CTG Guides MaineHealth Through Testing Transformation

Introducing Automation to Ensure Patient Safety, Realize Cost Savings, and Increase Efficiency

The Client

MaineHealth is a not-for-profit family of high-quality providers and healthcare organizations committed to the health and well-being of the communities and people they serve. As the largest healthcare organization in Maine and a leading healthcare provider serving northern New Hampshire, MaineHealth is recognized as one of the nation's top integrated healthcare delivery networks.

98.5%
Average reduction in test time for full ambulatory workflow, from an average of 12 hours to 11 minutes

70%
Reduction in time to create and admit test patient

The Challenge

Epic, MaineHealth's electronic health record (EHR), is the organization's core operating application. In order to ensure patient safety, accurate billing, and efficient operations, the system must be error free. Between frequent vendor upgrades, optimization initiatives, and additions of new modules, it became difficult to keep up with the necessary application testing.

Without a dedicated testing team, analysts were pulled from their normal roles to manually perform tasks, such as creating test scripts and patients and testing workflows. The result was a time-consuming process that did not provide the comprehensive test coverage the organization desired to ensure maximum accuracy for patient safety and billing. MaineHealth needed guidance to develop a more efficient testing program that would bolster their confidence in new releases.

The CTG Solution

CTG proposed using intelligent automation to accelerate test cycles, increase coverage, and decrease cost and demand on MaineHealth's internal resources. To demonstrate automation technology's power to modernize application testing, we partnered with them on a Test Automation Pilot Program, part of CTG's comprehensive Testing Solutions.

This program, which goes beyond a typical proof of concept, provided MaineHealth with the real experience of implementing and using automation technology on their own workflows to see how it works in their environment before making a full investment. This included leveraging CTG Eggplant® licenses at no cost. Eggplant Digital Automation Intelligence (DAI) empowers organizations to achieve true, end-to-end automation across all systems and applications and ensure that the technology environment supports their most central mission: providing the best possible patient experience.

CTG's objective was to show MaineHealth how Eggplant DAI could solve their most pressing testing challenges:

- **Test Patient Creation:** Testers needed to create various types of test patients—inpatient, ambulatory, and pre-registration. Two team members performed this tedious process manually, and they had a strict deadline for completion. Creating and admitting just one single patient could take more than 10 minutes to manually perform, with staff being pulled away for meetings, unexpected phone calls, and other daily tasks. To automate this process, CTG developed scripts that are scheduled to run at a specific time, ensuring test patients are ready for testing and training when they need to be, and freeing up team members to perform other tasks.
- **Ambulatory Workflow:** MaineHealth's largest workflow involves scheduling, checking in a patient, the clinical appointment, and finally, checkout. Performed manually, it took 8 to 16 hours to test. CTG automated this process to significantly reduce testing time.

Results

CTG's flexible Test Automation Pilot Program allowed MaineHealth to go at their own pace while learning how automation technology functions within their unique environment. Using Eggplant DAI, we were able to provide these real-life examples of the business performance improvement:

- **Test Patient Creation:** The time to create and admit a patient decreased 70%, from 10 minutes to 3 minutes per patient.
- **Ambulatory Workflow:** Testing time was reduced to just 11 minutes, a 97.7–98.9% decrease.

As part of the engagement, CTG created an ROI calculator that shows the financial benefit to using test automation technology. The tool compares the cost of manual testing and automated testing, based on the time and resources each scenario requires. This provided MaineHealth with real cost savings they can achieve using intelligent automation.

Ultimately, the program helped develop a strong business case to earn buy-in for an investment in Eggplant, resulting in purchase of software licenses. MaineHealth engaged CTG to assist with the implementation of the Eggplant DAI Test Suite, including automating existing test scripts in support of the Epic rollout at a 100-bed community hospital in the network. Our experts are helping build the organization's automation strategy and roadmap, recommending workflows that are ideal candidates for automation, assisting in the creation of a library of automated test scripts, and providing best-in-class training to maximize the technology's benefits and ROI.

Our pilot program not only showed MaineHealth the functionality of testing automation technology, but the true value that can be achieved by leveraging its power. Now, the organization is well on their way to building a strong testing automation program. As a trusted partner for test automation, as well as application support, CTG continues to leverage our expertise to accelerate the achievement of MaineHealth's business objectives.

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