

The Real Bottleneck to Agile Delivery

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Agile software delivery has taken the world by storm. Within a decade it's shaped the way many organizations deliver software. With the promise of releasing more functionality to users faster, what's not to like? While many organizations practice agile methods, many companies still struggle with a comprehensive implementation of this approach. So what's the real reason many companies' agile delivery process is hitting roadblocks? To understand this, let's first look at how software was traditionally delivered.

Before agile delivery, most organizations used a waterfall-based delivery process. Waterfall delivery focused on gathering deep requirements and then on building and testing software. Typical projects in this model would focus on releasing functionality half yearly or yearly. Given the long duration of projects, speed was not the goal. Instead, the focus was to release a lot of functionality that is stable and reliable. Delivery time was not the highest priority — stability and reliability of features were. But with the growing adoption of agile, speed became the No. 1 focus. Companies and their product users grew their desire for more features delivered much faster.

The agile process allows software features to be delivered much faster (ideally, every four weeks or less), significantly speeding up the functionality delivered. This trend gained popularity among tech companies in the early 2000s and has now become a standard practice. As popular as this method is, data shows software testing is the largest bottleneck to speed in the agile delivery process. When GitLab interviewed agile practitioners about the biggest bottleneck in the agile delivery life cycle, over half the respondents mentioned testing accounts for delays in the overall development process. Testing was cited as the greatest obstacle in the race against the clock.

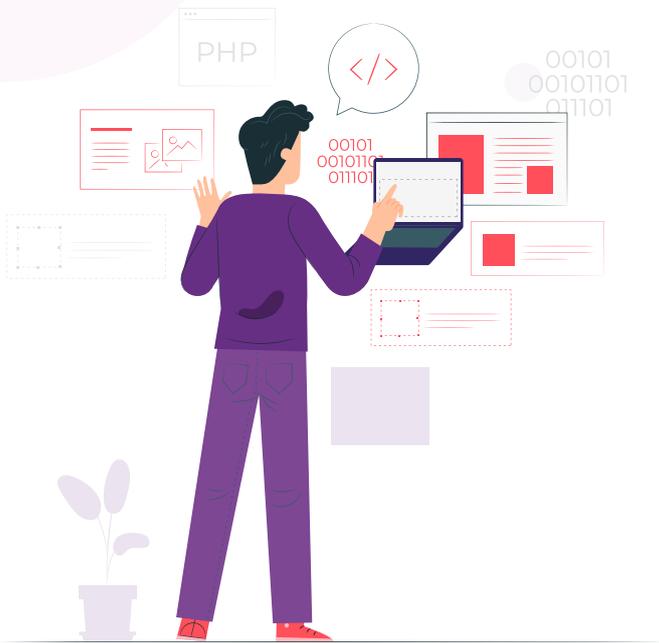
Testing allows the delivery team to catch flaws in the code and remedy bugs in the software before the product is ready to be deployed. But inadequate testing processes can cause major issues down the line, such as shortening the lifetime of a feature, reducing the overall user experience and, ultimately, slowing down the entire software delivery process. In the world of waterfall delivery, testing would often be done manually given the longer timelines to technology rollouts.

What is the Biggest Bottleneck in the Development Cycle?



The secret to overcoming this bottleneck is a fast and automated testing solution to help quality teams rapidly test functionality within their two-to-four-week sprint windows. Automated testing, however, must be properly executed in order to successfully improve efficiency. After 20 years of trying to implement automated testing, most companies still struggle to achieve better results. A common mistake that organizations make is only leveraging automation in pockets, as opposed to running it continuously and across end-to-end business processes. This happens when quality assurance teams have a tactical focus without a strategic seat at the table.

When implemented correctly, the benefits of automated testing are powerful. Not only will testing prevent defects and catch bugs, but it will also speed up the overall delivery time and enable testers to be viewed as quality specialists by freeing up time for them to play more strategic roles like ensuring the software requirements are clearly defined so developers build features right the first time. This will allow testers to spend more time on strategic planning instead of frequently performing manual tests to combat flaws in the software's functionality. Having automated tests for each feature also prolongs the life and value of that feature as any time a new functionality is added, all previous functionality is automatically checked to be working as desired.



Automated testing also allows businesses to innovate and try new things with their tech stack, knowing their critical processes have predefined automated tests. They can afford to experiment and immediately see if any of these changes have caused a breakage in their critical business processes before they are pushed to production. Businesses focused on making technology a key differentiator should strategically be looking at testing and quality as an area to prioritize given the data that shows it's the bottleneck in modern agile delivery.

Toyota pioneered lean, quality-driven manufacturing through automation to gain a huge advantage in manufacturing, and they changed people's perceptions of Japanese cars. Could a focus on quality do the same for traditional businesses that want to make software a key differentiator? We believe the answer is yes. According to Gartner, quality assurance leaders can increase their success by investing in five areas.

The first step to improving quality assurance is giving quality specialists, as we call them, a seat at the decision-making table. The biggest issue that companies face is limiting testers in crucial planning conversations despite them being an integral part of the transformation process. This was a similar problem that CIOs faced 10 to 15 years ago, and now they are crucial members of the leadership team. QA leaders must be viewed as quality specialists and must be given a voice to share their perspectives and weigh in on the delivery process instead of bringing them in at the end.

All organizations should be looking at how they can best automate their testing to free up quality specialists' time, allowing them to focus on quality more holistically across the organization. The best way to achieve an efficient and high-quality agile delivery process is for quality specialists and developers to work hand in hand from the beginning, to make sure all flaws are addressed on the spot and that all requirements are met along the way.