



LTS GROUP

Software Testing Portfolio



Healthcare Win & Web App

Overview

Client is a South Korea-based healthcare company that manufactures medical devices.

More than 25,000 dentists from all over the world use their software and equipment to diagnose and treat patients

Project Info

Country: Korea

Domain: Medical Device

Development process: Scrum

Tools:

WAPT Pro

Bunny

Burp Suite Scanner

OWASP ZAP



Test cases



Bugs

Business needs

- The client wanted to:
- Evaluate the quality of the whole system, including functional and non-functional testing.
- Maintenance the current website application and testing a new web app

Solutions

- Delegated a test leader and core team for long-term operation Other factors will be arranged upon requests with flexibility to save cost.
- WAPT Pro: For performance test.
- Bunny: For PASC Server Simulation
- Burp Suite Scanner: To perform manual and semi-automated penetration tests of web applications
- OWASP ZAP: For automated penetration tests of web app.

Healthcare App

Overview

Our client is a fully-invited closed SNS specialized for medical institutions.

The application enables users to make schedule and synchronize it with external calendar system (Google, Outlook). The system runs on multiple operation systems, including Android, iOS and Windows.

Project Info

Country: US

Domain: Healthcare

Framework: TestNG, Appium

Development process: Scrum

Tech stack:

Java	Maven
TestNG	Appium



Business needs

They need to automate main functional testing to ensure the highest efficiency, stable performance and time to market for continuous version releases.

Solutions

- Utilize Selenium & Appium for mobile app testing with multiple devices.
- Java, Maven and TestNG are used.



Automated test cases



Bugs



Regression run

Well-being Measurement

Overview

The application helps users to measure and improve mental health, mitigate lifestyle risk by providing users with 5 key well-being elements.

The system is virtually complicated as it includes desktop app, web app, mobile app, data warehouse, web services.

Project Info

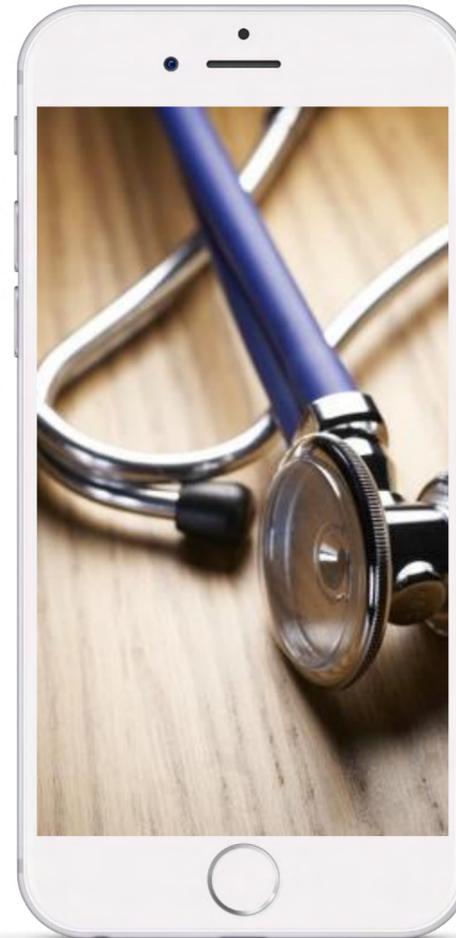
Country: US

Domain: Medical

Tool: Ranorex, Jenkins

Development process: Scrum

Tech stack:



Business needs

The company had desire to accelerate time to market within 3 months and reduce test effort by replacing manual testing with automation testing.

Solutions

Leverage CI – Jenkins to automate End-2-End testing.

Apply various tools for each operating system:

- Ranorex for desktop app
- Selenium for web app
- ETL Validation for ETL Testing



Test cases



Bugs



Regression run

Telecommunication Web App

Overview

The platform supports corporate management as the new management consulting. They would like to make management's dreams and thoughts such as sophistication of management, which utilizes information communication, overseas expansion support, corporate web strategy, etc., come true.

