



## Purpose

- As part of a digital lead generation campaign, a 10-part blog series aimed at bringing in 15 MQLs (defined as fully BANT qualified)
- Involve subject matter experts (SMEs) in marketing

## Target Audience

- Chief Risk Officer, VP Product, Director of Compliance, and Chief Technology Officer (CTO)

**Note: this document contains two of the 10 blog posts.**

# Test Automation: A Reality Check

Welcome to **Test Automation** – a new blog series for QA professionals and product owners who are committed to optimizing the processes involved in building world-class software products and systems.

In this, the first in the Test Automation series, I touch upon the current state of test automation, address common myths about test automation, and identify the reasons why people look to test automation as a viable solution.

## The Current State of Test Automation

The current state of automation can be summed up into the patterns of two groups – both of which look to test automation to save time, reduce effort, and increase test coverage as a means to increase the quality of software.

The first group, which applies ‘Waterfall’ software development life cycle (SDLC) methodologies, draws upon off-the-shelf test automation solutions (i.e., those with advanced record and replay features to help capture automation scripts). As a result, QA professionals who leverage test automation tools are expected to be skilled in testing alone – rather than have developer and/or programming skills.

The second group of automation adopters follow Agile and Agile-like SDLC methodologies. With rapid sprints and scrums in place, this group have a more adaptive approach to test automation. In practice, that means they use ‘Open Source’ tools and leverage ‘continuous integration’ and ‘continuous test’ principles. This approach is applied for developers who have sufficient dexterity in coding tests rather than having to rely on ‘record and replay’ features.

Regardless, of whether you align with one or the other of these approaches, test automation is evolving rapidly and will shape your testing processes, products, and ultimately your business. Because of that, you should be aware of the misconceptions about test automation that are widely circulated. That’s where I turn to next.

## Myths About Test Automation

Regardless of your testing experience, you will come across several myths about test automation. Here are the three most common myths:

**Myth #1: All test automation is equal.**

**Reality:** Test automation looks different for every organization – how it is deployed in your organization depends on your company’s products, projects, project scope, team structure, timelines, and budget.

**Myth #2: All test automation tools are equal.**

**Reality:** Every test automation tool has its ‘sweet spot’. That means that, depending on the level of complexity, you may use a blend of test automation tools to achieve your short- and long-term testing goals. Furthermore, the automation tool(s) you use will vary depending on the application that you are testing and the skills of those responsible for testing.

**Myth #3: Test automation is expensive.**

**Reality:** The cost of test automation is made of three components: test automation software, test authoring, and execution. Here are important things to keep in mind:

- Test automation software ranges from being free-of-charge to costing several thousand dollars. That means, your budget, and targets for cost recovery will dictate how much you spend on automation software.
- By its design, test automation authoring involves creating testing scripts that are meant to be re-used so that the costs are recovered over a period of time
- When authoring is done correctly, the cost for automation execution is minimal.
- Test automation software can be leased — instead of purchased – as a way to control costs.

## **Reasons for Test Automation**

Having addressed the most common myths, let’s turn briefly to the project (and business) reasons that lead QA leaders/practitioners and product owners to explore test automation as a viable solution:

- The direct, and indirect, costs associated with manual testing is growing
- Project schedules demand a need for conducting more tests
- The number of identified ‘escaped defects’ are rising
- The costs associated with repairing software defects is rising and/or is unpredictable

In the next Test Automation blog, I will tackle the question that every QA leader and product owner asks themselves: “*Will I see a return on my investment in test automation?*”

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# Test Automation: The Reality About ROI

In an earlier Test Automation blog, I touched upon the current state of automation, addressed common myths about test automation, and identified the reasons why people look to test automation as a viable solution.

In this blog post, my colleagues and I tackle an issue that *all* product owners and QA professionals urgently need to address how to achieve a return on investment (ROI) from test automation.

According to the most recent international software benchmark testing report, over 90% of organizations see an ROI from automating their testing processes – with 76% of organizations achieving an ROI within one year. That's encouraging enough to impress even the most sceptical budget-conscious executive. But, to achieve ROI in such a brief period requires taking the right steps. Specifically, you must address: 1) *What* testing should be automated; 2) *How* to implement test automation; and 3) The *measures of success* you should use.

## Return on Investment: What Tests to Automate

To achieve ROI on your test automation efforts, focus on three areas.

First, you should automate those tests related to the aspects of your software that are absolutely fundamental. This 'suite' of tests, referred to as regression tests, must take place whenever *any* change to functionality or feature is modified. For instance, if your software product has an e-commerce component to it, you want to ensure that the processing of payments is *always* stable. That means the consumer-facing processes, as well as those related back-end administrative tasks, must work flawlessly. In this example, the tests that come together to validate the e-commerce functionality is an example of a regression suite where test automation should be applied.

Second, you should automate those testing activities that require a high degree of manual effort. Such mundane and repeatable tests are a logical focal point for automation because the cost per test is higher than the cost per test for those that require little manual effort.

Third, your test automation should focus on functional and unit testing – i.e., the testing of individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, to determine whether they are fit for use.

## Return on Investment: How to Implement Test Automation

Implementing test automation varies because of several factors facing all product owners and QA professionals such as: the skills of those rolling out test automation, the chosen test automation software tool(s), available budgets, the stage of the software development cycle when test automation is implemented, the kinds of test(s) being automated, and the nature of the software being tested.

Having said that, to achieve ROI, there are some standard procedures to follow, such as:

- Tap into the power of test planning tools that assist in scoping out the 'test coverage' that needs to be conducted.
- Include in your software team the skills of a test automation architect as well as test automation developers.
- Review your current testing procedures and identify time-consuming process bottlenecks

Whether you build software products under Agile or Waterfall software development methodologies, make sure that whoever 'owns' responsibility for the software product has some understanding of software testing/test automation best practices.

## Return on Investment: Measures of Success

Every organization measures its return on investment in test automation differently. However, here are the most common measures comparing pre-test automation values with post-test automation values:

- The cost savings that result in reducing the time required to execute current test volumes
- The opportunity to re-deploy skilled test professionals to more strategic testing activities
- The cost savings achieved by repeatedly re-using automation testing frameworks and scripts
- The increase in confidence knowing that critical software functionalities are operating as they should

In the next **Test Automation** blog, we will tackle how you can get started with test automation so that you achieve the results that you, your team, and/or other key stakeholders expect.

I welcome your insights about how test automation is shaping your priorities and projects. Let me know what you think by reaching me via email.

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