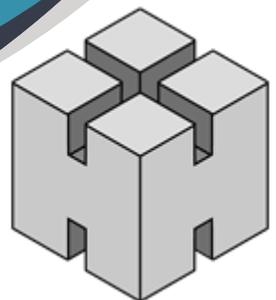


ABC of ROI of RPA

How to calculate Cost, Benefit and Return on Investment (ROI) of your Robotic Process Automation (RPA) Initiative



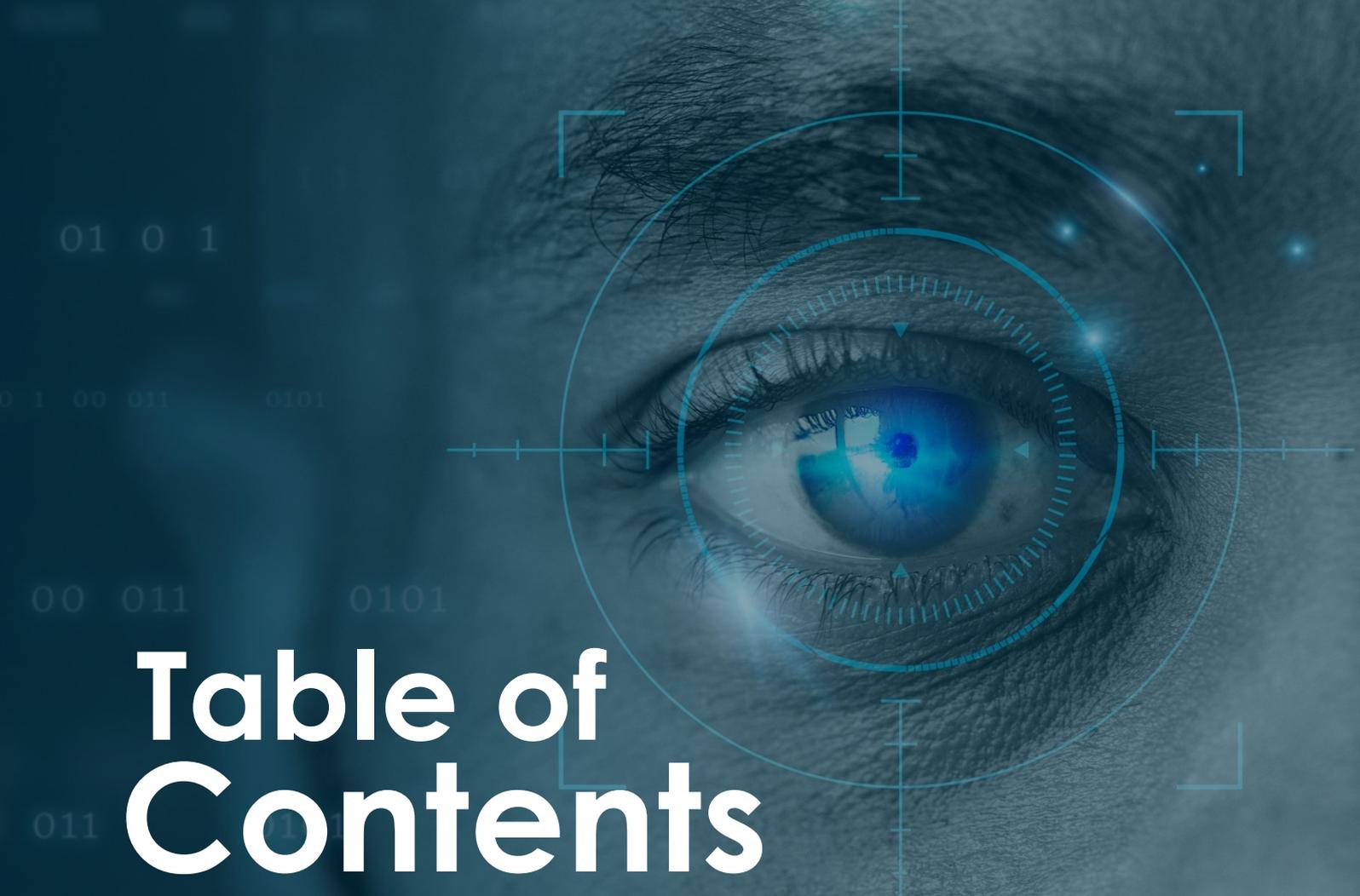
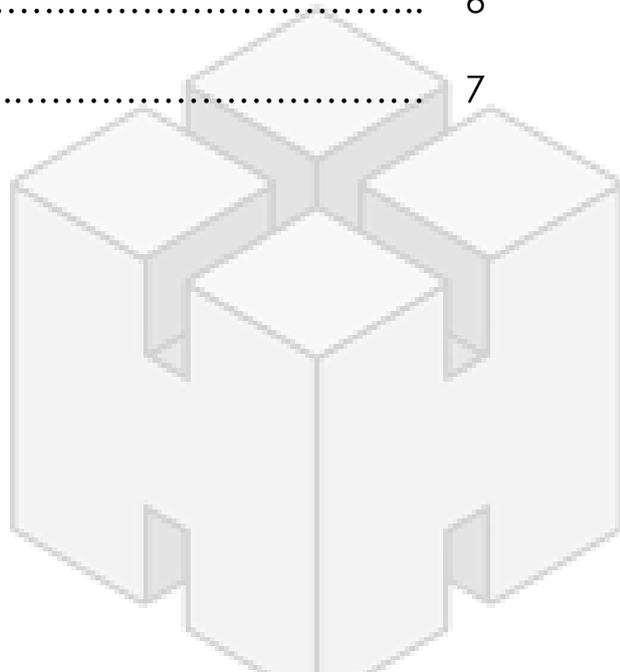
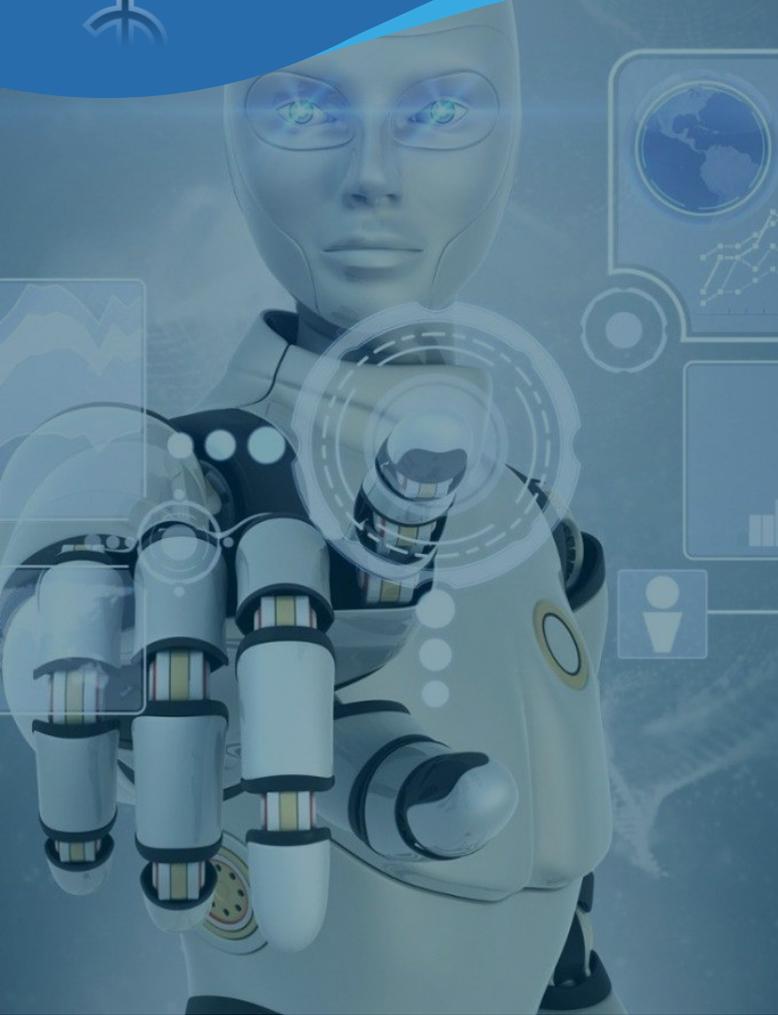


