HOW TO CALCULATE ROI FOR RPA

Before taking a deep dive into the ROI calculation, let us understand which processes can actually be automated.

In fact, they will also help obtain a clear understanding of whether the investments in your particular case are worthwhile.

- The tasks are rule-based
- The tasks are time-consuming and labor-intensive
- The data is readable
- The data is structurally organized

Here are four metrics to measure the full ROI of an RPA deployment:

Velocity — Measure the start time versus stop time of a back-office process before and after an RPA deployment and compare

Productivity — Measure the length of time human workers spent on a task versus how quickly robots complete that same task

Quality — Measure output accuracy before and after RPA deployment — it should be 100 percent after

Compliance — Measure compliance before and after RPA deployment — it should be 100 percent after

5 quantitative outcomes of automation to the enterprise

Cost-saving

Statistically, an RPA tool works at ⅓ of the cost of the companies' offshore resources and 1/10 of its onshore resources

Time

Using bots can significantly reduce the processing time. In some cases – from weeks to seconds

Accuracy

Robotic Process Automation can reduce the operational error rate to literally 0

Longevity and flexibility

The bots are adjustable and can run efficiently any time and on any schedule, even 24/7

Speed of Implementation

The average time of automating a process using RPA is from several days to a couple of weeks

1ST STEP TO ROI CALCULATION

The calculation of Value of Time Gains would be the 1st essential step in understanding a full picture of ROI.

Therefore, below you could see the formula of VTG in RPA projects.

$$VTG = (EC – AC)/AC \times 100\%$$

Where EC = Costs of processes executed by employees

AC = Costs of processes executed by bots.

And before going deeper into VTG calculation let us define what EC and AC actually consist of.

EC = Costs of processes executed by employees (Employees Costs)

For some of us, employee-related costs are only payroll-based. But in reality, it includes a bunch of direct and indirect expenses.

Namely, the actual expenses for an average staff member are:

Direct expenses:

- Payroll
- Tax on salary, social security, etc.,
- Paid sick leaves
- Paid annual leaves

Indirect expenses:

- Office rent
- Utility bills
- Workspace (IT infrastructure, phone, furniture, etc.)

Miscellaneous expenses:

Social bonuses and corporate events

Training, team buildings

How do we calculate EC?

Apart from labor costs listed above, we need to know the FTE rate, i,e. the coefficient of a daily employee workload. For instance, one employee can only partially be involved in repetitive tasks, spending on it only 30% of his/her work hours. In this case, his involvement would be 0,3 FTE.

Hence the formula for EC calculation would be:

Employee related costs (direct + indirect expenses) x FTE coefficient.

AC = Costs of processes executed by bots (Automation Costs)

Automation related costs (RPA costs) are not straightforward as well, and, what's more, there are also direct and indirect expenses:

Direct expenses:

Software costs

It includes licenses fees which is a minor component of automation costs.

Service costs

It includes all the stages of implementation, from workflow analysis to testing and actual deployment. It can be assigned to a vendor or can be done in-house (paid once upon implementation).

Maintenance costs

Bots should be flexible to various business scenarios and changes. It requires RPA developers' involvement, who would work on timely adjustments.

Indirect expenses:

Virtual workspace

Ideally, it implies a VM with Operational System and specific applications installed.

VM electricity and IT-related maintenance costs

Similarly to EC, AC calculation formula is as follows:

RPA related costs (direct + indirect expenses) x FTE coefficient

FTE - Full Time Equivalent

Calculation varies process to process, You need to calculate how long it takes an employee to complete the transaction and estimate the time bot takes to complete the same transaction

The time savings per transaction completed multiplied by the number of transactions will give you the actual calculation you need

CALCULATION OF ROI: WHAT SHOULD BE CONSIDERED

As we mentioned earlier return on investment in RPA projects consists of a number of significant components, apart from value of time back to business.

Among such components are as follows:

Value of process acceleration

For instance, automated customer onboarding may reduce customer onboarding from 7 to 2 days. Dependant on the size of the business it may bring hundreds of thousands dollars of profit.

Value of minimized number of errors

For some businesses, an error may be a synonym to a disaster. Automation may reduce these errors and save several millions of dollars to companies with higher error risk levels.

It is evident: when it comes to RPA efficiency, you cannot rely only on a straight count of costs. There are a vast number of factors that cannot be ignored in order to evaluate a real ROI figures.

