

devon

Coca-Cola Hellenic Bottling Company - Quality Assurance (CCHBC QA)

Case Study



Index

- Client Introduction 1
- Client Objectives2
- Client Challenges 3
- Devon’s End-to-End Automation Solution 5
- Implementation 8
- Results10
- Conclusion 11



Client Introduction

Our client is one of the world's largest bottlers of reputed beverage products. Operating in 29 countries across three continents, the company serves over 600 million people with a diverse range of beverages, including juices, water, energy drinks, and ready-to-drink teas and coffees. As a leading bottler, our client is responsible for manufacturing, packaging, distributing, and marketing these products, ensuring that consumers can enjoy them wherever they are.

Client is focused on innovation and growth. The company continually adapts to changing consumer preferences by expanding its portfolio, strategic partnerships, investments in digital transformation, and focus on operational excellence have positioned it as a leader in the beverage industry, driving long-term value for both shareholders and the communities it serves.



Client Objectives

Customer has a complex and large application landscape containing both Legacy and modern setup. However, the time to market has remained a challenge due to issues with limited quality assurance and repeatable test automation.

Implement Efficient Regression Testing

Automate regression testing to ensure quick and reliable validation of frequent updates in CRM products (SAP and Dynamics 365).



Reduce Testing Time

Minimize the time and resources required for testing by transitioning from manual to automated testing processes.



Adopt Cost-Effective Automation Tool

Leverage open-source automation tools to achieve testing goals while keeping costs low and avoiding expensive proprietary software.





Client Challenges

1 Quality over a large suite of applications

- a. Ensuring a baseline for test procedures
- b. Coverage of minimum 70% automation

2 Managing Frequent release cycles

- a. Balancing speed with quality in continuous delivery environments
- b. Maintaining comprehensive test coverage with each release
- c. Reducing test time by 50% during release

3 Scalability of automation across multiple teams

- a. Standardizing automation test framework and tools across Teams
- b. Scalability of test scripts across teams and environments
- c. Scalable solutions of test across Browsers and Devices

4 Multi Country and Multi Language automation

- a. Validating application functionality across different countries and languages
- b. Testing region specific workflows and features customized to the locale

5**Handling complex Integrations between CRM applications**

- a. Integrations between D365 and SAP applications
- b. Validating end to end flows across interconnected systems
- c. Detecting early integration issues

6**Data Privacy and Management**

- a. Protecting sensitive data during testing complying with security guidelines
- b. Automating test based on diverse data across countries and locales

7**Accessibility for general users**

- a. Simplified test results interpretations for Product Owners, Scrum Masters and Business associates.
- b. Automation through familiar tools for stakeholders, Business heads and Country Leads

Devon's End-to-End Automation Solution

Devon's automation approach is designed to seamlessly integrate modern and legacy applications, leveraging advanced automation frameworks and cutting-edge tools. This solution focuses on enhancing efficiency, accelerating time-to-market, and ensuring adaptability to business and technical changes, all while maintaining robust quality.



1. Accelerating Business Agility with Innovation and Kaizen Excellence

Our approach to Agile emphasizes adaptability, collaboration, innovation, and efficiency, empowering teams to deliver high-quality results while continuously improving and responding rapidly to change:

- **Business-Centric Flexibility & Continuous Innovation:** Agile processes enable teams to quickly pivot based on evolving business priorities, allowing continuous delivery without the need for large-scale re-planning. This flexibility fosters an environment of ongoing innovation, where new ideas can be rapidly tested and integrated, keeping projects aligned with business needs and driving forward-thinking solutions.
- **Iterative Development, Kaizen, & Feedback Loops:** Short development cycles, combined with Kaizen principles of continuous improvement, and real-time feedback ensure that issues are identified and addressed quickly. This leads to faster releases, constant refinement, and incremental improvements with minimal downtime, fostering a culture of ongoing optimization.

- **Cross-Functional Collaboration:** Agile fosters open communication across teams, promoting transparency between developers, testers, and stakeholders. This ensures that every team is aligned with the overall project goals, reducing miscommunication and improving output quality.
- **Adaptive Planning & Scalability:** Agile methodologies support iterative planning, which adapts to changing requirements. Whether the project is small or complex, Agile processes can scale efficiently to meet the demands of any team size or project complexity.

