Almac automates end-to-end regression testing

TurnKey helps Almac streamline operations with scriptless testing automation, using fewer people to test more releases in less time.

From vaccines and antibiotics to insulin and cardiac medications, millions of people around the world depend on a wide range of drugs to treat and prevent the full spectrum of illness on a daily basis. That means there are a lot of drug manufacturers developing, producing and marketing pharmaceuticals for use as medication—in fact, the pharmaceutical industry is currently estimated to be worth over $300 billion worldwide. Many of these drug companies depend on third-party organizations to help them conduct testing, research and trials.

Partnering to Advance Human Health

The Almac Group is an established contract development and manufacturing organization that provides an extensive range of integrated services to the pharmaceutical and biotech sectors globally. The international company is a privately owned organization that has organically grown over 30 years and now employs in excess of 3,900 highly skilled personnel. Almac is headquartered in Craigavon, Northern Ireland with operations in the UK, across the US (Pennsylvania, North Carolina and California) and in Asia (Singapore and Tokyo).

Almac combines an unrivaled dedication to the safe research, production and distribution of innovative medicines with world-class manufacturing capabilities. They have an outstanding track record for reliability. From research and testing to clinical trials, quality to detail is the company's primary formula for success.

Maintaining tight controls for compliance

In order to be successful in the pharmaceutical industry, Almac must have the right controls in place to stay in compliance with a wide range of strict domestic and international regulations. Audits are constantly being conducted, both by customers and government regulation agencies including the Food and Drug Administration (FDA), Medicines & Healthcare products Regulatory Agency (MHRA) and the Health Sciences Authority (HSA). They operate in an industry where there is no such thing as an acceptable margin of error—every detail must be documented, every action scrutinized and every piece of data carefully stored and capable of being immediately retrieved.

One of the main tools used to retain tight control of internal process and operations is the organization's enterprise resource planning (ERP) solution. Maintained by a highly specialized team of developers, testers and functional analysts, it effectively functions as the backbone of their Clinical Services business, supporting everything from project management and inventory optimization to warehouse management, distribution and finance.

The heart of Almac operations

The ERP system is the driving force behind the majority of Almac's core critical business operations. It essentially tracks each patient's treatment and ensures the company is "delivering the right drug, to the right person, at the right time."

"...the right drug, to the right person, at the right time."

Because so much depends on the optimal function of every extension, any change requires extensive testing. Sometimes change comes in the form of a completely new, innovative extension. But more often, it simply means staying up to date with the latest patches or changing an existing extension. Prior to working with TurnKey Solutions, Almac conducted all of this testing manually, which proved to be highly inefficient and cost intensive.

Manual inefficiency impacts business

An example of the inefficiencies associated with manual testing occurred when Almac went through a significant upgrade to their ERP system. End to end regression testing took a team of almost 20 people 12 weeks to run. This required significant business support, which pulled high-value employees away from their daily roles and responsibilities.

The Almac team knew they were ideal candidates for a testing automation solution. However, based on past experience, they also knew how important it was to choose the right solution.

Establishing testing automation requirements

Easy test maintenance was important, especially given the rate of change at Almac due to today's competitive business demands. They also needed a solution that was intuitive, didn't require scripting to operate, and provided them with a high level of visibility, allowing them to easily analyze results and quickly identify potential issues. After experiencing a demo of the TurnKey solution, their choice became clear. "By looking at the screens across vendor demos, the way TurnKey analyzes the screens for you and then creates the components, it's really head and shoulders above the rest, in terms of maintainability, efficiency and ease of use," said Brendan Woods, who is Group Head of Systems Delivery at Almac.

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Brendan was also drawn to TurnKey cFactory's scriptless approach to testing automation, "We currently don't have the skillset of scripting in-house, which would have led to longer timelines and significant effort and expense on our part." Because TurnKey offers what is essentially drag-and-drop interface, "if the screen changes, the TurnKey software makes it very easy to see what's different and accept or reject the suggested changes."

"...the TurnKey software makes it very easy to see what's different..."

Ensuring implementation and adoption success

Almac teamed up with the TurnKey Customer Success team, working together to ensure the successful implementation of the cFactory Scriptless automated testing solution paired with the TurnKey Oracle Accelerator. The team decided to take a business process flow approach to the implementation, taking one quote throughout the entire lifecycle through to billing.

Challenge:

As a leading pharmaceutical research and development organization, Almac works directly with many well-known industry leaders to conduct research and clinical trials. Faced with the constant challenge of increasing quality and efficiency, Almac wanted a better alternative to their largely manual approach to end-to-end regression testing.

Solution:

Turnkey's cFactory solution was combined with the TurnKey Oracle accelerator, allowing them to test critical business processes quickly and easily. The resulting solution seamlessly integrated with HP Quality Center and HP UFT to provide a seamless, highly intuitive user experience.

Benefits:

· **Full integrated team effort between Almac and TurnKey** to ensure rapid, seamless and painless implementation, testing and organizational rollout.

· **Testing automation gets what used to take weeks done in 3-4 days** using fewer people to achieve full end-to end business process coverage.

· **Easy and automated test maintenance** eliminates the need for teams of people to do what can be turned on overnight and left to run over the weekend.

· **Full compliance with regulatory bodies and customers alike**.

· **Solid testing strategy moving forward**.

Shauna Quinn, Software Test Manager in Almac recalls, "We wanted to start by validating an entire business process flow, and then continue to expand this to encompass other flows throughout the system."

After installing the solution, TurnKey provided training onsite for Almac's automation team, helping with the implementation of initial test cases. According to Shauna, "Turnkey's Customer Success team was very supportive. They helped us throughout the implementation phase and they were always there when we needed them." In addition to a dedicated training and education expert, TurnKey also assigned a subject matter expert who helped manage the team, addressed issues as they came up and carefully tracked their progress.

"TurnKey's Professional Services team was very supportive."

Measuring the benefits of scriptless testing automation

Benefits were achieved immediately when it came to maintaining the scripts. The team in charge of the TurnKey solution consists of only two people, a clear statement on the efficiency potential available through cFactory software.

"We used some of the new tests immediately to carry out the regression testing of a large release," said Shauna, "we were able to kick the tests off and run them overnight. This saved us manual regression testing time."

From implementation to planning the future

Once the TurnKey system was up and running, the Almac team was able to quickly create components and start linking them together to build test cases. "Within a few months, a full end-to-end business scenario was created through the entire system, from creating a customer to billing an invoice," said Shauna.

Three agile projects are launching where the team plans to leverage the TurnKey technology to conduct end to end regression testing. "End-to-end regression tests that took us a number of weeks using manual methods are now estimated to run end-to-end in 3 to 4 days, and that's with a 2-person team. Now we can run the tests over the weekend, saving us even more time." Almac is going to continue leveraging the TurnKey solution across different parts of their organization, shifting their focus next to testing Java apps and mobile which include a variety of customer applications and portals.

About TurnKey

TurnKey Solutions is the leading provider of scriptless test automation solutions. With over 20 years of experience in bringing new test automation tools, technology, and processes to market, TurnKey offers a proven path to tapping into the full power of HP's Application Lifecycle Management (ALM) platform. Its unique, data-driven framework is specifically designed to accelerate application delivery while supporting the most widely used software technologies and platforms. Customers can achieve greater visibility and increased control over their application management process, resulting in improved quality, reduced costs and increased agility across their business.

To schedule a live demo contact us at **sales@turnkeysolutions.com**
For more information on TurnKey Solutions and its products, visit **www.turnkeysolutions.com**

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