Therefore, considering the **2 factors** above the correct formula for ROI calculation in RPA projects would look as follows:

ROI = [(VTG*AC + Benefits from process acceleration + Benefits from fewer errors) – AC]/AC x 100%

This calculation is given by ELECTRONEEK

Different process have different ROI caculation

RPA Success Metrics For ROI Calculation

Here are the metrics you need to calculate ROI for RPA implementations:

- **Full-Time Equivalent (FTE) Resources** : One FTE is equal to the number of hours a single full-time employee works over a given time period
- **Number Of Tasks Per Day** – This one is self-explanatory. If you're calculating ROI on automated invoicing, set this value at the average number of invoices your company processes every day.
- **Task Duration (In Minutes)** – How long does it take to complete one instance of the task you plan to automate? Use minutes as the unit of measurement.
- **Average Fully Loaded FTE Cost (Per Hour)** – Employees cost more than their hourly wages. Generally, employment costs are 30% to 40% higher than the employee's hourly compensation, which accounts for benefits, infrastructure, and all the operational costs associated with a single employee. Add hourly wages to the relevant percentage for your area to determine the Fully Loaded FTE Cost.
- **Initial RPA Implementation Cost** – This metric includes licensing and working with an implementation services provider to train and deploy RPA bots for your unique task. It's the main cost you want to recoup with a quick ROI.
- **Growth Rate Percentage**– To calculate ROI for RPA over longer stretches of time, you need a fair estimate of how much growth you expect. Percentages are the simplest way to measure this factor. If you process 100 invoices per day now and expect to add another 5 invoices per month, your estimated growth rate percentage would be 5%.

- **Monthly Task Cost With RPA** – All RPA platforms include monthly costs for upkeep, maintenance, and assistance. Contact your provider to determine these average monthly fees.

1. Calculate the current cost of the task.

First, figure out how much your task costs *without* automation. Plug your numbers into this equation (assuming an 8-hour work day):

(FTE Resources*Fully Loaded FTE Cost)/((Task Duration*Number of Tasks Per Day)/8)=Hourly Task Cost

Multiply the Hourly Task Cost by the number of hours spent on the task each week to determine the Weekly Task Cost. Multiply this cost per week by 4 to determine a Monthly Task Cost. Record this Monthly Task Cost: That's the figure you'll compare against the cost of automation to ultimately calculate your ROI and the ongoing savings associated with RPA.

2. Determine the cost of implementing an RPA platform.

Automation costs include an initial set-up fee, plus monthly operational costs. To calculate an accurate ROI, you'll need to know both. Contact vendors to access these figures—or get your free ROI estimate from Nividous, complete with cost comparisons with other viable RPA providers

3. Create a monthly cost comparison table to find your ROI.

As mentioned, costs change over time. In order to find an accurate ROI, you need to consider both ongoing RPA fees and your task's growth rate. It's easiest to visualize these changes with a monthly chart—a format that also projects ongoing savings. The example chart below shows which numbers and calculations to include in each cell

Look for the first Difference column that equals 0 or less; that's the month during which you'll achieve your initial ROI. Extend the table for as long as you wish to calculate savings beyond the ROI—your ongoing return from an investment in RPA. With RPA automation through the Nividous platform, many users achieve ROI within weeks.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Monthly Task Cost (As-Is)	Monthly Task Cost	Monthly Task Cost * (1+Growth Rate Percentage)	This row: Previous column's value * (1+Growth Rate Percentage)	This row: Previous column's value * (1+Growth Rate Percentage)	This row: Previous column's value * (1+Growth Rate Percentage)	This row: Previous column's value * (1+Growth Rate Percentage)
Monthly Task Cost (With RPA)	Initial Cost	Monthly RPA Cost	Monthly RPA Cost	Monthly RPA Cost	Monthly RPA Cost	Monthly RPA Cost
Savings	This column: Row 2 – Row 1	This column: Row 2 – Row 1	This column: Row 2 – Row 1	This column: Row 2 – Row 1	This column: Row 2 – Row 1	This column: Row 2 – Row 1

This calculation is given by Nividous

Different process uses different ROI calculation different websites are their in he market to calculate ROI for RPA project

Different calculators are their in order to calculate ROI for RPA

They are

https://www.ether-solutions.co.uk/rpa-information/rpa-roi-calculator

https://www.keymarkinc.com/....etc

Diferent companies can use Different ROI calcution based on their requirement

Although organizations are leveraging and investing in new-age technologies like Robotic Process Automation (RPA), Artificial Intelligence (AI), Intelligent Document Processing (IDP), etc., they are often worried about the returns and how long will it take for the organization to reap the benefits of investing in technologies.

While investing in technologies like RPA, elements like software, people and the organization's IT infrastructure is taken into consideration.

The RPA ROI Calculator helps you in determining the cost that the organization can save by implementing RPA. The calculations will be based on the number of processes against the number of current FTEs and the time consumed by the employees to complete the process.

The RPA ROI calculator gives you and estimate of the savings over a period of time by implementing RPA

For any RPA Implementations/ resources in your organization please reach out to rpa@gxplabs.com