

WHITE PAPER

Test Automation ROI Calculator

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This white paper is all about understanding the parameters required and how to calculate the ROI from test automation. ROI is notoriously hard to quantify and an accurate set of numbers can provide great value. ROI is usually computed as the benefits derived, divided by the investments made for a given thing. If we are starting...

Table of Contents

1. Introduction.....	2
2. Aspire’s Test Automation ROI Calculator.....	2
3. Background Information.....	3
4. Automated Test ROI Computation Factors.....	3
5. Automation Testing ROI.....	3
6. Test Automation ROI Report	4
7. Conclusion.....	4
8. About Aspire.....	5



Test Automation ROI Calculator

1. Introduction

This white paper is all about understanding the parameters required and how to calculate the ROI from test automation. ROI is notoriously hard to quantify and an accurate set of numbers can provide great value. ROI is usually computed as the benefits derived, divided by the investments made for a given thing. If we are starting a fresh project, we might compute the value of testing and divide by the cost of the testing to compute the return. But, most of the times, automation is being introduced as a transition from manual testing. In this case the cost benefits from automation can be viewed as trade-offs in comparison to manual testing. But comparison is more of looking at the investment and see in a long run how it is going to pay-off. Calculating ROI requires an understanding of various elements of costs and benefits. This should persuade the decision towards automation transition. To initiate the ROI exercise, the following initial parameters need to be considered:

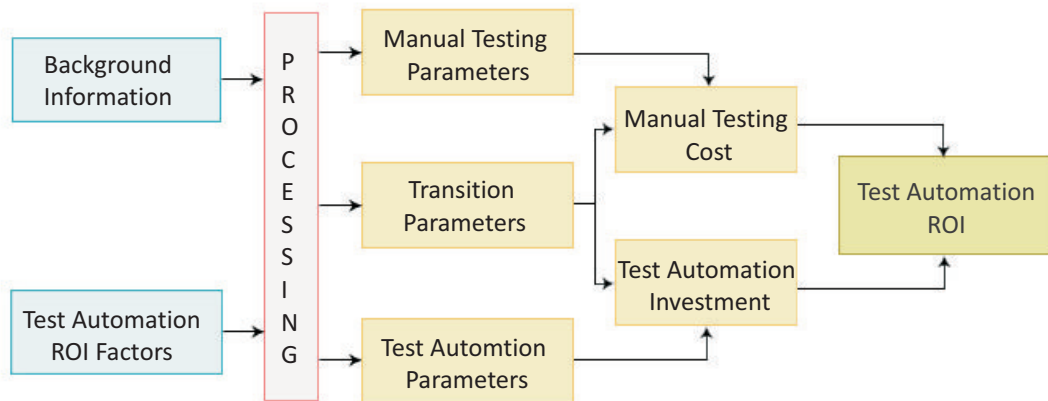
- Automating the entire QA system and not just building scripts to test the product. To be specific, there should not be any manual intervention with respect to moving the build from development server to test server, install / implement the product, sending the test results to the manager, etc.
- Understand the focus of automation with respect to reducing testing cycle time, maximizing test coverage, reaching the market faster, cost benefits, etc.
- Estimate your existing test suite with respect to effort and cost
- Assess few of the test automation tools
- Understand the product and its technology road map
- Test Automation Framework design

All the above parameters will help in doing an initial analysis and determine the high level ROI. Based on the results, you can delve into the details of calculating the real ROI. This paper will give the details of how the ROI can be computed on high level and the benefits that you can reap.

2. Aspire's Test Automation ROI Calculator

Aspire's ROI calculator is a practical guide to understanding the possible returns on your Test Automation Investment. Before you decide on this strategic investment, it is vital to know the cost and effort savings that Automation can offer. We follow a simplistic approach in calculating the ROI.

This calculator analyzes the effort and cost involved in Automation, based on the background information (existing manual testing details) that you provided as input. The practical steps that are involved in the transition from manual to automation are considered while calculating the ROI.





Test Automation ROI Calculator

Based on your input, the calculator uses Aspire's standard thumb rules* (basic heuristic data accumulated by experience) for deriving both manual and test automation testing parameters that are the basis for calculating the ROI.

3. Background Information

The existing test parameters are important as we are transitioning to automation testing.

- Age of product
- Releases planned for a year
- Required regression cycle per year
- Number of existing regression test cases
- Number of configurations to be tested
- Cost of the testing resources
- Infrastructure cost

We are not considering the existing regression cycle time as a parameter since our calculator has in-built thumb rule for determining the effort spent for test case preparation and test execution for every regression cycle. Test suite growth and test suite maintenance are other parameters that are embedded as thumb rule in this calculator. Generally, thumb rules vary from product to product based on the complexity of the project and hence we have a standard set of thumb rule as an in-built component in this calculator.

4. Automated Test ROI Computation Factors

When ROI needs to be calculated, the following respective costs for test automation are worth considering:

- Test automation tool cost
- Percentage of test cases that can be considered for automation
- Time required for building reusable components, automation frameworks and batch scripts
- Hourly cost per test automation resource

5. Automation Testing ROI

The transition from manual to automated testing has a significant impact on the Test Automation ROI. It is an established fact that Automation involves higher upfront costs, but the optimal usage of this initial cost is very crucial in deciding the returns. The transition process must be a step by step process and has to be done by experts.

The first step towards automation is to scope the automation requirements, analyze the technical feasibility for automation and identify an appropriate tool for automation. This will help you to estimate the required effort and cost for test automation investment.

When the estimation is being done, it is vital to consider the effort for designing test automation framework, which will help you to use reusable components through out the automation and thus helps in reducing the script development time. These factors will help you to come up with a right estimation and you will be in a position to look at the real benefits of automation. This calculator takes all these into consideration and computes the effort and cost of planning, design, script development, testing, documentation and maintenance.



Test Automation ROI Calculator

6. Test Automation ROI Report

Upon submitting the required parameters for calculating the ROI, this calculator will send the ROI report. It will give the details of the effort and cost for 5 years for both manual and automation. The report also compares these and gives the break-even period and the % of savings.

Conclusion

Automation is a strategic decision and an understanding on the potential ROI will help in the decision to invest in automation. We recommend you to calculate your actual ROI and understand the factors that will influence and enhance your investment and get the best out of automation.

You can visit Aspire's Test Automation ROI Calculator in http://www.apsiresys.com/ta_roi_calc. We will be able to calculate your actual return on investment for automation only with a clear understanding of your need for automation and what value it adds to your overall testing effort. It is always good to understand and analyze the need for automation, analyze the product test requirements and the existing regression test suite, identify the right test automation tool and then estimate the timeframe required to design and automate the entire testing. This exercise would benefit in finding your potential automation ROI before investing in it.

ROI will also come through with the following factors:

- Matured testing process
- Maximized test coverage which will assure the quality of the deliverables consistently
- Elimination of the risk of over sight of quality in repeated tests
- Faster Execution of the tests in multiple environments
- More focus on new features
- Enhanced product quality



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ABOUT ASPIRE SYSTEMS

Aspire Systems is an Outsourced Product Development firm committed to helping our customers build software products better and faster. We work with some of the world's most innovative Independent Software Vendors and software-enabled businesses, ranging from start-ups to established industry leaders, transforming the way software is built.

We provide our Test Automation services to ISVs and help them to reap the benefits of automation by consulting to identify the right test automation tool and recommend the test automation strategy. Being a product engineering services firm, we have an edge with the current technology trends & development methodologies and this exposure helps us to consult and automate effectively.

For further enquiries on this ROI and to know more about us please write to us at: automation@aspiresys.com.



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