

Test Automation An Experience Driven Solution

Since 1986, QualityLogic has delivered 5,000+ successful QA programs to 175+ clients of varying industries and markets. Our team's experience, methodology, and engagement model have been honed over 35 years, providing us the skills and resources to develop a detailed approach toward test automation.

AUTOMATION EVALUATION

Test automation can be a significant undertaking and any decision to automate should be approached thoughtfully and in an evidence-based manner. Before any automation engagement, QualityLogic consults with the client on the overall ROI that test automation would offer.

QualityLogic evaluates a variety of factors to help inform our understanding of the overall ROI, including:

- The time and cost benefit of automated vs manual testing
- The preparedness for automation at a code level, such as modularity of code or presence of appropriate unique identifiers
- The preparedness for automation based on product stability and any planned major refactors of existing functionality
- What ongoing maintenance would entail

Based on this evaluation, QualityLogic will make a data-driven recommendation on whether automation would have a tangible return on investment. The recommendation will include the determination of the assessment, focusing on areas of the product which appear to be well suited for automation. The recommendation will also identify potential risks that may have an impact on the implementation.



STRATEGY AND PLANNING

Once the overall plan to automate and degree of automation has been agreed on, QualityLogic then works collaboratively with the client to develop and recommend a strategy for test automation.

This strategy will include the recommended test automation tools and framework to be used and the priority of test cases to be automated. QualityLogic will also detail any other considerations related to the overall success and sustainability of the automation effort. This strategy and plan is captured in a formal proposal that will include estimated costs and deliverables.

TOOL AND FRAMEWORK SELECTION

QualityLogic's preferred approach is to build automation in the framework and language our client's development team is comfortable within. The rationale is to give our clients the ability to eventually own and maintain the test automation code at a later date. QualityLogic is happy to make recommendations on the framework and language used based on the technology stack and QA goals.



Their ability to deploy resources to help us build the test suite has been invaluable—they're a great partner in that way. Rather than just providing staff to run through each step of the test, they're able to add value by helping us build the system we're using for testing.

THOMAS SCHOFIELD Chief Operating Officer High Fidelity

QualityLogic also builds its automation suites using open-source, highly available tools so there are no expensive licensing costs for our clients.

TEST CASE PRIORITIZATION

QualityLogic typically prioritizes automating happy path test cases. This allows the suite to function as an effective smoke test and ensures all critical functionality is in place. Negative test cases and less critical workflows are then automated as appropriate.



ATOMIC TEST CASES

QualityLogic recommends building test cases atomically where possible to improve stability. The concept of having dependent test cases can create situations where weaknesses in the framework or network traffic can create false failures. By utilizing atomic tests, the number of false failures discovered can be minimized and the overall testing speed and performance can be increased.

MODULAR, REUSABLE CODE

QualityLogic builds test automation suites in a modular, reusable fashion. Automation is most successful when utilized in areas of the platform that have clearly identified unique identifiers for each component that the automation will need to interact with. The rationale for this methodology is that if there are no unique identifiers the automation code will need to rely on locator strategies which may change. For example, locator strategies that rely on XPath or CSS Selectors will require more maintenance as additional modules are added or styling changes are implemented.

QualityLogic utilizes Page Object Model for all of its automation efforts. This strategy allows for greater stability, ease of maintenance, and more sustainable code.

API VS GUI TEST AUTOMATION

QualityLogic is experienced in developing test automation suites which exercise both the GUI and the API. Ideally, we recommend creating automation tests to interact with both the API and GUI. This allows for better granularity with reporting and identification of problem areas. Where this is not possible, QualityLogic can work with the client to identify a suitable strategy and approach in this area.



TEST ENVIRONMENT

QualityLogic recommends that clients consider how the automation infrastructure will be maintained. There can be significant problems maintaining an internal automation framework and it should be considered carefully. QualityLogic can make recommendations on virtual infrastructure services if the client does not wish to maintain an internal automation infrastructure.

CONTINUOUS TESTING

QualityLogic is accustomed to working with clients who operate in a continuous testing model. Our typical approach is to support these clients with an ongoing engineering team whereby QA Engineers are embedded directly with developers and create automated test cases at the same time as the functionality is implemented. This allows for the automation to be in place as the code is released through the CI / CD pipeline.

TEST REPORTING

QualityLogic configures its automation reports according to the needs of the client. In many projects the only reporting requirement is for the automation results to be displayed in the CI / CD build system. Qualitylogic can also generate email or HTML-based reports that can be distributed to project stakeholders as required.

ONGOING MAINTENANCE

Depending on the client's business objectives, QualityLogic can either staff engineering teams for a finite period of time to develop the automation suite and then provide it to the client or can staff a dedicated engineering team responsible for ongoing test automation and maintenance.



TEST ASSET OWNERSHIP

Clients own all test automation scripts and test assets that QualityLogic creates as part of the QA engagement. These assets can be delivered as they are created to the client's preferred code repository and can be provided at the end of the program.

PERFORMANCE GUARANTEE

All of QualityLogic's engagements are developed around specific QA deliverables established in the testing proposal. QualityLogic guarantees their performance on all software testing services. The QualityLogic team will work closely with the client to ensure their satisfaction through the engagement.

OUR DEDICATED SERVICE MODEL

In QualityLogic's managed service model, team members are dedicated to specific clients. This includes members from multiple levels of the business – from individual contributors to senior-level managers. This model provides clients with a QA team that engages as partners, becoming embedded with the client, their business, and the industry, so they can work with you to help drive overall organizational success.

The return on investment from a QA testing company that functions as a true business partner is significantly greater than simply paying for hours of an engineer's time.

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