Gartner Peer Insights ‘Lessons Learned’: Implementing Software Test Automation Tools

Published: 5 June 2020    ID: G00404720

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Software test automation tools enable organizations to design, develop, manage, execute and analyze automated tests for applications running on a variety of platforms. Application leaders can learn from the implementation experience of their peers shared on Gartner Peer Insights.

Overview

Gartner Peer Insights is a free peer review and ratings platform designed for enterprise software and services decision makers. Reviews go through a strict validation and moderation process to ensure they are authentic.

We analyzed 196 Peer Insights reviews to identify lessons learned implementing software test automation tools. This report focuses on the responses to the questions: “If you could start over, what would your organization do differently?” and “What one piece of advice would you give other prospective customers?” To browse all reviews, see the full list of Software Test Automation reviews on Peer Insights.

Peer Lessons Learned

This edition of “Lessons Learned” summarizes clients’ firsthand experiences with implementing software test automation tools. The peer advice results both from successful implementation projects and lessons based on what went wrong. This peer perspective, along with the individual detailed reviews, is complementary to expert research and provides a holistic view to the implementation process. Reviewers who submitted their lessons learned represent a cross-section of small- to midsize and large organizations. (See Figure 1.)
Below are some key lessons learned and most cited recommendations by Peer Insights reviewers to help application leaders in their software test automation tool’s implementation process.

**Lesson 1: Define the Technology Strategy and Critical Use-Case Scenarios**

Peer reviewers recommend application leaders to spend plenty of time understanding and documenting technical requirements. They suggest organizations to think about their overall strategy in alignment to the business processes. This will help them achieve maximum efficiency through the tool. Considering not only immediate but also the future needs in the planning phase is significant. The members also advise organizations to start planning and building the testing infrastructure from early on.

A peer recommends:

“If you plan to set up a software test automation tool, document your set up process extremely thoroughly. There are many components to setting it up from the beginning and it will only help your team to have a clear understanding of what is involved.”

*Infrastructure and Operations Professional, Services Sector*

Another peer suggests:
“Take time to really understand what these software automation tools can do. Research well about them. Then look not just into your immediate needs but into the future. That way you can get the most out of the tool.”

Application Professional, Services Sector

A peer member advises to plan and build a test framework at the outset:

“Ensure you understand what you want to achieve from test automation, plan and build a framework first, and have a test automation lead that can drive the automation approach and framework across your teams.”

Program and Portfolio Management Professional, Communications Sector

Peer recommendations include:

- Create a list of requirements for your project and set up clear processes to be followed in the organization.
- Plan for automatic test execution structure before creating test cases.
- Spend more time upfront to ensure the component configuration is providing the details needed to support the platform maintenance.
- Plan to cover both the current and future needs of the organization.

Recommended reading:

“How to Choose Your Best-Fit Vendor for Test Management”

Lesson 2: Evaluate Multiple Test Automation Tools to Select One That Aligns Best With Your Available Skills and Development Style

Analyzing different vendors to select a tool based on specific needs of the organization is an important suggestion given by the peer members. They recommend taking extensive demos and selecting the tool with the correct feature set that can deliver on most business goals. Talking to the vendors and ensuring that all legal documentation is in place is of paramount importance.

A peer reviewer conveys:
“Understand your industry or market and select the proper tool with the correct feature set. Ensure that the tool fits your needs and fits into your process, not the other way around.”

Business Professional, Services Sector

One peer further adds:

“Set up acceptance criteria to evaluate if you do product comparisons. Also really take the time to experiment with this type of tooling to understand the nitty gritty.”

Technical Professional, Services Sector

Peer recommendations include:

- Narrow the vendor choice by assessing the test automation market based on the unique value propositions of different types of vendors to find the right match for their organization’s needs.
- Test most features and plugins of the tools you have shortlisted to evaluate what is needed the most.
- Assess the range of technologies you have in your organization and decide on a tool based on that. Integration of the new tool with the existing toolkits helps and saves cost.
- Ensure that all necessary tool documentation (including best-practice documents) is delivered to you.
- Ensure that the vendor is committed to helping you achieve competency and provides support in case you need it.

