



10 Benefits of Test Automation



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What is Test Automation?



Testing applications is one of the critical aspects of quality assurance. While manual testing was the norm until a few years ago, organizations today have started adopting automated testing for good. So, what is test automation?

Test automation is a method of software testing that uses automation solutions to execute the tests. It then generates a report comparing the results with the expected results, helping teams gauge the quality of their applications. Unlike the popular myth that test automation replaces manual testing, it perhaps empowers quality engineers to test more in less time and with less effort.

Why is Test Automation Crucial?

Although nothing can replace what a human mind can offer, manual testing can be, at times, tedious, repetitive, and boring. Moreover, since the applications only grow bigger with time, testing them manually becomes even more complicated, eating up your team's productive time and effort.



Since manual testing is also prone to errors, the defect injection rate is significantly higher, leading to poor quality software. According to a [CISQ report](#), the cost of poor-quality software in the US was approximately \$2.84 trillion. At a granular level, if fixing a bug in the development phase **costs \$100**, the same bug costs \$10,000 to be fixed in production.

Test automation reduces the instances of human errors, generating consistent and reliable results every time. This means higher quality, reduced bug-fixing cost, lesser effort, and higher productivity for teams.

What are the benefits of automated testing?

1. Saves Time and Money

Testing applications is a continuous process. Every time a code is modified, you must test it across various configurations, operating systems, and different user journeys. Testing all the possibilities manually means enormous testing effort and associated higher costs. The cost and effort only grow exponentially, owing to the expanding applications. With test automation, you can run tests repeatedly at no additional costs. It is also faster. Unlike 8 hours/day in manual testing, you can run automated tests 24/7, which means executing tests for an extra 16 hours a day. This translates to faster delivery of functionalities and a shorter time to market.

Usually, when teams consider automation, the first thing that seems like concern is the high initial setup and implementation cost. But what's often overlooked is the higher cost associated with manual testing in the long run. According to this [report by Hewlett Packard](#), automating a test scenario can drastically reduce the cost of each test hour from \$78 to \$17.54.

However, one crucial aspect to note is that your test automation ROI is directly proportional to the level of automation adoption. More the automation coverage, the higher the ROI.

2. Increases Test Coverage

Complex enterprise application requires a larger team and significant amount of time to carry out [end-to-end testing](#). With test automation, especially no-code, you can test applications of any size, end-to-end, with a few clicks of the buttons in a few minutes or hours. This enables you to test more features across heterogeneous applications and configurations: the result – enhanced coverage and higher quality.

Expansive test coverage also increases the probability of identifying the bugs early in the development phase, decreasing production issues and unsatisfactory user experience.

[The World Quality Report 2020-21](#) states that 'requirement coverage by test' is the primary parameter testers use to assess the quality of the applications and efficiency of the automation solution.

Higher the coverage, better the efficiency of the solution, and quality of applications.

3. Improves Accuracy

The exposure and expertise of a manual tester determine how thoroughly your applications get tested. Test automation, when implemented accurately, removes your dependency on these parameters, delivering expected results every time.

Yet another aspect that impacts quality is manual errors. Irrespective of how meticulous a quality engineer is, there is always a possibility of missing a few steps, entering the wrong data, or any trivial manual error – leading to poor application quality. With test automation, you can ensure that your solution will execute the steps accurately without fail and report each step without bias.

4. Helps Achieve Continuous Testing

Continuous testing refers to the uninterrupted running of automated tests to get rapid feedback on the business risks associated with the application under test. As a result, it improves the feedback related to a bug and minimizes the business risk. Thus, continuous testing forms an integral part of the DevOps process and enables teams to work cohesively.

With test automation, you can achieve continuous testing as it allows you to test applications rapidly. It lets you implement shift-left testing. It makes testing an early and prominent part of SDLC instead of a bottleneck at the end of the development process.

5. Enables Reusability

Manual testing, especially regression testing, can seem extremely tedious as you need to test every minor code change. Writing scripts, running them over and over again is nothing short of a nightmare. With no-code test automation, you need not write test cases or execute them manually when the codebase changes. Instead, your solution creates the test scripts which you can reuse and execute as required without additional efforts or costs.

If your automation solution offers pre-built keywords, your efforts decrease furthermore.

6. Offers Faster Feedback

Yet another benefit of test automation is instant feedback. This feedback loop between developers and testers plays a vital role in delivering higher quality and excellent customer experience. Faster feedback means faster bug-fixing time and lesser downtime. Especially when your product is already in the market, you can fix an error on the go and ensure it doesn't wreck the customer experience and customer satisfaction.

In manual testing, identifying and pinpointing the bug, fixing it, and testing the new functionality takes way longer and could lead to a bad customer experience.

7. Improves Team's Morale

Test automation improves the morale of teams. While this seems like an intangible parameter to assess, the results are often invaluable. A [report by McKinsey Global Institute](#) states that in about 60% of occupations, at least one-third of the constituent activities could be automated. Quality Assurance and testing are no different.

Test automation takes over the job's repetitive and mundane parts, freeing humans to do what they do best – brainstorming and ideating. With the new-found time and capacity to focus on challenging and more rewarding tasks, your team becomes more productive and innovative, delivering top-quality work. Test automation also enables QA teams to effectively execute manual tests like usability, exploratory, and ad-hoc tests where automation can't play a significant role.

8. Promises Information Security

The quality of your test data broadly defines how effective your testing will be. Unfortunately, manually creating quality test data takes time, testing on copies of live databases. With test automation solutions, you can create and protect your test database and use it when required.

9. Easy Reporting Makes Life Easier

Reporting in manual testing is cumbersome. It involves constantly updating the number of test scripts written and the number of bugs fixed – creating a dependency on each other. With test automation, **reporting is seamless**. In a test automation solution like **Avo Assure**, you get screenshots and videos of the execution of each step, which makes it easier to identify the error and fix it.

10. Offers Scalability

While manual testing is relatively scalable, the investment and time required to scale can impact the delivery timelines. It simply means scaling in manual testing indicates adding more hands to the project. Getting them on board and training them needs time. Test automation, on the other hand, can scale in a matter of minutes. It simply means adding more test executors to the test automation solution.

When Should You Not Automate Testing?

Automated testing helps organizations achieve time, effort, and cost benefits. However, 100% test automation is never recommended since you shouldn't rule out manual testing completely. Below are the scenarios when you shouldn't automate testing:

- Exploratory testing
- End-user usability testing
- Applications that involve strategic thinking and development – best when a test expert tests all possible scenarios
- User experience testing
- Test cases that yield low ROI
- Installation and setup testing
- If automation takes longer than manual testing
- Test cases that are non-repetitive

Why Avo?

Avo Automation empowers the largest Fortune 500 companies to rethink and transform their businesses with no-code automation solutions.

Avo Assure, a no-code and heterogeneous test automation solution, enables you to test end-to-end applications with a few clicks of a button. It empowers teams to focus on higher value and more rewarding jobs by taking care of repetitive and mundane tasks.

With Avo Assure you can:

- Expand test automation coverage up to 90% by executing end-to-end tests repeatedly
- Achieve over 40% cost savings and increasing employee capacity for innovation
- Be 2x more productive.
- Leverage about 1400 keywords and reduce testing time.
- Save over 45% of your regression testing effort.
- Deliver high-quality applications at least 3x faster.
- Reduce the production bugs by 80%.

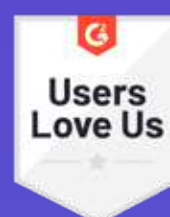
Want to know more about what Avo Automation can do for your business? Reach out to us, and we will schedule a demo for you with our experts.

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