2. AI leveraging modern automation tool : Playwright

We selected Playwright for its superior blend of performance and flexibility, making it ideal for diverse testing environments:

- **Cross-Browser Compatibility:** Playwright's ability to test across multiple browsers ensures consistent application behavior, delivering comprehensive test coverage.
- **AI-Powered Test Optimization:** Playwright can be enhanced with AI-driven test selection, automatically identifying the most critical test cases to run based on recent code changes, reducing the need for manual selection and ensuring faster, smarter test execution.
- **Advanced Debugging and Simplified Parallel Execution:** With Playwright, developers can easily debug tests and run them in parallel, which dramatically reduces execution times and speeds up the feedback loop.
- **Seamless Integration & Reporting:** Playwright integrates effortlessly with existing toolchains, offering enhanced reporting and smoother transitions from legacy systems to modern automation tools.
- **Legacy Modernization:** Playwright's versatility makes it ideal for blending legacy systems with modern automation strategies, ensuring older platforms are not left behind in the modernization journey.



3. Modular and Efficient Automation Framework

Our solution prioritizes efficiency through a modular, reusable framework that ensures consistent, reliable, and flexible automation:

- **Reusable Components:** The modular approach allows the reuse of test components across different projects, reducing redundancy and enabling faster response to system updates without needing extensive rewrites.
- **Localization Through CRM Parameterization:** To accommodate country-specific workflows, we implement dynamic parameterization, adjusting test scenarios for local requirements, ensuring accurate testing across regions.
- **Enhanced Test Data Management:** We automate the extraction and management of test data from multiple repositories (e.g., Excel files), enabling smoother data flows and ensuring that tests are based on up-to-date, accurate information.

4. Robust Pipeline for Continuous Integration and Delivery

To support automated testing, we offer a streamlined, flexible pipeline that maximizes efficiency and scales to meet growing demands:

- **Automation of Data Flow & Task Execution:** By automating the pipeline from data collection to task execution, we eliminate manual steps and ensure faster, error-free transitions across different stages of testing.
- **Improved Efficiency & Deployment:** Using YAML as code, our pipelines are designed for easy customization, enhancing efficiency and speeding up deployments without manual intervention.
- **Cloud-Based Scalability:** Leveraging cloud platforms, our solution can scale effortlessly to handle large volumes of tests, ensuring that the infrastructure grows alongside business needs.



Implementation

ADO Test Plans

As part of the implementation, we use Azure DevOps (ADO) Test Plans as the foundation for our automation process. Each ADO test plan contains steps for every test case to be automated. Once automated, the test cases are executed in the pipeline, and the test execution results are updated back in the ADO Test Plans.

Framework

Leveraging the developed custom framework, automated the manual test steps effectively. Automation framework is designed to handle multiple countries with their respective languages, as well as the common language, English.

Each test case is automated in such a way that it does not depend on any other test case and can be executed independently in any scenario. The framework is also built to support parallel execution.

Framework provides 2 flavours of execution:

1. Test Level Execution

- a. Single test for 1 or more countries
- b. Multiple tests for 1 or more countries

2. Suite Level Execution

- a. Single test for 1 or more countries
- b. Multiple tests for 1 or more countries

Centralized Repositories

The automation framework, scripts including the test data and other requirements, are stored in a centralized Azure repository. This repository is the source to trigger the test automation in Azure Pipelines. Git is used for version control and to manage these repositories.

