# AUTOMATE VISUAL TESTING TO EXPAND COVERAGE AND ACCELERATE TIME TO MARKET

## OVERVIEW

Testing is the bedrock of any successful implementation. In today's world of responsive web design and growing device diversity, layout verification of an application has become exceedingly difficult. Manually executing visual testing plans within increasingly short release cycles escalates costs, time and pressure on the delivery teams when ensuring the final product is free of any system or human error. Visual aspects of an application like formats, alignment, screen resolution, position of an action button on digital interfaces and such other changes to the application have a big impact on the User Interface. Managing the same present additional roadblocks to the testing team while delivering optimal quality. Different devices, operating systems and region specific designs increase the potential for error, all of which mean an infinite number of cause/effect variables to test.

Flexib is a robust testing framework from Altiray, 3i Infotech Services. Flexib seamlessly automates functional and non-functional testing using commercial and non-commercial tools. This hybrid frameworks uses select keyword and data-driven capabilities to offer the advantage of reusable test scripts, functional libraries, business process and use cases. It supports Continuous Integration/Testing/Delivery and adapts to DevOps processes. While the model-based testing framework is used to automate workflows and use cases, Artificial Intelligence (AI) services are used to automate business processes. The Flexib framework helps automate AI using Blue Prism, Automation Anywhere and UiPath.

Flexib ensures your testing processes are methodical and detailed in the most challenging of environments. Flexib aims to recognize and mitigate risks

## CAPABILITIES THAT ENSURE HIGH PERFORMANCE TESTING

• Automate User Interface (UI) validation with smart image matching algorithms

• Simplify baseline maintenance

• Test with multiple mobile screen resolutions for Responsive UI designs

• Use automation tools to test the look and feel for Responsive websites

• Effectively test the UI with HTML error reporting, screenshots, and image comparison tools

• Utilize regression testing tools that are available anytime/ anywhere for the entire testing team

• Run multiple tests in parallel to save time

• Set up tests to run on Cloud; e.g., Sauce Labs, BrowserStack and real devices as well

## OUR APPROACH AND ACCELERATORS

3i Infotech combines the expertise offered by Quality Analysts and the industry's leading testing tools to offer enterprises the opportunity to automate and streamline their visual testing process with the Flexib framework. This framework extends the existing Selenium, Galen and Appium-based automation solutions to User Interface (UI) verification and provides enterprises with:

- Repeatable, automated test processes applicable for any visual elements
- One-command validation of content, data, and layout for all User Interface elements of an application or website across multiple platforms
- Integration of functional testing of the data accessed through the User Interface
- Expertise with next-generation visual testing and automation technologies to identify and remedy visual quality related challenges in dramatically less time.
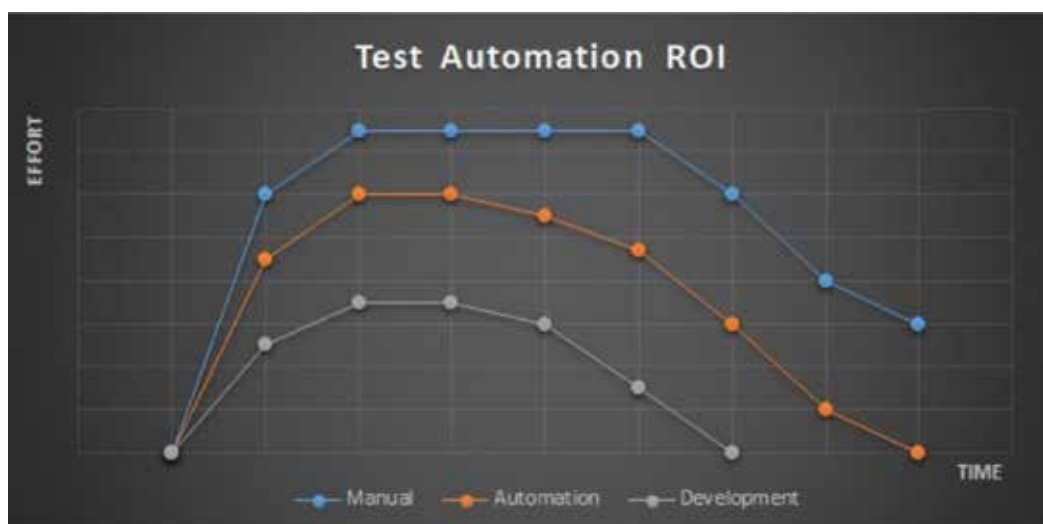
## USE CASES

We have had success in various scenarios some of which are listed below

- Responsive applications with weekly or frequent build cycles and releases.
- Responsive applications with frequent Manuscript and layout changes.
- Applications/Websites in multiple environments before launch
- Pixel to pixel testing for CSS & application Layout

## WHY FLEXIB

- Reduces time spent on manual visual QA
- Reduces visual testing coding efforts
- Improves test automation coverage across browsers and devices
- Captures 20% more regressions and UI bugs pre-release
- Gains peace of mind, knowing that an application UI elements are validated
- Frees up engineering time for feature development
- Reduced turnaround time for certifying client websites



Manual vs Automation Testing 30% Effort Saving

# CASE STUDY: AUTOMATED VISUAL UI TESTING

## THE CLIENT:

An US based specialty pharmaceutical and medical device company with offices across the world, manufactures and markets a broad range of branded, generic & branded generic pharmaceuticals, over-the-counter (OTC) products and medical devices which are marketed directly or indirectly in more than 100 countries.

## THE OBJECTIVE:

Since the company is in the pharmaceutical industry, it introduces products as well as acquires the same frequently. Subsequently, its website has to showcase new products / acquisitions. As a partner, Altiray, 3i Infotech Services develops and tests the websites for such requirement in different environments. The challenge arises from the fact that the websites have to undergo pixel-to-pixel testing and pass through various stages till Go-live, all at a short notice.

## THE QA SOLUTION:

To overcome this challenge a framework was created to automate the pixel-to-pixel level testing of the website. This approach is very unique as this is does not test the functional test cases. The automation is specific to AI powered visual automation for responsive design testing. Here the testing of the content, layout, images, fonts, forms, manuscripts are automated in various environments like QA, Client's Development, Staging, Pre-Production.

## THE BENEFITS:

- Reduced turnaround time for certifying client websites
- 30% Effort Saving due to Visual UI Automation
- Code re-usability reduced effort for regression testing
- Improved test automation coverage across browsers and devices

# ALTIRAY ™
*Actioning Tomorrow*

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.

**3i Infotech®**
LIMITLESS EXCELLENCE

| Extensive domain Knowledge | Experienced technology experts | Smart technology solutions | 20+ IP based software products | 1200+ customers 50 countries |
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