



Will automation work for you?

Zake Yusfe

Should we automate our testing work, when should we automate and how should we do it?

Many organisations would like to benefit from automated testing for a majority of reasons e.g. reduce workload or deliver products quicker; however sometimes they have unrealistic expectations or don't fully understand what benefits automation can deliver.

Throwing a tool at a problem that may not even be suitable for automation is a recipe for failure. Studies show that in most cases, the reason for failure has been the adoption of the tool before the high-level processes and planned approach have been put in place. So rather than make a costly error why not evaluate the risks and merits first?

What can be automated?

There is a range of things to consider when looking at automation across both ongoing projects and new:

- Can existing tests be automated; if they can, is it worth it (will these tests be used short term or long term). If the tests are used short-term, you are better off having these tests run manually for that short period?
- Have you got resources with the right skills to automate your tests?
- Have you got the tools required or do they need to be purchased?
- Are your existing tests up to date (do they need to be modified/updated)?
- What approach to software development is your company using (agile or waterfall)?

Automation of a defined set of tests will usually pay back if the specified criteria exist to provide a return on investment (ROI). Automation is not cheap and requires an ongoing commitment to keep the scripts current.

The key questions listed below must be answered yes if you are going to achieve ROI from automation:

- Is the system stable in terms of the functionality (particularly around the interfaces)?
- Are there existing manual test scripts in place, captured with detailed steps that have expected results documented?
- Do you have metrics on the time taken to execute the existing scripts (effort)?
- Do you have an analysis of the system to show business critical functionality, frequently used functionality and complex business flows?
- What is the product roadmap in terms of Application Lifecycle and upgrade plans?

Resource

If you do not have resources with extensive experience and knowledge in automation it can be hard to introduce it:

- You may need to bring in a consultant, who can work along with at least two permanent members of your team, so that they can take over at some point. Also, they can provide support to the consultant if he or she requires.
- Bringing in experienced consultants can help get things going, these consultants should be able to assess your current situation, analyse the existing systems and give you the information you need to decide whether it is worth investing in automation.

We are Testing Solutions Group.

For more information visit: www.testing-solutions.com

- They should identify the tools you need or would benefit from, as well as existing tools they can use. Furthermore, the consultant should advise you on your upcoming projects in regards to automation.
- For an automation project to succeed, it requires commitment from your management to invest in resources and to plan thoroughly and assess continuously. Automated tests created by inexperienced testers can lead to failure.
- Training for existing employees (possibly train testers and developers in pairs so they can support each other).
- Scripting of tests should be done in the same language as the application under test, so the developers can provide support to testers.

Identifying tools

There are so many tools on the market that it can take a long time to research, trial and procure the right tool for a project or an organisation.

Choosing the wrong tool can seriously affect productivity. The selection process needs to take many factors into consideration including hardware requirements, configuration options, ease of use, reporting, maintenance, availability of skilled resources and, of course, costs.

You need to identify tools that will support your testing rather than hinder it. Firstly, you will need to document your requirements and gain an understanding of your test processes and the skills currently in your test team. Having identified the most appropriate one you should ask for a demonstration of how the selected tool meets your needs and the benefits it brings to you.

While it is quite true that you get what you pay for, paying a lot of money for a market-leading product isn't necessarily best. Most implementations only use a small fraction of the features that are available so looking at less expensive or even open source tools makes sense.

We are Testing Solutions Group.

For more information visit: www.testing-solutions.com

The benefits of automation.

- Provides a consistent and repeatable set of tests which will always be executed in the same way (reduces the human error aspect of test execution).
- Allows a test execution run to be completed in a much shorter period and without the cost of resources to execute manually (this means results are available quicker, and development resource can start addressing issues earlier).
- Allows out of hours scheduling and execution (e.g. overnight runs).
- Allows automated comparison of results with existing baselines (so focus is only required where expected results have not been achieved).
- To provide confidence that even the smallest change has not impacted key functionality (manual regression testing is not always cost effective for small changes).

However, this is only the start of your programme to deliver automation. Once all this is done you will still need to consider:

- How you are going to implement the tool.
- How your automation specialists will learn the function of the tool.
- Is there a need for project specific training.
- And as mentioned early in the paper what you are going to test, including test asset creation. Issues we will cover in our next white paper.

If you would like to know more about TSG or any of our solutions please contact us on: Tel: +44(0)20 7469 1500 or email enquiries@testing-solutions.com.

