V-SOFT® DIGITAL

Quality Assurance & Testing Center of Excellence

Fortune 50 Healthcare Test Automation

⛰ Challenge

The client is a Fortune 50 healthcare clinical solutions company. Their Radiology Specialists (RS), Medical Doctors (MD), and Registered Nurses (RN) use various legacy systems with digital image processing technology to track cases for Medical Oncology, Radiology, Radiology Benefit Management (RBM), Sleep, Specialty Drugs, Radiation Oncology, Genetic Testing (GT), Musculoskeletal Care (MK), and Cardiology. When a case is accessed for processing, the user (eg. RS, MD, RN) is navigated to the respective legacy application. The company initiated the 302/NextGen program to decommission its legacy applications and implement a centralized Case Management Tools (CIT) to manage cases from creation to closure in four project phases. The CIT would allow users to view the status of any case and process it, regardless of its legacy application. The company developed the CIT using an agile methodology and needed an experienced Quality Assurance (QA) Automation Testing Team to build a testing framework for CIT.
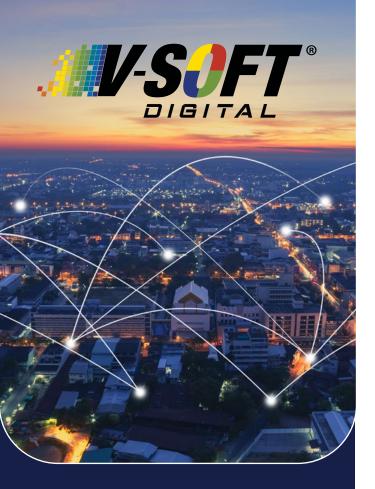
💡 Solution

V-Soft Digital Testing Center of Excellence (TCoE) collaborated with their developers to gather requirements. Then built an automation testing framework to speed up the development and also created automated test scripts using best-practices for continuous integration and DevOps.

🎯 Result

V-Soft Digital QA team accelerated their development effors with a successful UI Test Automation Framework, which resulted in 40% project cost savings and a 60% increase in time saving.

1. UI Test Automation Framework - Created from the scratch and delivered Selenium UI Framework (BDD & POM) that is utilized by all phases of 302 scrum teams for UI Test Automation.

2. Services framework - Created from scratch and Delivered Services Framework. The same has been used by all the phases of 302 QA teams.

3. Test Strategy & Plan for Phase 1 - Delivered 302 Test Strategy & Plan document to entire 302/NextGen Phase 1 Agile Team along with Leadership.

4. Test Automation Strategy & Plan for Phase 2 - Delivered 302 Phase 2 Test Automation Strategy and Plan to 302/NextGen Project & QA Leadership. It includes UI Test Automation & Services Automation Plan.

5. Other Documentation - Created New Hire Onboarding documentation.

6. Knowledge Assets Reusability - Created a Playbook for Test Automation that can be reused when new resources are added to the

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Delivered robust quality with zero errors — **100%**

Cost Savings — **40%**

Time Savings — **60%**

project.

7. DevOps Contribution - Delivered Services smoke test suite to Release Team towards CI/CD process. Postman Collection smoke suite is running on Jenkins.

8. DevOps Contribution- Delivered UI-Legacy smoke test suite and regression suite to Release Team towards CI/CD process.

9. Code Reviews & Coding Standards - Mentored and educated Team Members.

10. On Time - Managed team and collaborated with the business team to ensure timely deliverables.

11. Communication - Conducted frequent checkpoints with Scrum Masters, Agile Coaches, and Product Owners to set the expectation of current QA Automation Strategy.

12. Met Project Requirements - Bridged the gap between the Team and Leadership (QA, Development, Business, and Executive-levels) to ensure QAdelivered a defect-free product at all levels of the program.

13. Gaps- Identified the gaps brought to QA Leadership's notice by providing a solution towards the closure.

14. Reporting - Delivered daily, weekly status and other reports and plans to client leadership.

QA Automation Best Practices

- Implemented a tag concept to give the user flexibility to run scripts based on the environment and test types such as smoke, regression, functional or run all tags simultaneously.
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- Implemented a dynamic XPATH concept for UI automation to manage UI changes.
- Implemented PageFactory with PageObject model in the framework to test effectively.
- Designed a user-friendly PageObject model.
- Captured all the exceptions in step level and took screen shots of failures.
- Followed a BDD approach in the framework creation in English language, so that we can change the behavior in the test script and test there.
- BDD framework is easily comprehensible to Product Owners and Managers.
- Followed Java coding standards while writing test scripts.
- Executed more efficiently by creating more reusable components and less code
- Generated reports including pie charts.

Why V-Soft

V-Soft Testing Center of Excellence (TCoE) demonstrated a strong footprint and proven capabilities in the test automation. We achieved this through meetings and presentations with the company and sent our QA department head on-site for 5 months to assess and establish a test automation process that worked towards continuous integrations, mentored and managed the team, and guided them on industry best-practices. The company felt that V-Soft successfully delivered high-quality results with the right technologies as an exceptional asset to their Agile Team.

TECHNOLOGY APPLIED

- Java
- selenium webdriver
- Cucumber
- REST Assured
- GitLab
- Mongo DB
- SSO
- Jenkins
- AWS
- Gherkin
- JIRA
- UCD
- Appian UI
- Intellij
- Gradle

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