



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

Four Reasons On-Demand Software Testing is the Best Way to Succeed with Agile Development

Faster Usually Means Buggier!

*"Program testing can be used to show the presence of bugs, but never to show their absence!",
Edsger Dijkstra*

Introduction

In the eight years since the Agile Software Development Manifesto (<http://agilemanifesto.org/>) was written, Agile Development methodologies have become widely used and accepted as industry standards across the world. The flexibility to grow and adapt software development organizations is one of the most attractive features of Agile Development.

The price paid for this flexibility is **buggy software**. While most agile development teams are able to produce features at a higher rate than traditional development teams, they also deliver more defects than a traditional development team.

WHY?

- Early in the lifecycle teams don't realize the severity of existing defects, and do not put a large effort into finding them.
- When Critical Mass is reached, customers begin using the product in unexpected ways.
- As product development becomes steady, the effort necessary to find the defects is not constant throughout the release cycle, and a steady team of Test Engineers is too much for some stages and not enough for other stages.
- When the product matures, automation test scripts that have been relied on in the past no longer provide sufficient coverage, and cannot find all of the defects.



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

On-Demand Software Testing solves these problems.

This report will examine how On-Demand Software Testing keeps product quality in step with your engineering team.

1 - Before You Think You Need Testing

One of the key ideas behind Agile Development is Just-In-Time delivery. Just-In-Time documentation and design are probably the first two concepts an Agile Development group will adopt. We also see Just-In-Time testing as critical to an Agile Development group. Two examples are early in the Product Lifecycle, and early deployments of a new Hosted or Software as a Service (SaaS) offering.

Early in the Lifecycle of a product, testing needs are typically fairly light. Software teams on a new product are smaller, and have little to no existing functionality to support. Additionally, there is an appearance of fewer customer defect fixes that are part of the development effort, and fewer, if any, regression defects from previous releases. Most Agile project teams will simply rely on the developers to test their own work. The problem is most developers don't think their code needs tested, and therefore don't test. Does the comment "I only changed one line" after finding a bug in a production release sound familiar?

- Developers are not Testers - On-Demand Software Testing allows teams to have formal, well trained Test Engineers who know what process and methods are necessary to find the defects at every stage of the development Lifecycle.

Deployments are simple early in the Lifecycle of SaaS or Hosted products. A single developer can push a new build to production in a matter of minutes with little or no risk, and can detect and fix problems or production defects quickly, often before the customers have detected it. The developer who is deploying a change or the product owner can often execute ad-hoc test scenarios that are sufficient to verify the deployment. As the product grows, deployments become more complex, database modifications have a potentially bigger impact on your customer base, and production defects take longer to resolve as the product



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

becomes more complex and full featured. Downtime for the production system will grow until a formal process is put into place.

- Developers are not verification and validation testers – On-Demand Software Testing provides a way to verify and validate prior to deployment, decreasing the interruption cost and time of software deployment.

We propose using On-Demand Software Testing in this situation. Here's why:

- Software Testing Experience – Our On-Demand Software Testing Engineers have many years of experience working across a wide variety of software projects and can bring a wealth of knowledge and best practices to your project.
- Duration of the Need - Our On-Demand Software Testing Engineers can work for you for as few as 5 days.

2 - When Your Customer Finds Bugs!

The cost of a defect increases significantly when you have enough customers to require full-time support,. Critical defects can be released to your customers because developers are not trained in software testing methodologies. These defects have a much larger impact because you now have many customers calling to have the issue resolved. What appears to be a minor change in the code can cause a ripple effect that breaks multiple pieces of functionality and impact many customers simultaneously. Regression testing is now required, and you begin having “Test Fests” – you know, everyone in engineering, marketing, sales and administration work overtime to test the application right before a critical deadline or delivery. The problem is that these people aren’t trained test engineers, and many are not even technical enough to properly report a defect if they do find one.

