# Agile Quality Automation Speeds Delivery and Reduces Risk
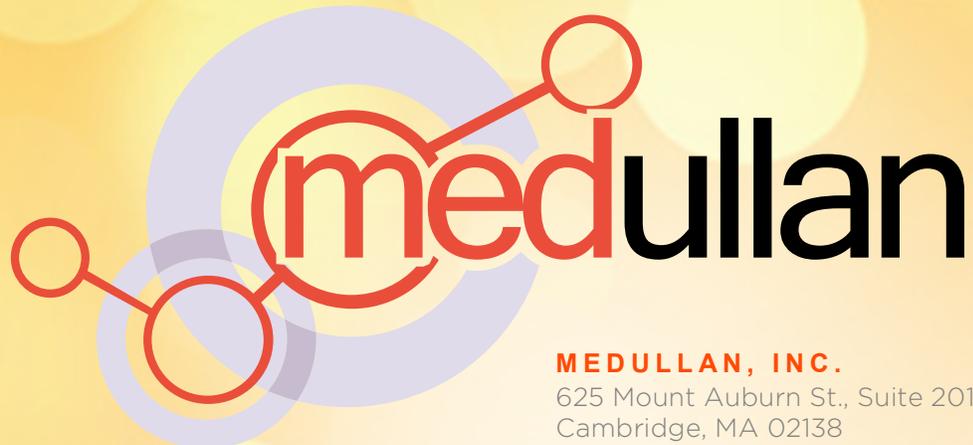
By Julliette Ehlert, *Senior Manager, Technology*

In an unpredictable healthcare environment, it's essential to ensure quality throughout the entire software lifecycle — not just at the end. Quality software development companies use fully-instrumented in-house systems that speed delivery, reduce risk, and lower costs, leading to more robust solutions and better outcome.

Healthcare is characterized by a number of unique challenges and constraints, among them the pace at which the industry can change. Every day, healthcare innovators must address new technologies, consumer trends, and legislative changes that have the potential to transform the industry overnight.

As a result, traditional "waterfall" style methodologies are no longer effective for developing innovative solutions; healthcare-oriented software firms instead must use agile methodologies that allow them to be highly responsive to the constantly changing needs of clients and end-users. The most sophisticated digital solutions providers have distributed these methodologies across the software lifecycle to ensure quality from contract to completion, designing fully-instrumented in-house automation suites that streamline the development process and maximize value.

## KEY COMPONENTS OF AGILE QUALITY AUTOMATION

While plenty of companies claim to use agile methodologies, many are just running manual tests on a tight schedule. Rather than treating quality as a separate phase, true agile development relies on embedding quality functions in every phase of development. Key elements of agile quality automation include:

- **Push-button development environments** for common packages that reduce local environment issues and eliminate environment-related bugs

- Defined, **best-practice-based project templates** for multiple technologies that make establishing code bases for new projects instantaneous

- **Reusable build pipelines** that make it possible to create a CI environment configured to the deployment environment in minutes

- Front to back software verification by a **fully-instrumented CI environment** that allows best practices for code and solution quality to be enforced by tools (code verification, static analysis, functional testing, etc.), so manual reviews can focus on higher-level problem-solving

- Detailed, push-button **reporting** that gives managers instant insight into the health of a solution

## AGILE QUALITY AUTOMATION GETS RESULTS IN HEALTHCARE

This more reliable, results-driven workflow is ideal for healthcare clients because it results in accelerated time to market, reduced risk, and maximum return on investment.

**Accelerated time to market**: Sophisticated reporting helps developers to catch and fix regressions earlier and uncover usability issues prior to actual user testing, leading to more robust solutions that reach the customer faster. Further, code is highly configurable in the cloud or client local server environments, which permits easier implementation and delivery to end-users.

**Reduced risk**: More visibility into project health and quality allow the client to be a more active partner in the development process, leading to greater specificity and stronger adherence to business strategies and objectives.

**Maximum return on investment**: Better software testing ensures the greatest confidence in the deliverable while requiring fewer testing resources overall. The firm can then allocate resources more productively and spend more time on value-added activities, such as refining innovative new features, addressing potential adoption issues, and enhancing the user experience.

## AGILE QUALITY AUTOMATION AT MEDULLAN

Medullan's automation team recently upgraded our infrastructure to a fully agile quality automation system. Our CI server is now fully integrated with our application lifecycle management platform, Rally, and we have created extensions for Rally to support a quality-oriented workflow. By selecting technologies, completing their initial definition, setup, and configuration, and documenting best practices with these technologies, we have created a development pipeline in which quality is endemic.

Medullan has implemented the ideal quality model by seamlessly combining agile quality automation with our LITE (Lean Iterative Testing and Evaluation) UX practices. Not only does agile quality automation do for software development what LITE does for UX, it also enhances LITE's inherent value.

LITE is a manual process that occurs outside of and complements the automated quality environment. Utilizing a flexible assessment protocol which combines exploratory interviewing, participatory design exercises, and scenario based testing, LITE streamlines the collection of real user insights and renders them immediately actionable. Likewise, agile quality automation streamlines the collection of insights prior to real user testing, creating a similar optimization process in the development space and increasing the worth of our established LITE routines. Both of these continuous quality-assessment processes are cross-cut by agile principles; they allow us to iterate continuously, harness change for the customer's competitive advantage, obtain the most value from our unsurpassed healthcare experts, and produce digital solutions that are both practical and technically excellent.

Due to the automation team's success with Medullan's new agile quality automation system, we can now configure projects to a buildable state in 24 hours or less, build state-of-the-art digital solutions at extraordinary speed, and allow our clients to enjoy a panoramic view of project quality during every phase of development, all the while accelerating time to market, reducing risk, and increasing returns. It's just another way to ensure that our customers receive the highly-adoptable and innovative digital solutions they should expect from a top healthcare software provider.

## CONTACT INFORMATION

Medullan Inc. is a healthcare consultancy that provides strategic technology innovation services – from product strategy and definition, to rapid prototyping of UX design and software development.

ask@medullan.com
625 Mt. Auburn Street, Suite #201
Cambridge, MA 02138