Project Info

Country: Thailand

Domain: Telecommunication

Framework: Cypress

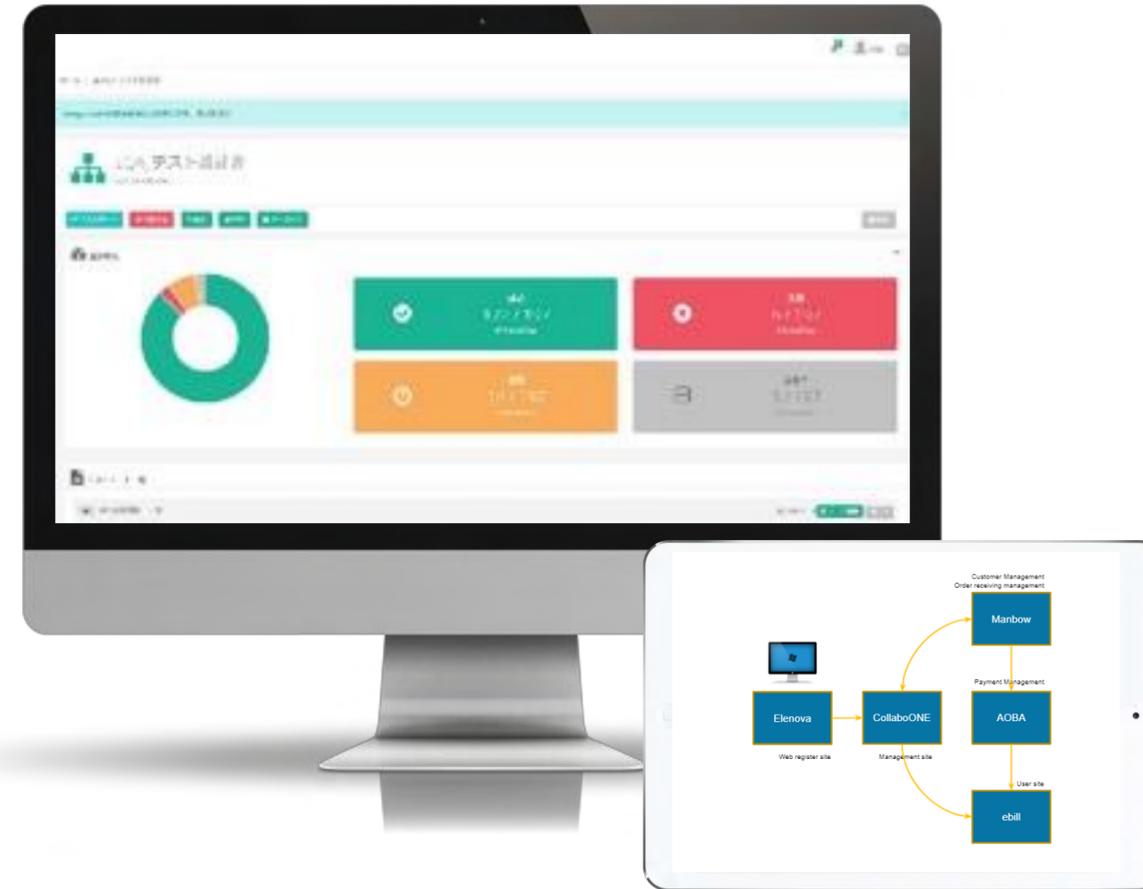
Development process: Scrum

Tech stack:

Javascript

Jenkins

Cypress



Test cases



Bugs



Functions Tested

Business needs

The customer has some parties to develop the Internet connection service system. They want to build an independent testing team who controls quality for integrated systems and performs acceptance testing.

Solutions

- Send onsite staff to the customer's site to learn the current system and new features.
- Pilot project to show full testing life cycle.
- Maintain offshore team performing tests to ensure the product's quality.

Communication & Data sharing Web App

Overview

Client provides web application that allows multiple companies to record, manage & share data to reduce production costs and increase efficiency.

The web creates segregation within a firm by roles and groups. Changes are saved so users know what is adjusted and by whom. The user can create Query, Data Report and Dashboard from this database.

Project Info

Country: Japan

Domain: Back-end Service

Framework: PlayWright, k6

Development process: Scrum

Tech stack:




Test cases



Bugs



Functions Tested

Business needs

The client continuously gets new customers, so they need to maintain and develop or customize features to adapt to new customers.

Solutions

- Provide test scenario and test coverage for functionality for client to review.
- Have development team to fix defects.
- Yield effective communication methods via Zube to ensure no defects slip through.

AI/Image Recognition Web Application

Overview

Client is an AI development company.

The company comprises many business units, including development, manufacture, sales of photovoltaic system, various future prediction systems and weather forecasting system.

Project Info

Country: Japan

Domain: Artificial Intelligence

Development process: Scrum



Business needs

Our client has a product with subsystems that are released continuously.

The client needs an independent test team to check AI image processing software before releasing the product.

Solutions

- Have Japanese speaking testers work directly with the development team.
- Suggest technical adjustments for each release.



Test cases



Bugs

Navigation Automation Testing

Overview

The client offers real-time map updates with high-resolution digital maps, providing services that reflect the most current state of the ever-changing city landscapes.

By collecting and utilizing value-added content, the client provides users with the positional information they need on time.

Project Info

Country: US

Domain: Navigation

Framework: Selenium, Appium

Development process: Scrum

Tech stack:

Selenium	Appium
Java	Maven
TestNG	



Business needs

The client needs to run tests on many mobile models and different screen orientations such as iPhone 6/7, Galaxy S5/6.

When new software version is delivered in each country, testing must be run again using automation test tools.

Solutions

- Selenium and Appium are used for mobile app with multiple devices
- Java, Maven, TestNG, Sikuli (detect image) are used.
- Sikuli is used to detect image on map.



Test cases



Bugs

Audio Visual Navigation (AVN)

Overview

The client is one of the biggest South Korean multinational electronics companies which has many business units, including vehicles.

They want to set up an Offshore Test Center to handle all test activities for different AVN models from different producers

Project Info

Country: South Korea

Domain: Automotive

Development process: Waterfall

Tools:

CANLink

CANoe

Test Bench



Test cases



Bugs

Specifications

- OS: Android
- Navigation System (10.25-inch Screen) w/ Rear Camera
- Harman Kardon® Audio System w/ Speaker Lights
- UVO Link w/ enhanced navigation features (and smartphone remote start)
- Apple CarPlay® and Android Auto™ Smartphone Integration
- Head-Up Display, Wireless Phone Charger
- Smart Cruise Control w/ Stop & Go
- Safety Technology
- Auto Emergency Braking & Warning
- Lane Keeping Technology
- Blind Spot Detection Technology
- Rear Cross-Traffic Alert and Avoidance Technology
- Driver Attention Warning
- High Beam Assist

Solutions

- Do pilot phase for knowledge transfer and sample tests.
- Set up Offshore Test Center, transfer devices, build team and process, train domain knowledge, and cooperate in testing activities with the client.

Insurance

Overview

The client is a big insurance company in Vietnam working on areas of Insurance, Life, Securities, Fund, Bank, Invest. They have a wide relationship with other insurance groups such as AIG, AXA, Amlin, Munich Re, Swiss Re, Hannover Re, Lloyd's, Atrium Space, Catlin, ACE, Hiscox, SCOR, SpaceCo.

