Testing any application requires the team to manage between understanding the application's functionality from an end user's perspective as well as design scripts that will automate the entire process. The conundrum comes to play when domain experts who understand the functionality and can define how the user will experience the product, don't have automation expertise to write scripts; while the automation experts who can write the scripts needed to automate the process to ensure that testing cycle is completed seamlessly, often don't have the functional knowledge or understanding of how the end user experiences the application.

To resolve this conundrum and bridge the gap between domain expertise and test automation, 3i Infotech's Altiray brings you the Hybrid Test Automation Framework (HTAF) along with Flexib.
HTAF - A HYBRID TEST AUTOMATION FRAMEWORK

HTAF is a 3i Infotech proprietary customizable framework developed over the Selenium – Cucumber test framework. This framework significantly reduces the test automation life cycle by accelerating script development, execution and management. A hybrid design approach is followed that supports both data-driven and keyword-driven automation methodologies. Spreadsheet-driven HTAF test scripts can be used by the Quality Analysts / business users with minimal technical knowledge. Selenium with Cucumber supports BDD framework and offers a way to write tests that anybody can understand, regardless of their technical knowledge.

The Behavior Driven Development (BDD) framework allows organizations to implement important acceptance test scenarios while development is in-progress. It gives the opportunity to create test scripts from both the developer’s and the customer’s perspective. So in the beginning, developers, project managers, Quality Analysts, user acceptance testers and the product owners (stakeholder), all get together and brainstorm about which test scenarios should be passed for the success of the software/application being developed. This way they come up with a set of test scenarios where the test scripts are in simple English language, which serves the purpose of documentation as well.

END USER BENEFITS

- Faster delivery of applications to the end user
- Wider Test Coverage to include manual and automated test requirements
- Improved accuracy of the test results
- Shorter feedback cycle to evaluate and implement any changes suggested
- Flexible Testing methods leading to leaner test plans
- Performance and Security of the application can be verified simultaneously

Visit us here: www.3i-infotech.com/altiray
3i Infotech also offers a unified Web platform that integrates Open source, Commercial Automation, Performance and Security testing tools under a single roof named Flexib. Flexib is a combination of both Key work and Data Driven capability - a unified Hybrid Framework for Functional, Automation, Performance and Security testing services. It provides enhanced testing capabilities, while delivering high quality, cost effective, customer centric and easily readable technical and professional reports.
The architectural diagram depicts the Hybrid Automation testing activities using the Open source tool Selenium with Cucumber for Functional and Mobile test scenario scripting, Flexib for continuous testing and monitoring along with Jenkins for Continuous Integration.

Selenium with Cucumber can be utilized for scripting the Web/Mobile apps, while Flexib can be deployed with all the necessary integrations of various tools on Cloud/Intranet/Internet as per the client’s requirement. Access can be given to various stakeholders as per the client’s interest.
**BUSINESS SCENARIO**

A leading US-based multinational Financial Services Provider were facing challenges with respect to quality of their existing application and any changes made were failing in an Agile environment. They wanted a quick solution to address these issues effectively. They were looking to engage with an independent testing vendor for manual test execution and automating the application for faster time to market.

**CASE STUDY**

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**BENEFITS OF HTAF FRAMEWORK INTEGRATED WITH FLEXIB:**

- Support for Web and Mobile apps
- Keyword driven and Data driven Hybrid framework implementation
- Reduced time for test scripting and implementation
- Integration with a global web platform “Flexib” for Test Execution and Reporting
- Integration with Jenkins for Continuous delivery
- Detailed test reports
- Reduced Operating costs
- Flexibility of dynamic and agile Resource utilization

![Automation Efforts reduction (%)](image)

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SOLUTION PROVIDED:
• We worked with the client to study the application and strategized to provide end to end regression test automation frameworks and System testing
• The entire Functional testing was proposed to run in an Agile environment
• Selenium Automation framework solution was used to address the automation testing for the application and Defect management was addressed with JIRA to execute in the same environment
• We also conducted regression testing of non-impacted systems, to reduce any chances of indirect effects of any changes to the main application

BENEFITS:
• 20% decrease in effort due to reusability of automation libraries
• Agile test approach helped achieve getting the application faster to market
• Streamlined automation deliverables schedule ensured minimal impact of any changes to the system

Altiray™, 3i Infotech’s Services landscape, is well integrated across domains and emerging technologies. Our digital frameworks are optimized to deliver the much-needed core transformation in businesses. Based on a curated technology stack, the solutions enable easy technology adoption and are effortlessly scalable. Mobility, together with new-age technologies like Blockchain, Artificial Intelligence, IoT, Augmented / Virtual Reality (AR/VR), are an imperative part of digital transformation, and Altiray™’s offerings cater to all levels of the mobility maturity curve, covering Consulting, Design & Development, Data Testing, Support, Data Intelligence & Co-Innovation.

5
Offshore Delivery Centers

9
Global Delivery Centers Across India & Europe

5000
Employees in 24 offices across 12 countries

Extensive domain Knowledge

Experienced technology experts

Smart technology solutions

20+ IP based software products

1200+ customers
50 countries