We propose using On-Demand Software Testing in this situation. Here's why:



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

- Leveraging Valuable People – Using On-Demand Software Testing allows you to keep your highly trained developers, sales people, marketers and other office staff focused on what they do best.
- Customer Satisfaction – When our Test Engineers find a defect, you can be confident it is completely investigated and any fix is fully verified. We discuss this further in another report: [The Hidden Costs of Software Quality](#).

3 – Too Many or Not Enough

The typical ratio of Test Engineers to Developers is between 1:3 or 1:4. However, that is not the case every single day or even week. Often, no testing is necessary in one project while another needs a significant amount of testing. The solution is simple - schedule projects so that Test Engineers are moving from one project to another smoothly and efficiently. However, in the real world projects often change schedules or shift priorities on a monthly or weekly basis, and suddenly you need your Test Engineer on two projects this week and no projects next week.

Overnight you have a sudden need to increase the volume of testing with no one in the company available to step in.

We propose using On-Demand Software Testing in this situation. Here's why:

- Urgency - We can have trained, experienced and managed Test Engineers working for you tonight and producing test cases and defects tomorrow morning.
- Software Testing Experience – Our On-Demand Software Testing Engineers have many years of experience working across a wide variety of software projects and can bring a wealth of knowledge and best practices to your project.
- Duration of the Need - Our On-Demand Software Testing Engineers can work for you for as few as 5 days.
- Efficiency - The cost of fixing a defect increases exponentially as the defect ages. When our On-Demand Software Testing Engineers find the defects immediately, the effort and duration it takes for a software developer to fix it is decreased significantly.



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

4 - When It Gets Big & Complex and Test Automation Doesn't Work

There is a fundamental problem with Agile Development Methodologies that is universally incorrect: regression testing is handled by creating test automation scripts during development. It is a great idea, but it is also doomed to fail. Test automation is perfect for simple functionality, but virtually worthless for usability and UI testing. In addition, it is not possible to fully automate all of the possible ways that a user might interact with the application. Most importantly, however, developers are not Test Engineers, and it falls on the developers to write the test automation scripts.

Eventually a realization occurs: our automation tests are not catching enough defects. Manual regression is needed, but manual regression cannot be completed within an iteration, in some cases not even within a release cycle. You need a large number of Test Engineers during your hardening iteration, but not all the time.

In addition, the cost of deploying the application has also increased exponentially and it is more important than ever before to have Deployments run smoothly. Let's face it, no one wants to be up at 3:00 AM debugging a bad deployment into production.

We propose using On-Demand Software Testing in this situation. Here's why:

- Scalability – We can put as many or as few of our On-Demand Software Testing Engineers on your project as is necessary to complete the job in the time available.
- Availability – Our On-Demand Software Testing Engineers are available in any time zone. On-Demand Software Testing is available literally around the clock.

Will On-Demand Software Testing Work for Me?

Probably. It depends.

It will if you:



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

- Have an application in a stage that is ready to be tested
- Have an application that is accessible via the internet or installable on a personal computer or server
- Have a team that wants their work tested
- Will spend an hour working with us on our first day and 15 minutes per day thereafter
- Give us real feedback on our work and be honest with us about where we make mistakes
- Really want it to work

Those last two items are actually the most important. On-Demand Software Testing is NOT a black box that you shove your program into at the last minute. It is a quick and valuable process that you can use when you need it the most. But, it does require that you do your part – the most important of which are communication, honesty and desire. Without those, On-Demand Software Testing won't work for you – or us.

Wait a Second! What Does This Cost???

Good question – thanks for asking.

Our On-Demand Testing Engineers are \$46/hour with a minimum 5-day commitment. If you think you'll need more than that, then our On-Demand Testing Engineers are \$40/hr with a minimum 30-day commitment.

At most, your maximum risk for working with us for 5 days would be \$1,840.

You'll be amazed at what we can accomplish in 5 days!

Money-Back Guarantee

In fact, I'm so confident that we can deliver much more than \$1,840 in real business value within 5 days that I'm willing to offer you a money-back guarantee.



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

Here's how it works.