Project Info

Country: Vietnam

Domain: Insurance

Framework: Ranorex

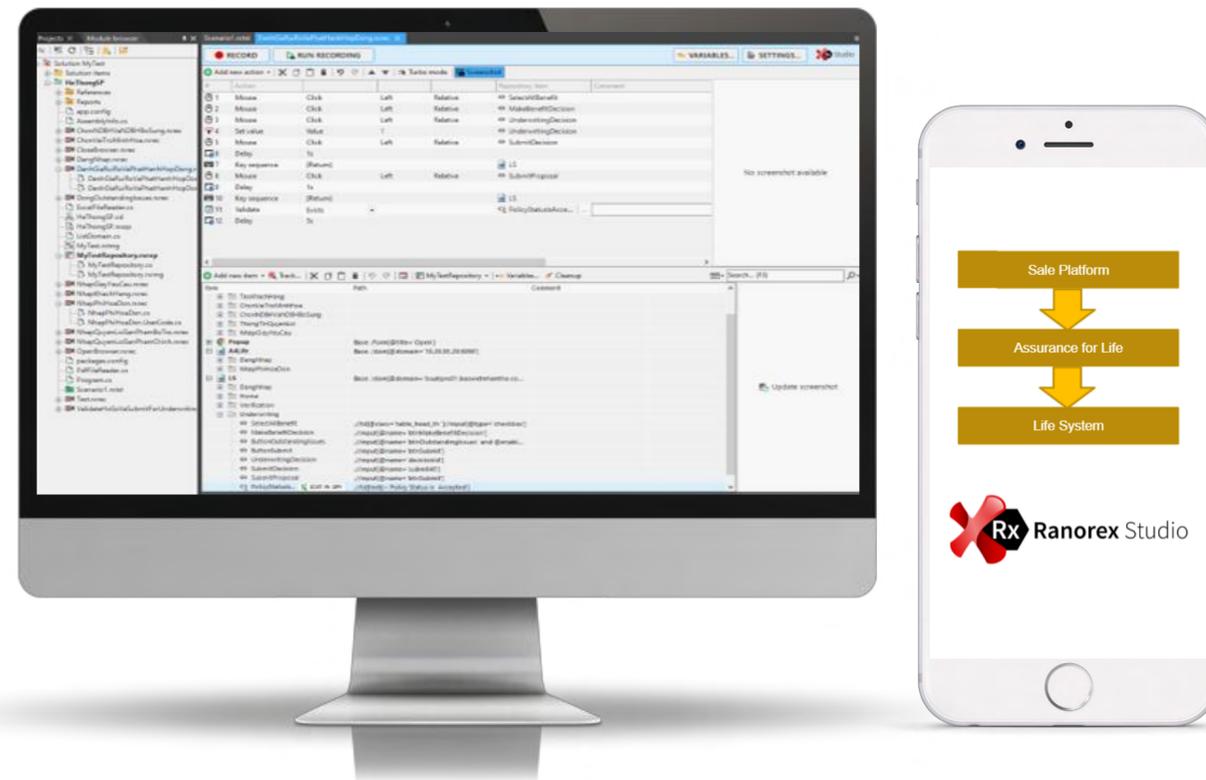
Development process: Waterfall

Tech stack:

Ranorex

Jenkins

C#



Test cases



Regression run

Business needs

The client maintains more than 40 applications, 30 services. They want to increase testing coverage by automation testing and continuously integrate with the development environment to see test results for each deployment.

Solutions

- Do POC and assessment with the current system.
- Propose a solution to automate testing for web, mobile applications.
- Implement automation testing for the systems.

Cryptocurrency Exchange

Overview

The client is a Japanese company that mainly focuses on cryptocurrency consulting, including:

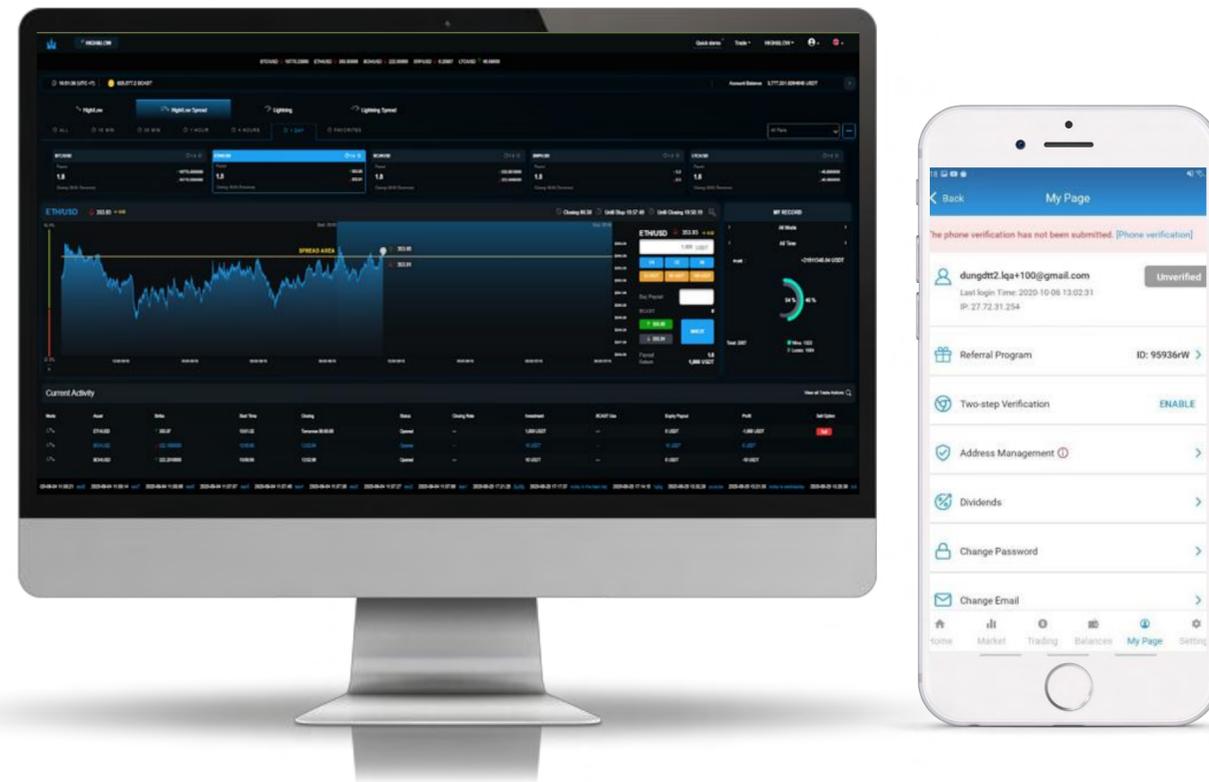
- Developing community (Bitcointalk, Reddit, Bounty Campaigns, etc.) for cryptocurrency habitual user.
- Providing advices for selecting token/coin investing country.
- Showcasing customer's project to Japan, South & North Korea, China, Vietnam, Europe...
- Localizing marketing content to be published in Japan.

Project Info

Country: Japan

Domain: FinTech

Development process: Agile



Test cases



Regression run

Business needs

They are going to integrate functions and want to control the quality status on one view before going to production. They want us to test the product on multi-platforms in two languages, English and Japanese.

Solutions

- Delegate experts in fin-tech software testing to analyze the software requirement.
- Provide device lab.
- Provide experienced testers who write test cases in Japanese and execute tests in both languages after two weeks since being requested.

Banking App

Overview

Established on 18th September 1996, our client started its operation with initial charter capital of VND50 billion and 23 staffs.

