WELCOME TO A FASTER FUTURE

THE BENEFITS OF AUTOMATED TESTING

Automated testing tools have matured and improved over time and today often play a significant role in an organisation's testing and delivery of a software application.

While manual testing still has a useful role, it has two drawbacks:

1. It is time consuming and;
2. It is difficult to maintain the level of intensity required during multiple regression iterations

This is why automated test tools are used - they avoid the drawbacks of manual testing. There is now a clear industry consensus that automated tools offer a repeatable and efficient testing solution. The potential benefits of automated test tools are significant:

- Automated Regression testing is faster than manual testing
- There is repeatability and accuracy with a tool in testing is excellent
- The tools can run unattended e.g. overnight
- Test coverage dramatically increases through data variations. The tool can cover more combinations faster than a manual tester
- The ability to expand the testing through adding computers and running more tests in parallel
- To be able to run test executions in any environment; development, test, training, staging etc
- When implemented correctly, automated test tools deliver on their promise of more thorough and efficient testing, achieved with less manual effort

ARCHITECTING AN AUTOMATION SOLUTION

When solid architecture, design and planning techniques are applied to the automation, the result is lower maintenance, lower cost and improved test efficiency. The primary benefit is to deliver a framework for automation that is:

- Quick to implement
- Efficient and fast to run
- Maintainable
- Scalable
- Able to easily use multiple data sources

The TestPro Automation Framework provides the solution that meets these criteria.

BENEFITS OF AN AUTOMATION FRAMEWORK

The benefits of an automation framework is to:

- Accelerate the implementation of automated testing tools
- Improve the return on investment of the automated tool
- Simplify the interface to the automation tool, so that business users can more easily participate in testing
- Capture and maintain application data and context so testing is more efficient and thorough
- Reduce automated test script maintenance

TESTPRO AUTOMATION FRAMEWORK (TAF PRO)

TestPro has a long history in implementing automated test tools across a broad spectrum of automation solutions.

TestPro has evolved the implementation models for test automation through progressive generations:

1. Record and Play
2. Data Driven
3. Keyword Driven
4. Hybrid

The use of a hybrid architectural model allows automation to be flexible to cope with any automation maturity and be usable by manual and automated testing teams and by business testers.
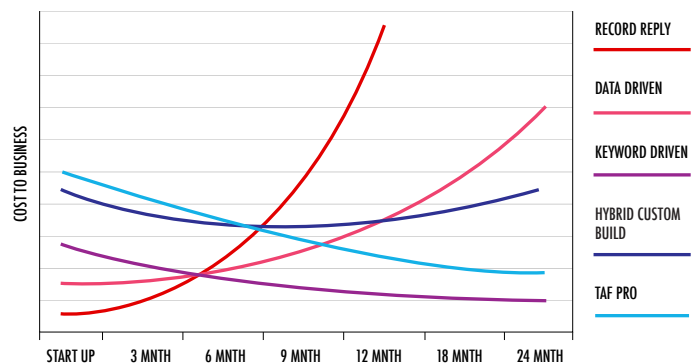

FIG 1. COMPARATIVE MAINTENANCE EFFORT OVER THE LIFE OF A PROJECT.

TAF PRO ROI AND KEY BENEFITS

The whole focus of TAF Pro is to improve the efficiency and ROI of test automation.

- The framework reduces test script complexity
- TAF Pro provides a method to manage the test cases, in conjunction with the various data required by the tests
- By managing multiple test data sources, tests can be executed with different data combinations, reducing the number of tests
- TAF Pro enables the automated test tool to use it's inherent power of object recognition and   management, so reducing script maintenance
- It uses modular scripting, allowing test cases to be built up from building blocks

RESULT REPORTING

TAF Pro provides enhanced result reporting by letting the testing team know what the failure was and including the actual data that was entered into the system at the point of failure. A screen capture of the error plus any output results or parameters that were generated and any test tool errors that were generated.

DATA MANAGEMENT AND FILTERING

TAF Pro provides very powerful data management facilities for the automated test. It offers data management combined with the ability to easily display the data associated with any test combination.

TAF Pro allows sophisticated data filtering functions. This means that any test can be run with a reduced set of data which will directly support the environment, the test conditions desired or allow tests to be aimed at specific outcomes.

Filtering data is both fast and considerably more efficient than any other method of test execution. It offers the user direct access to the number of tests in a suite that will run without being familiar with the entire dataset that could be run.

RISK BASED TESTING

TAF Pro provides a clear and immediate ability to sort, collate and execute data for tests that have a risk assignment within the dataset. This powerful feature is critical in the ability to execute tests with the highest priority first and foremost.

TAF PRO IMPLEMENTATION

We recommend you implement TAF Pro in stages. This first step is to focus on the core regression tests that are used to test the most critical, or most defect prone area of an application. This area typically offers an immediate and high ROI. The automation coverage can then be expanded into other application areas as required.

TAF PRO TECHNICAL APPROACH

By delivering the above requirements within the TAF Pro framework, the limitations inherent in the other automation and framework methods are resolved or properly managed.

- The modularity increases test maintainability and script reuse, thus script rework and maintenance cost is reduced
- The modularity provides the ability to quickly create test cases or test suites from existing test scripts
- The automation tool maintains its full capabilities e.g. intelligent object recognition and speed, so test scripts execute efficiently and quickly
- Multiple test datasets can be attached to test cases for use with different test conditions or situations, or different environments
- Test data is managed efficiently in a database

To achieve these benefits, TAF Pro uses a generic object model that abstracts the data and parameters to a data store with separate data maintenance facilities.

Automation can achieve its ultimate potential when implemented using a tool and method that supports the flexibility of multiple data combinations.

TAF PRO WITH RATIONAL FUNCTIONAL TESTER

TAF Pro integrates with Rational Functional Tester to deliver the automation. TAF Pro can be supplied with RFT or separately. Any existing RFT automation can be automatically used with TAF Pro. TAF Pro provides bulk import of RFT scripts.