Secrets to Writing an Effective Business Case for Test Automation

Writing a strong business case is a critical component of any Automation project. Before you eagerly rush in to impress your client with your solution, you need to be able to sell it to them first! It should demonstrate a range of key selling points, from why Automation is critical to their project’s success, to how they’ll get their return on invest tenfold.

The following tried and proven tips should serve as a guide for writing a successful Test Automation Business Case:

1. Relevance – What specific benefits will your clients gain
   An often forgotten step in business case development is actually figuring out your client’s compelling drivers for automation. Is it increasing their test coverage? Or utilising existing automation tools? This will depend strongly on the company’s goals. The aim is to align the business case with the organisation’s direction through precise, “value-add” solutions.

2. Know your audience – keep it free of Jargon
   The persons reading the document may have little or no technological background. Therefore, in the body of the proposal, it’s usually recommended that you explain your automation solution in terms of what it will do - i.e. “The solution will decrease test cycle time by 30%”. Always include an executive summary. This should enable a quick and general overview of the key selling points.

3. The Proof of Concept – use it to highlight the value of automation
   For the Proof of Concept (POC), the focus is less about capturing all of the data, and more about finding the key goals that will be driving automation efforts. It is just as critical to identify the drawbacks, to maintain integrity and a good standing with your client, and so that the issues may be dealt with accordingly. Quite often targeted the application(s) determine the level and capacity of automation efforts. The opportunity to perform a POC should be used to determine this. For example, web based applications are often easy targets for test automation, so the effort for this may be less than say a Java application.

4. Typical Sell Points – make them count
   Improved Test Coverage
   Simply put, improved test coverage is the ability to execute more test cases in the same amount of time. Given that testing is typically in cycles, increasing coverage in a standard cycle can significantly improve the effectiveness of the testing, and hence the quality of the application. A very effective method to demonstrate the cost benefit is to calculate the time required to execute manual test cases and average numbers of tests executed in their typical cycle times (coverage increases vs. time saved).
Reduced Testing Execution Time

Automation can (as mentioned above) significantly reduce the overall test cycle time. This is achieved by such advantages as the ability to execute on multiple PCs (limited by licenses), and running overnight ("test while you sleep").

In order to make a comparison in terms of cost benefit, there should be an estimate for executing the test cases manually (usually measured in average test cases/per person/per day). A comparison can then be made with the current estimated automation cycle time.

Enhanced Test Repeatability

There are multiple risks of having the same test repeated by the same testers, cycle after cycle. The tediousness of it will most definitely lower the team morale/enthusiasm, but also the important factor to consider is the human error will increase due to overly familiar test cases. Automation is a perfect candidate for these mundane, repetitive test cases. Once a test case is effectively reviewed and automated, it will execute the same steps time after time. This point is particularly useful on large scale projects.

5. Tips for Estimating Effort

An exhaustive analysis of automation requirements for the first 2-3 years for the project is strongly recommended for the client. From the Proof of Concept, the consultant should (possibly working with the relevant Sales/Business Manager) be able to provide an estimation of effort + any recommendations to assist the client in this analysis.

The following should typically be included in the estimation setup for the automation business case:

- Automation Framework Setup Time
- Training
- Licenses (for development and execution)
- Maintenance Costs
- Hardware Costs (including support)

The cost benefit formula is useful for providing a succinct, measurable return on investment for the organisation.

Typically, the formula for automation is as follows:

\[ \text{ROI} = \frac{\text{Net Benefits from automation over manual}}{\text{Net Cost of automation over manual}} \]

“An exhaustive analysis of automation requirements for the first 2-3 years for the project is strongly recommended for the client.”

6. Include a High Level Implementation Plan

This should include a very high level breakdown of the next steps (possibly 3 monthly) over a 1-2 year period. It is important to develop a strategy which will assure your client of a sustainable solution, as automation does have some reputation for ‘breaking’ if not maintained (this can typically include training permanent staff).

7. Summary of Key Topics

- Goals for Automation
- Benefits & Challenges for Automation
- Estimated Effort
- Cost Benefit Analysis
- High Level Implementation Plan

That should give you an insight into constructing a decent automation business case. Happy writing!

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