Until 31/12/2020, the charter reached over VND11,000 billion, while its shareholders' equity reached VND17,972 billion and total assets were VND244 trillion.

Currently, the bank has over 9,400 employees, serving nearly 3 million customers at 165 branches and transaction offices in 27 key provinces/cities across the country.

Project Info

Country: Vietnam

Domain: Banking

Development process: Agile



Test cases



Bugs

Business needs

Their web banking and App's mobile banking upgraded to new versions, which need confirming and checking of the new functions.

Due to strict regulation on users' data protection, they allow us limited access to the database. The software requirement specifications are also outdated.

Solutions

Provide a testing team after 6 months requested with:

- Experience in testing in banking and finance sector.
- Experience in mobile testing, API testing , web testing.
- Certification by the International Software Testing Qualifications Board (ISTQB).

Mobile Banking App

Overview

The client is the third largest bank in terms of chartered capital in Vietnam. It was established in 1993, amid the backdrop of a nascent transition from central planning to a more market-oriented economy.

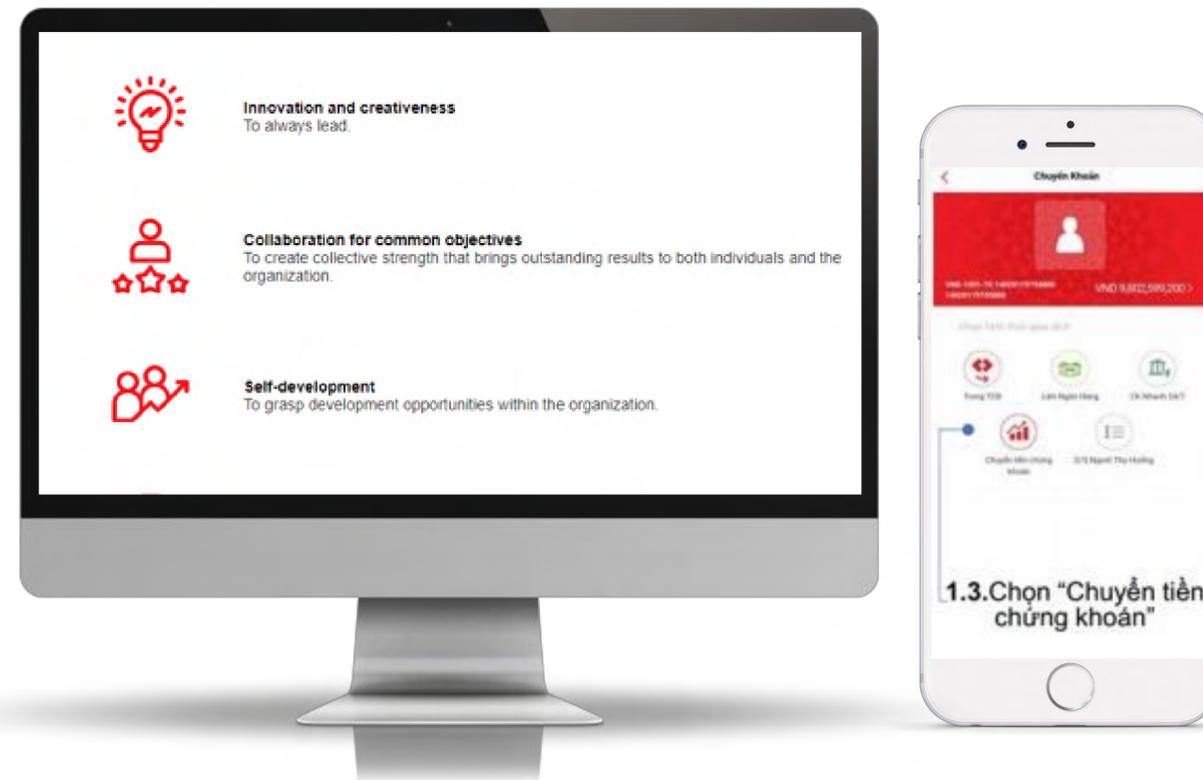
Back then, Vietnam undertook and witnessed comprehensive changes in economic development, unleashing an explosive level of growth that doubled the GDP expansion of the previous decade.

Project Info

Country: Vietnam

Domain: Banking

Development process: Agile



Test cases



Bugs

Business needs

Their mobile banking application was upgraded to new versions and needed validation of the new functions via the data warehouse.

Due to the 24/7 service nature of banking, we have limited access to the database, need understand about the Core24's system and ensure that the users won't get affected.

Solutions

Provide a testing team after 6 months requested with:

- Experience in testing in banking and finance sector.
- Experience in mobile testing, API testing , web testing.
- Certification by the International Software Testing Qualifications Board (ISTQB).

Mobile Banking App

Overview

Our client is a Vietnam-based financial institution. It is engaged in the offering of commercial banking services and derivative products to both individual and institutional clients.

The Bank also acts as an insurance agent. It is involved in the trading of bonds and other valuable papers, securities dealing, as well as the trading and processing of gold. In addition, the Bank is engaged in other financial investment activities like portfolio management and more.

Project Info

Country: Vietnam

Domain: Banking

Framework: Serenity With Cucumber

Development process: Agile

Tech stack:

Java

Cucumber

JMeter

Serenity Screenplay

Jenkins



Test cases



Bugs

Business needs

Their mobile banking application was upgraded to new versions and needed validation of the new functions via the data warehouse.

Solutions

We provide a testing team with:

- Experience in testing in banking, finance sector and human resource manager system.
- Experience in Web Testing, Mobile Testing and API Testing.
- ISTQB certificates.
- Experience in manual testing, automation testing, performance testing.

Mobile Digital Banking

Overview

The client is the first commercial bank established (in 1991) during the period of Vietnam's economic reform and rapid development.

They have more than 1.8 million valued retail customers, nearly 45,000 corporate customers, and many power partners. Late in 2019, they start to build free digital banking made by Vietnam to the Vietnamese.

Project Info

Country: Vietnam

Domain: Banking

Development process: Agile



Test cases



Bugs

Business needs

The client speeds up time to market. They need an independent testing team to validate software before going to production.

Due to the client's security policy, our access to the database is quite challenging.

We also have limited time to get accustomed to the client's system.

Solutions

Provide a testing team after 2 weeks requested with:

- Experience in testing in banking and finance sector.
- Experience in mobile testing, API testing, web testing.
- ISTQB certificates.