Recommended reading:

“Take a ‘Shift Left’ Approach to Testing to Accelerate and Improve Application Development”

“Magic Quadrant for Software Test Automation”

“Critical Capabilities for Software Test Automation”

Lesson 3: Involve Adequate Developers and Testers Early in the Automation Process

Peers advise on using adequate resources from the outset as it helps in leveraging the tool in the best manner. Ensure support and commitment from the team and management from as early as possible. They recommend involving development and testing resources right from the planning and implementation stage. Well-versed and knowledgeable resources make the whole process smooth and prevent an organization from regular hassles.
A peer recommends:

“Ensure the practitioners using the tool set are well versed in the capabilities it has to offer and the different approaches that it opens up. This makes the difference between getting good value and getting great value from using the products. Don’t just accept using the base functionality — challenge the boundaries of testing.”

Technical Professional, Services Sector

Another peer says:

“Place responsibility for the rollout and implementation of the product with the development teams at the organization. Once virtual services and automated tests are created by developers, then bring in testers to continue to expand the test suites.”

Analyst, Healthcare Sector

Peer recommendations include:

- Include developers and stakeholders from the planning stage itself.
- Ensure your automation team is experienced and well skilled.
- Build a core team to manage and maintain scripts, and leverage automation developed by other teams.
- Schedule time to discuss complicated issues/troubleshooting with your team.

Recommended reading:

“How to Scale DevOps by Building Platform Teams”

Lesson 4: Equip Each User on the Automation Tool With the Right Training Before Moving to the Implementation Phase

Peers advocate training the users of the tool thoroughly so that the team becomes effective by utilizing the tool with maximum efficiency and saving time. Spending time specifically to train users about the tool and its features helps the organization in the implementation and maintenance phases considerably.
A peer recommends:

“Try to gain all of the knowledge that you can from the trainers when they come onsite. Use your company data in training and use real examples. This will be a huge help to you.”

Analyst, Government Sector

One peer advises:

“We would definitely request more assistance and training for our initial implementations. Perhaps we would inquire more about access to a peer-user community.”

Analyst, Unnamed Sector

Peer recommendations include:

- Provide advanced training for all users of the tool to make the implementation a visible success.
- Encourage users to watch online videos and webinars, and read manuals for the tool’s understanding.
- Train users from experiences gathered from the peer community, if possible.

Recommended reading:

“Innovation Insight for Continuous Quality”

Lesson 5: Start Small, and Build Clean and Maintainable Tests in the Implementation Phase

The peer members recommend organizations to implement the tool in small steps, which will allow it to build knowledge and capabilities before broad roll-out. The members also advise to have a precise and defined implementation strategy.

A peer member suggests:

“Have a thorough test automation strategy with well-defined metrics and quality requirements before implementing. Automation applied to efficient operation will magnify the
efficiency but applied to an inefficient operation will magnify the inefficiency.”
Application Professional, Finance Sector

Another peer recommends:

“Start with a niche area to automate testing against. This will allow you to build up knowledge and capabilities before automating all testing.”
Application Professional, Construction Sector

Peer recommendations include:

- Start small and implement the tool step by step.
- Implement established effective scripting practices in your organization.
- Understand what is included and what module is supported in each version of the tool.
- Configure tool’s options per your environment to get the most out of it.
- Pay very close attention to best practices and standards. Document them, and ensure everyone understands and follows them.

Recommended reading:

“4 Essential Steps to Implement Test Automation”

Methodology

Of the Peer Insights survey data considered for this market, only those responses meeting the following criteria were included in this synthesis:

- Reviews less than 12 months old.
- Responses that pertain to the project experience and are not tied to the capabilities of a vendor.
- Reviews were clustered into the top-five most-referenced categories (lessons learned) and then listed in order of relevant phases in the project life cycle.

The results of this synthesis are representative of the respondent base and not necessarily the market as a whole.
Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

“Magic Quadrant for Software Test Automation”

“Critical Capabilities for Software Test Automation”

“Four Steps to Adopt Open-Source Software as Part of Your Test Automation Stack”

“Take a ‘Shift Left’ Approach to Testing to Accelerate and Improve Application Development”

“Promote Continuous Quality for APIs to Support Digital Business”