During your first 5-day project with us, I'll personally call you on the 5th day and ask if we've delivered at least \$1,840 worth of value. If you think we haven't, then I'm going to ask you where we missed the mark and what we could have done better. I need you to tell me at least five things we could have done better. Then, I'll say "Thank You" and delete the hours we worked for you from our system so you won't receive an invoice. That's it. All the work we did do for you is yours to keep with our compliments and apology for disappointing you.

This Sounds Too Good – What's the Catch?

Another good question.

Here's the catch. You have to give us a referral to one of your colleagues who you think can benefit from our services. Of course, I'll be thrilled if you can come up with more than one, but we do require at least one.

This offering only works if we are able to provide it to a large number of clients.

If you find our service valuable, and I'm confident that you will, then you'll probably want to use our services again in the future. And we want to stay busy while we wait for your next project! So we need your help with referrals. Win-win, right?

Why Did We Do This and Why TESTCo?

I started TESTCo in 2002 to offer small and medium sized software companies the opportunity to take advantage of all of the benefits of offshore software testing without any of the risks and hassles. We've done very well doing just that.

As you know, though, the economic times have changed. Budgets are smaller, and the need to build software to increase revenues and reduce costs is becoming more important every day. Everyone is being expected to do more with less.



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

I'm passionate about the quality and value of our Software Testing Services and wanted to make it more available and more affordable for more clients. Over the years we've delivered testing solutions to a large number of leading software companies.

So, we took everything we've learned about Software Testing and Quality Assurance and made it available to a wider customer base at a very affordable price. This new offering strips out the extra engineering processes designed for big corporations and makes it easy to start tonight- on a tight budget and timeline.

Now, instead of taking two weeks to create a solid team of testers, it takes only one day. This allows you to slice what used to be a two-month testing process down to just a single day.

It's the perfect testing package for high-velocity businesses.

We actually started offering our On-Demand Software Testing Services to a select group of clients in early 2008. These clients were very generous with their feedback, and we've made a number of improvements over the past year.

Our On-Demand Software Testing Services are now ready for every business!

More importantly, the services cost less than traditional testing, require fewer people and provide real value the very first day.

What Do I Do Next?

I hope you've found this report valuable.

If you need help today, then by all means, please call us at 512-329-5960. If I don't answer, please leave a voicemail letting me know that you need help urgently. I'll call you back within 1 business day. You should also send an email to jeff@testco.com so I'll have 2 opportunities to see that I need to get in touch with you quickly.



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

If you don't need help today but think you might need help in the near future, please send an email to jeff@testco.com and we'll arrange a time to talk on the phone and answer any questions you have.

Here's what one of our On-Demand Software Testing clients said recently –

“TESTCo was crucial to meeting our testing goals and deadlines. Even though I was too busy to provide proper direction to the testing team, they were able to get started on their own, create test plans based on what I wanted and deliver results from day one. As the testing needs of the project grew, TESTCo was easily able to grow with us. They continued to build requirements themselves and they were able to manage the testing process in a way that worked for us, not against us. Bringing in TESTCo is a huge win for any software engineering project.” - Apaar

You may find that you like the idea but are still uncertain as to how to proceed. That's not unexpected. Unfortunately, I can't give every detail of every step in the process – it's just too much information. If you find that you're still a bit uncertain, please feel free to contact me at via our website at www.testco.com. We can schedule a quick meeting to answer your questions and discuss the process in more detail.

I wish you the best of luck and success with your next project.

A handwritten signature in black ink, appearing to read "Jeff Hotz".

Jeff Hotz, President/Founder, TESTCo

About TESTCo

TESTCo delivers On-Demand Software Testing to carefully selected customers around the world. The Austin, Texas-based company's customers eliminate software testing problems, slash support costs by up to 50% and achieve their release date commitments...all without the hassle of hunting down the best



TESTCo
Safe. Easy. Reliable.

PO Box 1042
Del Valle, TX 78617
www.testco.com
888-311-1994

outsourced vendor, the pain and frustration of learning how to properly manage them and the unpredictable results so common with most outsourced vendors.