Marketing And Loyalty Platform

Overview

The Marketing Analytics module acts as a real-time universal cockpit, allowing you to review and manage the performance of your loyalty programs, membership-tiers, rewards and merchants.

Loyalty Management gives companies off all sizes the ability to connect with customers on a more intimate level.

Project Info

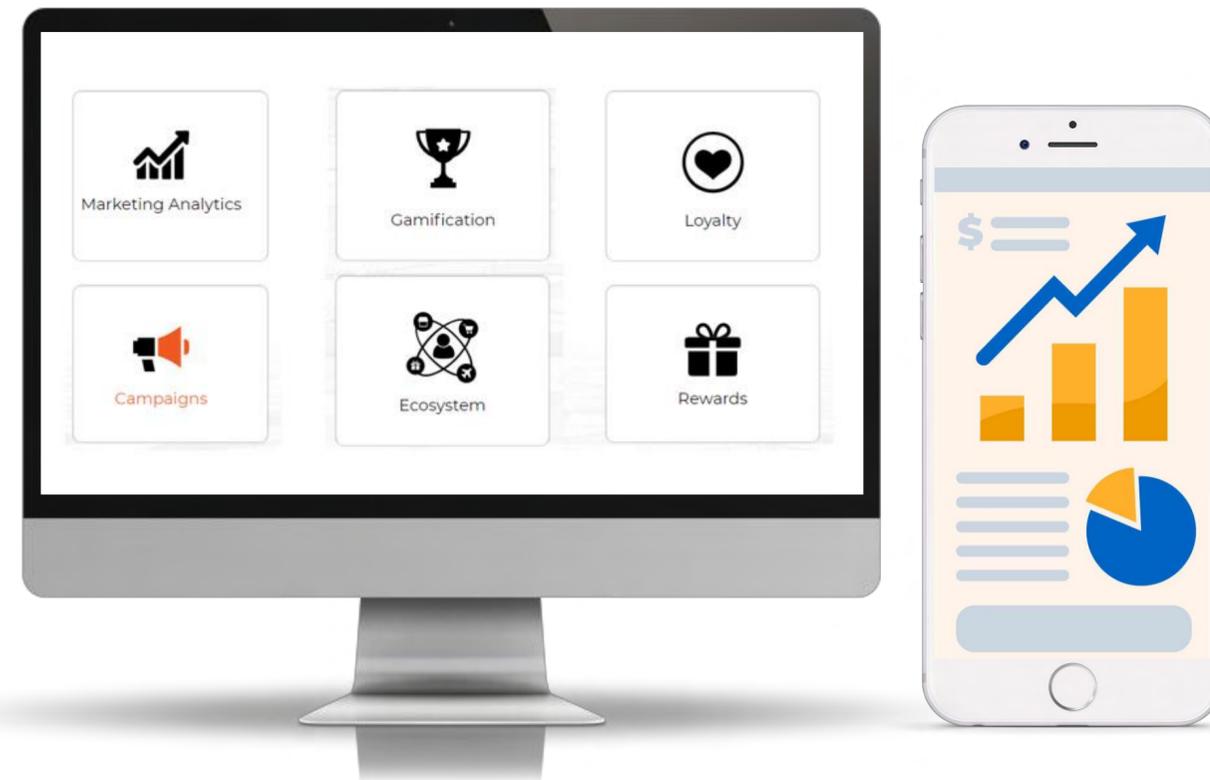
Country: US

Domain: Business Services

Framework: Cypress

Development process: Agile

Tech stack:



Business needs

They want to optimize testing effort using automation test.

End-2-end test flow is complicated.

The data test is huge for API test, making it hard for current manual test to cover.

Solutions

- Build automation framework for web testing.
- Develop API test program (using JavaScript), support data-driven to test with a huge data set.



Test cases



Bugs



Days reduced for a regression cycle

F&B Mobile Application

Overview

Client is the pioneer and the leading restaurant chain model in Vietnam, owning more than 21 brands and nearly 400 restaurants, serving 17 million customers annually.

They have approximately 20 mobile and web applications and each has 5-6 releases per year.

Project Info

Country: Vietnam

Domain: Food & Beverage

Framework: Selenium, RestAssured

Development process: Agile

Tech stack:

Java	Maven
TestNG	Selenium
RestAssured	



Test cases



Bugs



Regression run

Business needs

The client wants to apply UI automation testing for their apps.

Additionally, they require APIs for backend testing to reduce the time to market and test efforts, at the same time increasing quality.

Solutions

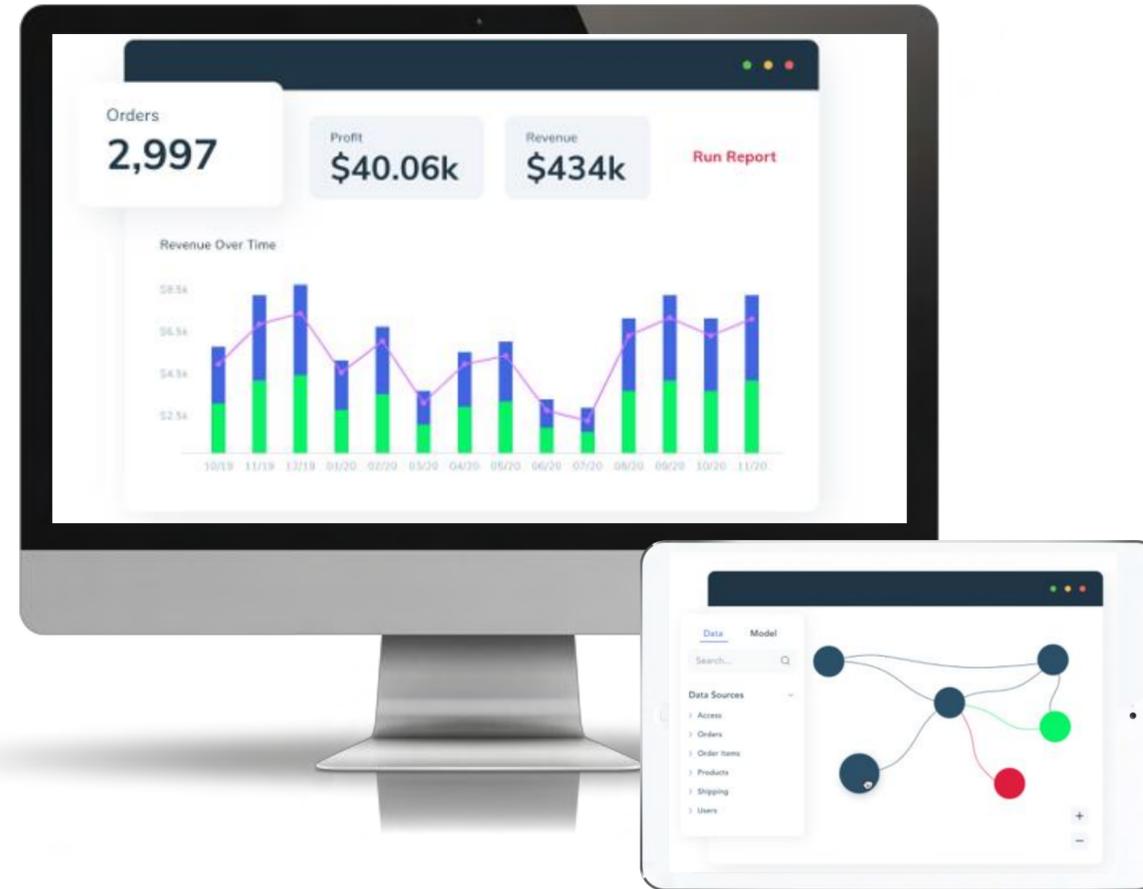
- Build automation framework for both mobile testing and web testing.
- Develop API test program (using Java), support data-driven to test with a huge dataset.
- Use Java, Maven, TestNG, Appium (for mobile apps) and Selenium (for Web apps).