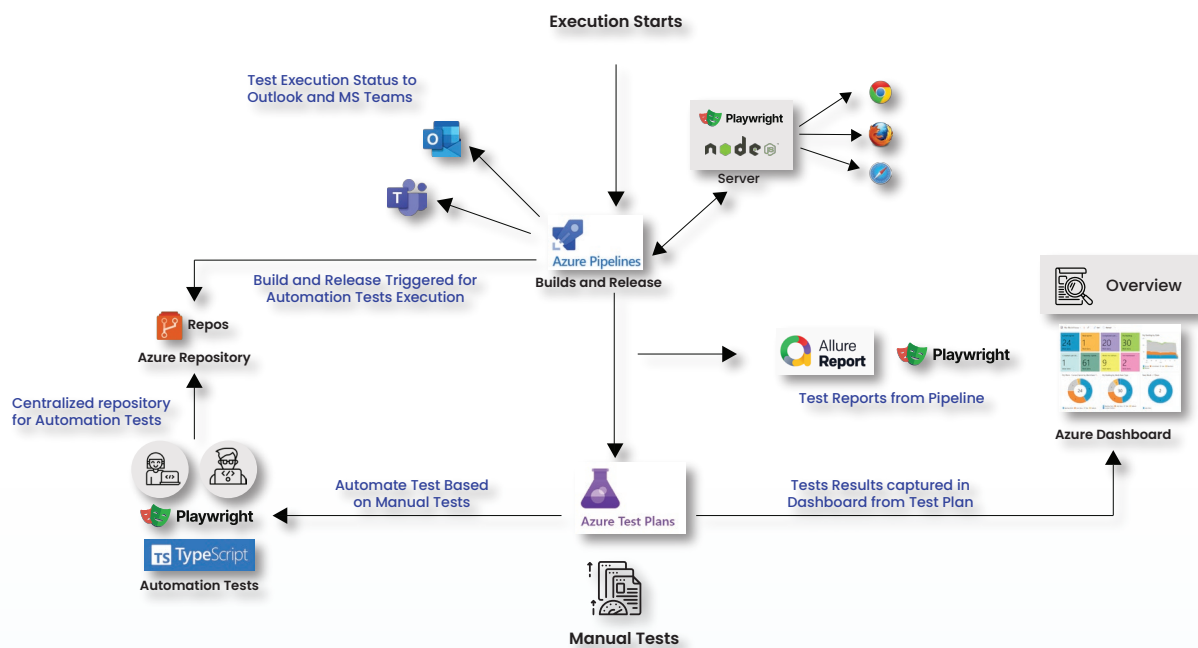


Fig: Architecture of automation solution

Automation Pipeline

To streamline our automated testing process, we use Azure Pipelines to configure a comprehensive pipeline. The pipeline is integral to our continuous integration (CI) efforts, handling test case execution, data processing, and workflow automation. This pipeline includes nightly jobs that run daily for designated test suites, delivering results that assist manual QA testers in evaluating the application’s stability.

The process begins with a user-configured pipeline tailored to the specific test case flow, followed by the execution of test cases. The tests after execution generate various reports essential for in-depth analysis and bug tracking. After each pipeline run, results are notified to stakeholders through email and Teams channels, facilitating quick updates and collaborative discussions.

Test Automation Reports

Playwright Reports and Allure reports integrated to the test dashboard of azure pipeline provide detailed and visually engaging insights into test executions, capturing test execution outcomes and performance metrics at country level.

Integrated test results to reflect under tests in Azure DevOps Test Plans, these tools enhance visibility and management of test results, enabling efficient tracking and analysis of software quality.

Results



Reduction in test execution time

Most of the tests are automated requiring less or minimum manual time for execution. Automation scripts have reduced 50% of the execution time on an average

Reduction in Time to Market

Automation tests triggered during each deployment or release has reduced the product time to market up to 30%



Coverage increase of country level testing

No more sampling approach is required with every deployment and now all countries can be run with automated regression suites covering up to 80% of the country tests

Reduction in Manual Effort

Most of the process including configuration for tests are automated, integrated to pipeline and this brings down manual effort up to 60%



Potential reduction in Manual testing cost

Manual effort reduction has potential projection of saving 30% of the cost spent. This cost can be used towards infrastructure or more tasks to add value over manual test

Testimony



The Devon team has consistently demonstrated a strong commitment to teamwork, readily accepting technical and managerial challenges while collaborating across departments to ensure high-quality results. They have consistently delivered high-quality results, even addressing organizational gaps. They've have worked closely with the QA team, automating complex tests and improving test structures. This collaborative effort has significantly reduced manual workload and ensured that all results are transparently shared through the commonly used dashboards. Their success is a great example of what can be achieved through strong teamwork and shared goals.

Luigi Manzo
PMO Test Manager



Conclusion

Our implementation of a robust, scalable and flexible automated testing solution has significantly enhanced testing coherence and accuracy.

By leveraging Playwright for its advanced features and seamless integration with Azure DevOps, we achieved notable improvements: a 50% reduction in test execution time, a 60% decrease in manual effort, and a 30% faster time to market. Additionally, automation has increased country-level test coverage by 80% and offers a potential 30% cost reduction in manual testing.

This approach not only streamlines the testing process but also aligns with our objective of delivering high-quality applications modern or legacy with more efficiency and effectiveness.



About DevOn

DevOn is a technology company focused on helping organisations achieve high performing remote software delivery teams. We offer innovative solutions designed to enhance team efficiency and effectiveness, regardless of location.

Our experienced, professional teams use cutting-edge technology to provide seamless collaboration. Organisations that incorporate DevOn teams for remote software delivery see improved performance and reach goals faster.

