathering from the client's business and other application owners, offering valuable insights during the development and testing phases.

DEPLOY AND MONITOR

The CoE established defined processes for deployment, hyper care, handover to support, and continuous bot monitoring, incorporating the following key features:

- I. **Continuous delivery and continuous deployment model:** The CoE adopted a model that enabled seamless and ongoing delivery and deployment of bots, ensuring a streamlined and efficient automation implementation process.
- II. **Hyper-care mode for bot deployment:** Before handing over bots to the support team, each bot deployed in production underwent a hyper-care mode. This phase involved closely monitoring and addressing any issues or concerns to ensure smooth and stable operations.
- III. **Implementation of automation insights dashboard:** The CoE implemented an automation insights dashboard, which enabled near real-time monitoring of bots in production and the benefits they delivered. Recently, this dashboard has been upgraded and transitioned to a data visualization platform, providing enhanced monitoring capabilities and on-demand reports.
- IV. **Detailed ROI view:** The dashboards offer a comprehensive view of the return on investment (ROI) for each bot operating in production. This allows stakeholders to assess the financial benefits and impact generated by the deployed automation solutions.

Business and Community Impact

- ▶ The automation CoE successfully deployed over 150+ use cases since the inception of the program.
- ▶ To date, the CoE has deployed 150+ bots in production, with a goal of reaching a count of 200 bots by 2023.
- ▶ Furthermore, the automation CoE received recognition for its achievements, as it was analyzed by a global analyst firm and ranked among the top 10 CoEs in North America.
- ▶ The CoE evaluated and assessed over 500+ ideas for automation, ensuring a thorough exploration of potential opportunities.
- ▶ The implementation of automation solutions across various business functions such as Finance and Accounting, Human Resources, IT, and Legal has resulted in cumulative savings of thousands of hours.
- ▶ These efforts have also generated significant cost savings in the millions of CAD\$.
- ▶ The automation initiatives led to the automation of approximately 1.2 million transactions across multiple business functions, further enhancing operational efficiency and productivity.

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