Business Intelligence Platform

Overview

Our client is a Business Intelligence startup in the US. The product has 3 main modules:

- **Data Sourcing** – which lets users gather data from a wide range of data sources, configures security options, queries, and syncs intervals.
- **Data Modelling Module** – which allows users to connect tables, create data models, set up custom calculations and row level security.
- **Collection** – which helps users create interactive dashboards or API collections, then publishes these into embedded reports, SDKs or data apps.



Business needs

They need to standardize and delegate the whole QA process.

Solutions

- Have staff proficient in database frequently communicates with client to document and clarify requirements.
- Provide extensive experience-based testing for complex cases.
- Testing types: Database, API, usability, compatibility, experience-based testing

Project Info

Country: US

Domain: Business Intelligence

Framework: Cypress

Development process: Agile

JavaScript

Cypress

Azure Pipeline



Test cases



Bugs

Measure Link

Overview

The client is a global metrology leader with a vast network spanning over 22 different countries.

Since the establishment in 1934, they have been offering measuring tools and measurement-related technologies with the motto of "Quality First".

Project Info

Country: Japan

Domain: Metrology

Development process: Water Fall

Defect types:



Interface



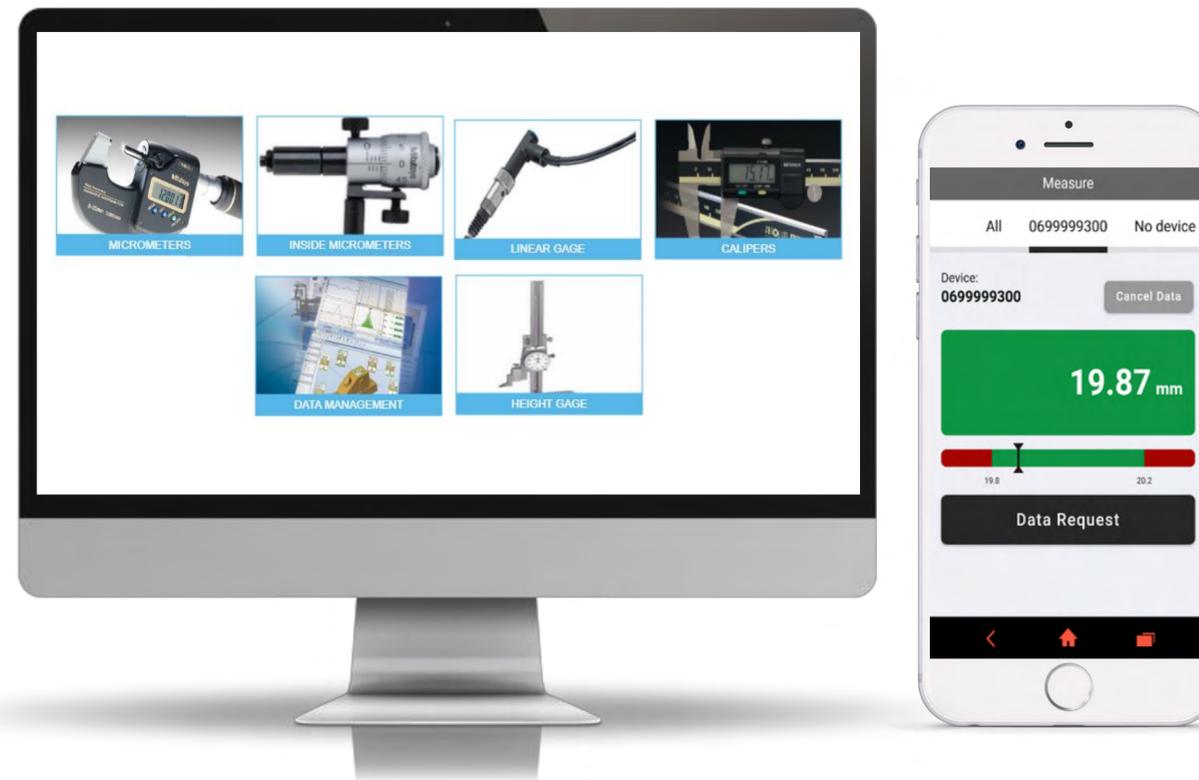
Functionality



Performance



Error Handling



Business needs

The client presents its 6,000+ products as integrated technology into its product offering and pushes measuring accuracies into the sub-micron range.

They want to have a flexible test team that can ramp-up/down on demands at a competitive cost, work with both Japanese and English speakers.

Solutions

- Execute a pilot project and finalize working process and device transferring between countries.
- Delegate a test leader and core team for long-term operation. Other factors will be arranged upon requests.
- Set up a special room that supports Bluetooth Low Energy transmission.
- Execute 300 test cases.