Table of Contents

Introduction	3
ROI Calculations – Modeling and Reporting	3
The dynamic nature of RPA costs	4
Benefits	6
Business Enablement	6
Conclusions	6
About the Authors	7





ROI Calculations – Modeling and Reporting

Return on investment (ROI) can simply be calculated as:

$$\text{ROI} = (\text{Net Financial Benefit from the Investment} / \text{Initial Investment}) * 100$$

The ROI calculation seems simple enough, but there are multiple components impacting costs and benefits, and they inevitably change over time, as explained in this paper.

ROI calculation templates can be used as a starting point but should be adapted to the specific need of each entity (firm, department, or business unit). One or more templates may be developed and implemented, depending on the target operating model - centralized, distributed, or hybrid of the Automation Center of Excellence (COE). These calculations also depend on corporate guidelines for project accounting – there is not a one-size-fits-all. The ROI calculation is therefore a modeling exercise, and the level of complexity may vary greatly. We recommend keeping it as simple as possible for the right level of visibility and monitoring of the effectiveness of the automation COE, and relevant decision making.

ROI from each of the initiatives should be closely monitored and reported periodically (at least monthly) to confirm that the expected returns are delivered. The required KPIs and the reporting mechanism should be established early in the RPA journey.

Introduction

Robotic Process Automation (RPA) is a powerful tool to increase productivity, reduce errors, and improve customer and employee experience. It can free up employees from repetitive, tedious tasks, enabling them to focus on more creative, value-added activities. It may also raise business process capacity, handling higher volumes, without adding any headcount.

It is important to quantify the expected and actual return on investment from RPA, by developing and monitoring relevant meaningful metrics. We need first to identify and measure cost components and apply the same disciplined approach to benefits.





The dynamic nature of RPA costs

Depending on the maturity of the RPA program, cost structure and cost components could vary significantly. The costs can be analyzed based on the three distinct phases of the RPA Program.

Startup or initial costs:

During this phase the main cost components are:

- IT Infrastructure: the costs related to establishing the RPA platform and integrating it into the corporate infrastructure, which includes the cost of hardware and software, as well as labor cost.
 - o RPA Tool: Costs directly related to installing and setting up the RPA platform, bot lds, RPA roles, one or more instances of the platform, etc.
 - o Other infrastructure: Costs related to procuring/setting up/configuring on-premises or cloud infrastructure, including VM machines and databases, as well as establishing network connectivity to the users, platform, bots, etc.
- Training: Unless the company decides to hire external experts, it should consider the cost of initial training to get the automation factory started.
 - o RPA Architect and Developers: Dedicated technical resources that are new to RPA tools should be properly trained to start the bot

design and development. Hiring RPA service providers and experts with the required RPA experience may be more cost-effective and less time-consuming, so it should be considered as an alternative.

- o Business Analysts and Project Managers: Targeted training needs to be provided to the Process Experts, Business Analysts, and Project Managers that are tasked to work on process discovery, documenting detailed process steps and requirements, testing bots and supporting automated processes. Additional activities performers and stakeholders can be trained during the subsequent phases.
- Governance - Establishing operating model and framework for the Automation COE and stakeholders. For example, establishing policies and procedures for approvals from Compliance, Audit, Risk, and Legal departments (CARL), establishing the roles and responsibilities for identifying and prioritizing automation opportunities, design, development, testing, and deployment of bots, bot monitoring, and support. All essential components of the target operating model must be implemented during this phase.





