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HOW GIC ADOPTED TEST AUTOMATION TO MODERNIZE ITS TESTING CAPABILITIES

To make up for its lackluster Software Testing performance, GIC was in a pressing need of Test Automation. Due to its huge scale of operation and its complex business nature as a wealth fund, GIC was searching for a competent partner with proven capabilities in Test Automation consulting, implementation, and maintenance.

CAPITAL





Industry

Fund Management

Founder

Government of Singapore

Employees

1,500

Headquarter

Singapore

Service(s) and Product(s) used

Digital Testing Service, Katalon Platform

Challenge

- No tester in place
- No centralized reporting standard
- Complex integration among modules

Solution

- Test Automation Framework that is highly reusable and maintainable
- End-to-end CI/CD Implementation



I am pleased with the professionalism and expertise rendered by the team during the project. The team is very dedicated, experienced, and was able to lead me along to deploy Katalon solution in the best approach.

— KEVIN YEO - Project owner, GIC



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SINGAPORE'S RENOWNED INVESTOR DECIDED TO ADOPT TEST AUTOMATION

As one of the biggest sovereign wealth funds in Singapore with total assets of over \$450B, GIC knew that their digital systems have to operate around-the-clock, with the highest quality, while maintaining a reasonable level of security. A mistake can cost the company hundreds to millions of dollars. Therefore, software testing became the top priority. Since, at the time, there was no tester in the team, the need of centralizing and automating everything related to software testing was definitely something GIC wished to achieve.



THE NEED FOR AUTOMATED SOFTWARE TESTING

GIC's biggest challenge was that it relied solely on Unit Testing to verify the quality of its products. This was because there's no tester in place. And, since its software infrastructure was managed by the IT team (which had little connection to the product team), GIC found that setting up the integration was extremely complex. Many different teams working on the same project like this also made the deployment process fragmented and inconsistent.

To make matters worse, GIC had no centralized reporting process to track its test results.

The real estate management system, which has complicated interactions with map elements (verify live data, compare, zoom), disqualified manual testing as a suitable method.

REACHING OUT TO A TRUSTED SOFTWARE TESTING PARTNER

To solve these challenges, GIC engaged KMS for advisory and scripting services for the three main modules of its real estate management system: Deal Tracking, Geolocation, and General.

Discovering the real estate management system

To demonstrate its consulting capabilities, KMS went through several rounds of technical verification and solution presentation as part of the Proof of Concept phase. After the contract was signed, a Discovery Phase was conducted to understand deeper into the internal product, which is the real estate management system. This system manages all the real estate that GIC is regulating for different regions across the globe. It helps GIC stay on top of all the deals, internal staff reports, capital budget, and different data & analytics metrics.

Choosing Katalon as the primary test automation solution

From there KMS team created a list of improvements and chose Katalon as the primary automation tool to automate manual test cases and to be integrated with ElectricFlow—the CI/CD tool GIC is using. KMS worked closely with GIC's project owner and infrastructure team to integrate Katalon with the current CI/CD workflow and set up the centralized report server to unify both unit test and automation test results.

Placing full trust in the KMS team

Since GIC did not have any QA, KMS had to review the manual test cases created by the client carefully and provided suggestions on how to create automation-friendly cases. To help GIC gained clear insights on the system performance, automation and DevOps experts from KMS had simulated some of the common user actions through API and set up the measurement metrics to automatically send notification email whenever an API exceeds the defined execution duration. Also, everything was embedded into the centralized report server.

TANGIBLE RESULTS ACHIEVED

With great support from the GIC team when it comes to onboarding and troubleshooting configuration issues, the automation testing squad from KMS had created a framework that maximized the reusability while making it easy for the development team to adopt. Worry about software quality after each release was now a thing in the past.

At the end of the project, GIC achieved:

65%

automation coverage
over 1.5 months

75%

of reduction
in the testing effort

Solid and flexible automation framework
that can adapt easily to any future changes

Centralized report server
with a crystal-clear dashboard for tracking purposes



They managed to uncover the difficulties early and proposed practical solutions to address them. The deliverable has comprehensive documentation and a proper code base which allows me to continue usage efficiently post-project engagement. I thank the team for the job well done

— KEVIN YEO - Project owner, GIC

ABOUT KMS SOLUTIONS

KMS Solutions works closely with leading software companies across the globe to bring the most advanced and innovative technologies to Asia Pacific. The focus is to help organizations achieve their business goals through world-class fit-for-purpose solutions and proven industry best practices. KMS Solutions' success is ultimately measured by the positive impact that it makes to the client's business.

To learn more about KMS Solutions and our works, visit: kms-solutions.asia