Printers

Overview

The client is a leading global provider about printing solutions to thousands of customers.

They require testing for old devices which are not currently available on the market. Also, for each customer group, there are different uses of devices. Hence, firmware changes based on customer groups.

Project Info

Country: Japan

Domain: Embedded

Development process: Water Fall



Business needs

The client has a lot of roll-out and maintenance requests annually. The number of request separates to:

- **Printers:** 3 to 10 change requests per customer annually.
- **Japan traditional printers:** they get 15 to 20 change requests per customer annually.

They want us to test all the devices and ensure that client's reputation and loyalty won't be affected.

Solutions

- Delegate experienced embedded tester who speaks Japanese in the team.
- Do thorough research for the project.
- Design test cases for different series and different customer group.



Test cases



Features tested



Bugs



Approved test cases



Project score

School Management System

Overview

Client is an US company who provides Education service.

Their system provides online school services, allowing the school's board of management, admins, teachers and students to study, do exams and manage all school activities online.



Business needs

Our client wants us to:

- Migrate system on premise to AWS environment (system and database)
- Implement auto scaling and load balancing mechanism
- Perform load testing on system with a huge number of users

Solutions

- Run tests multiple times to get the most accurate outcomes.
- Set a particular time for testing in which the number of users is low. This helps us preserve user experience on the platform as well as executing tests smoothly.

Project Info

Country: US

Domain: Education

Framework: JMeter

Development process: Agile



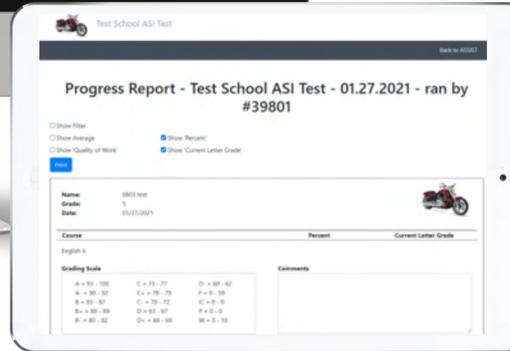
Functions tested



Load test levels



Server load test



Trading Platform

Overview

Our client provides an online trading platform for Forex and Stocks trading.

The products have been on the market for a long period. There're no clear standards like the Software Requirement Specification document to rely on.



Project Info

Country: Cyprus

Domain: Financial Service

Framework: Requests

Development process: Agile

Tech stack:

Python

Requests



Test cases



Bugs

Business needs

They want us to test:

- 3 trading apps, including web & mobile apps
- A CRM system
- A website

And ensure that:

- Application features work as per qualified standards.
- All functions well perform

Solutions

- We delegate a dedicated QA team to work with the client and research the products, plus consult the LTS' development team to deeply clarify the requirements.
- Testing types: BE, Functional & Non-functional testing.

Golf Simulator

Overview

The product is the most realistic simulation game system of golf sports in reality.

This system of golf room is equipped with golf clubs for players to hit the screen in front of them. The screen in the system is a realistic image system of the golf course with 18 golf holes like an outdoor practice field.



Project Info

Country: Thailand

Domain: Sport

Development process: Agile

Tech stack:

Angular

iOS

Android



Test cases



Bugs

Business needs

The client wanted us to:

- Test all of Improvements on the available app version development
- Implement Integration Testing, System Testing, and UI/UX Testing.

Solutions

- Thoroughly learn and analyze the Golf rule
- Verify the distance and pixels in the developer's environment and suggest test tools for customers
- Implement functional & non-functional testing.

Multiplayer Game

Overview

The product is a social app that has over 45 free multiplayer games.

Besides gaming, users can also chat, create public & private rooms, create groups and participate in tournaments or buy IAPs.

Project Info

Country: China

Domain: Gaming

Development process: Agile

Tech stack:

Angular	iOS
Android	Golang
Dartlang	



Test cases



Bugs

Business needs

They want to ensure that the server is stable all the time and compatible with many devices.

Millions of players from different countries are enjoying games and creating lasting friendships daily on the app, so we must resolve the huge request's number every time

Solutions

- Cross testing with multiple devices to minimize bugs associated with specific devices.
- Thoroughly test all scenarios
- Testing types: Functional & Non-functional testing, Cross testing

Slot Game

Overview

The product is an online slot game with excellent graphics, Rush symbol and Lucky Draw features. The concept is based on a magical oriental themed slot machine game with 243 ways to win.



Project Info

Country: China

Domain: Gaming

Development process: Agile

Tech stack:

Cloud Testing

iOS

Android



Test cases



Bugs

Business needs

The client wanted us to:

- Ensure that all the game features works as per requirements.
- Ensure that the game fully support different currencies and languages.
- Ensure that the game works well on Android and IOS operating systems and on different mobile device types.

Solutions

- Functional test for all the game features
- Non-functional test for currencies and languages
- Compatibility test for Android and IOS operating systems on 32 different mobile device types.
- Use Cloud Mobile Testing to increase the device types tested.

Camera Network

Overview

Our client is a reputable Japanese company established in 1976. The company specializes in manufacturing and selling peripherals for digital home appliances.

The tested product is the watch's sensor-equipped model "TS-WRLP", compatible with PATLITE's network monitoring indicator lights. 5 sensors (temperature, humidity, sound, presence, motion) can be detected by light and sound.

Project Info

Country: Japan

Domain: Embedded

Development process: Agile

Defect type proportion:

74% Functionality

24% Interface

2% Performance



Business needs

They wanted us to test the operation of the Camera and the Admin page according to the design before launching it to the market.

Solutions

- We do POC and assessment with the current system.
- We propose a solution to automate testing for web, mobile applications.
- We implement automation testing for system.