Scaling up phase

As the automation program expands and is scaled up, ROI primarily reflects ongoing direct costs, including maintenance:

- Licensing: The cost of licenses is estimated based on:
 - o The number of FTEs, volumes to be processed (expected average and peak volumes), as well as process run time i.e. duration of bot-run in number of hours per day.
 - o Attended or unattended mode.
- Development and Testing: Estimated cost of Process Discovery, Design, Development, Testing, and Implementation for each automated process (including Intake analysis and prioritization, business analysis and documentation, SME, developers, and technical resources efforts).
- User support and ongoing Training: Business users need to be trained on exception handling and post-automation processing. For attended processes, they should also be trained on the RPA tool functionalities. As businesses units get added to the RPA program, there may also be the need to train Project Managers, Business Analysts, and some IT teams supporting each of these businesses.
- Program Management / Ongoing Governance: During this phase, the Target Operating Model will be fully implemented, with a fully staffed COE, responsible for the RPA Program governance. Reporting on multiple metrics and ROI will also be the responsibility of the COE. The COE costs are funded centrally (by Business,

Operations, or IT) or spread among the process owners of all automated processes.

- Process Monitoring and Change Management: The COE will include a team responsible for monitoring automated process runs, triggering/scheduling, terminating, or re-running processes, and escalating to business as needed. The COE will also be responsible for reporting and change management – coordinating the review, business approvals, as well as development and implementation of process changes.
- Platform support: The COE will be responsible for maintaining and supporting the RPA platform, including upgrades, maintenance, troubleshooting, disaster recovery, and downtime management.

Maturity phase

Direct project cost components remain the same as during the scaling-up phase, but, since multiple automations are implemented, costs are spread across many automations, while benefits increase significantly, providing greater ROI.

- Software maintenance and upgrades: Continuing support for the platform upgrades and Infrastructure updates.
- Licensing extensions: As RPA products and offerings vary, there is a need for periodic reviews, and renegotiation of license cost, including the cost of new capabilities.
- Citizen Developer Program (CDP): The roadmap for the RPA program should include a plan for implementing a CDP (if applicable). ROI templates should be adapted to reflect the specific needs of a CDP program.



Benefits

Automation benefits, similarly to costs, have multiple components:

- First-year Impact: First-year ROI should be pro-rated, based on the timing of actual benefits.
- Headcount savings: Actual Full-time employee (FTE) savings should reflect actual budget impact (fully loaded FTE costs). Some companies may choose to consider the number of manual hours saved and its cost savings as a tangible benefit for ROI calculations.
- Error reduction: Reducing or eliminating errors and related rework results in positive financial benefits.
- Compliance: Compliance benefits may be estimated based on the avoidance of non-compliance (potential penalties).
- Processing speed: Transactions can be processed with increased processing speed, resulting in faster service or better Service Level Agreement (SLA), which in turn, may generate more revenue or profitability, and positively impact customer satisfaction.
- Customer Satisfaction: Quantifying financial benefits of increased customer satisfaction could be very challenging, but faster and more accurate execution of customer orders or service requests may increase profits and bring in additional revenues.

Business Enablement

RPA can be used to generate new business opportunities. Products or services that are usually labor-intensive and cost-prohibitive may become feasible using RPA, conversational intelligence, and other cognitive tools, generating new income. Cost-benefit calculations should be adapted specifically for those opportunities to be pursued after the RPA program has achieved maturity.

Conclusions

Automation initiative business cases drive the methodology to calculate the expected and actual ROI of the program. After the methodology for estimating ROI is established, the value delivered by each automation and the cumulative value should be monitored and regularly reported. The impact of automation should be compared to historical benchmarks, and the automation selection and prioritization policy should be revised, as needed.

Underneath the apparent simplicity, there are multiple factors to be considered for calculating and monitoring the ROI for RPA projects. Seeking expert advice will help in designing and implementing the most suitable ROI model for automation initiatives in your organization.