Our seven key principles serve as the foundation for building successful remote teams:

- Effective communication
- Strong leadership
- Clear expectations
- Regular feedback
- Continuous improvement
- Recognition and reward
- Results-focused culture

DevOn is proud of our industry awards, and they reflect the high regard of DevOn shared by clients, employees, and analysts.

Awards & Recognition



4 Times Great Place to Work Certified

Certification based on **Trust Index 94%** – a comprehensive employee survey and culture audit



Top 10 inspiring Workplaces 2023

Ranked No.4



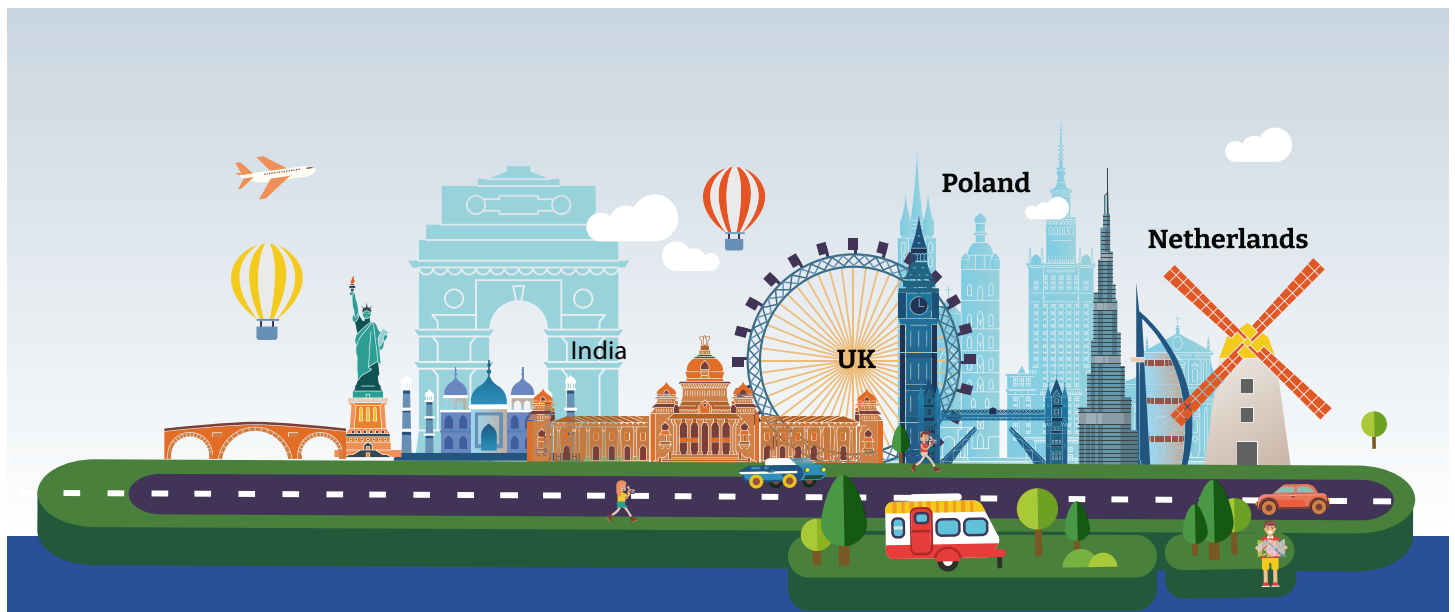
Top 50 mid size workplaces in India



India's Best Workplaces for Millennials™ 2023



National Best Employer Brands Award 2022



CONTACT US

Speak with one of our experts

Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, please feel free to reach out to us for a quick brainstorm.

THE NETHERLANDS

Brassersplein 1, 2612 CT Delft

☎ 015 241 1900

✉ info@devon.nl

🌐 <http://www.devon.nl>

INDIA: BANGALORE

2A-West Tower, Embassy Tech Village, Outer Ring Road, Deverabeesanahalli Village, Varthur Hobli, Bellandur, Bengaluru, Karnataka 560087

☎ +91 80672 98000

🌐 <https://devon.global>

INDIA: GURGAON

6th Floor, MM Towers, Plot No. 8 & 9, Phase IV, Udyog Vihar, Sector 18, Gurugram, Haryana 122001

☎ +91 6462 203 377

UNITED KINGDOM

7 Three Rivers Business Park, Felixstowe Road, IP10 0BF, Foxhall, Ipswich, United Kingdom

☎ +44 20 3318 2856