Test cases



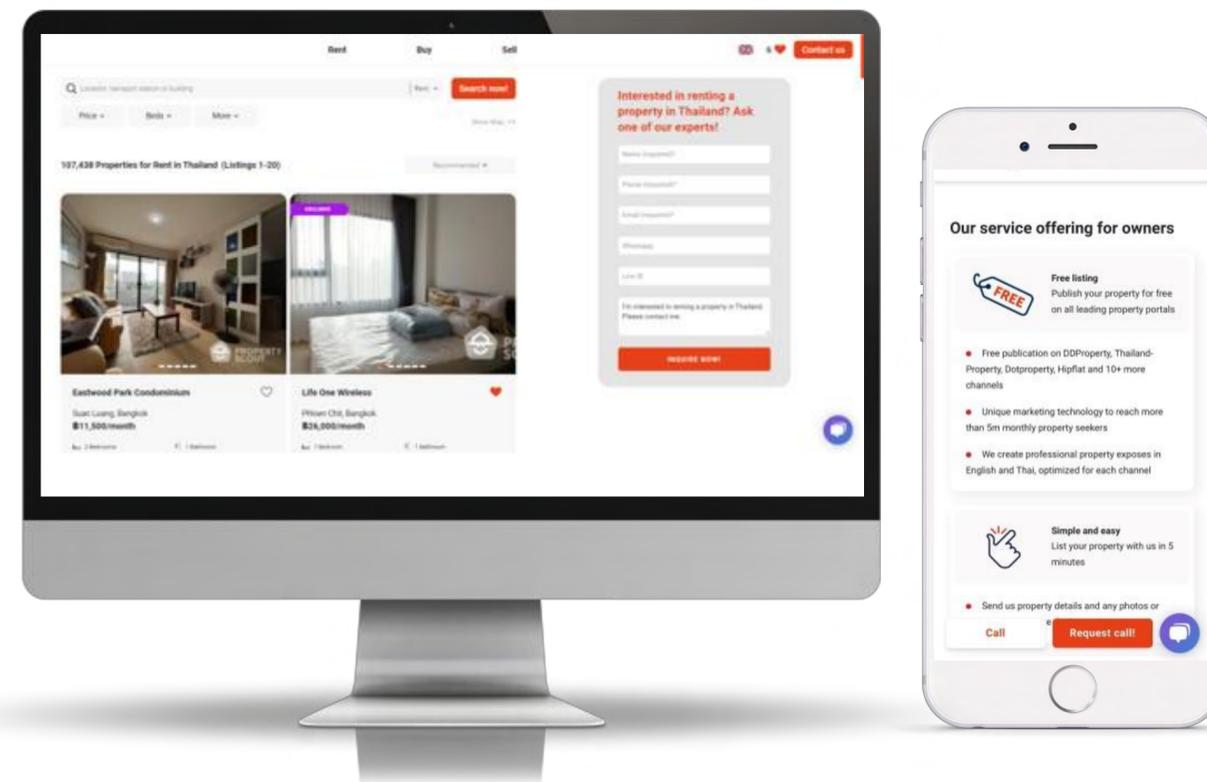
Bugs

Real Estate Platform

Overview

The product is a platform that helps users find properties for renting/buying without worries. The data on the website is validated by humans and via complex algorithms to make sure that the properties are fresh, available and trustable.

The business logic is complicated and the amount of data to be tested is huge and refreshed daily.



Project Info

Country: Thailand

Domain: Real Estate

Development process: Agile



Test cases



Listings tested

Business needs

Our client wants us to:

- Validate data imported from partners and exported to partners
- Make sure that data reflected on the website is consistent with the CMS
- Testing GPS location of listings
- Testing internal services that support managing properties internally
- Ensure well-executed SEO principles

Solutions

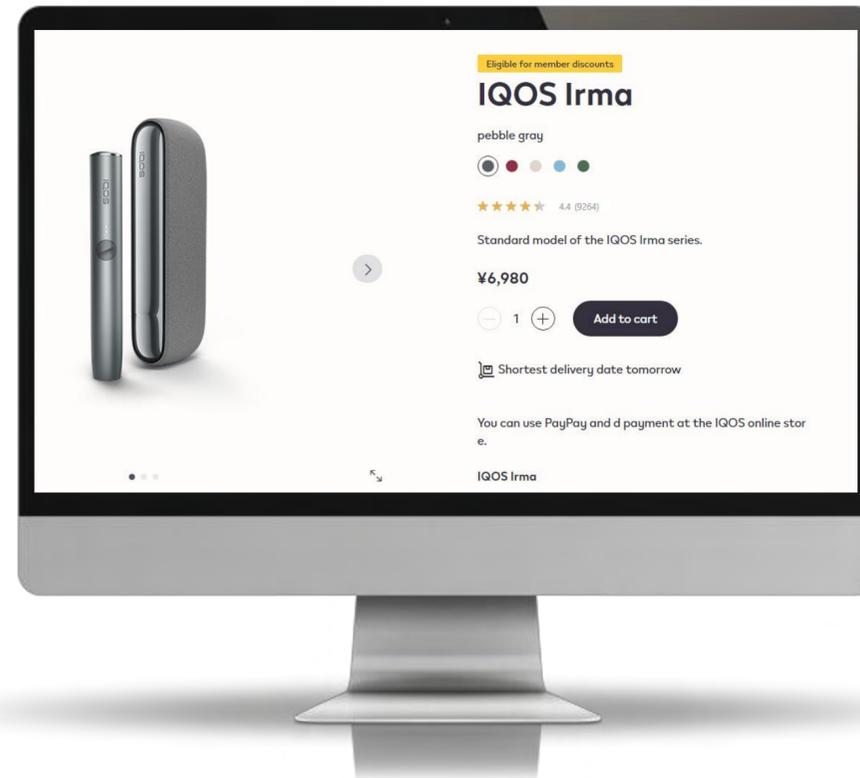
- Communicate with developers, DevOps and POs regularly to understand the requirements and the business priority to shift the tickets as soon as possible.
- **Techniques:** CI/CD, CMS, Integration testing, System Testing, Sanity testing, Performance testing SEO.

E-commerce Platform

Overview

The product is an e-commerce platform that sells IQOS devices in the Japanese domestic market & other countries.

Customers can purchase, replace and upgrade their products as well as find out how to use the products on the website.



Business needs

Multiple promotions & marketing campaigns are planned and executed regularly. The testing is carried out to ensure purchasing, transaction and stock replenishment process work properly during new product releases and promotions are applied. The payment methods include:

- Pay Later
- Pay By Link (QR Code)
- Pay By Credit Card
- COD

Project Info

Country: International

Domain: E-Commerce

Development process: Agile



Test cases



Bugs

Solutions

- Products are managed by unique IDs through a complex CMS system
- Promotions and campaign are updated on a weekly basis, which requires configuration adjustment in the backend to display correct purchase amount on the frontend.
- Integration tests are executed daily
- Sanity tests are executed bi-weekly



GET IN TOUCH WITH US!

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