

E-BOOK



MOVING FROM MANUAL TO **CONTINUOUS** **TESTING**

A Guide to
Digital Assurance
Transformation for
Operational Agility





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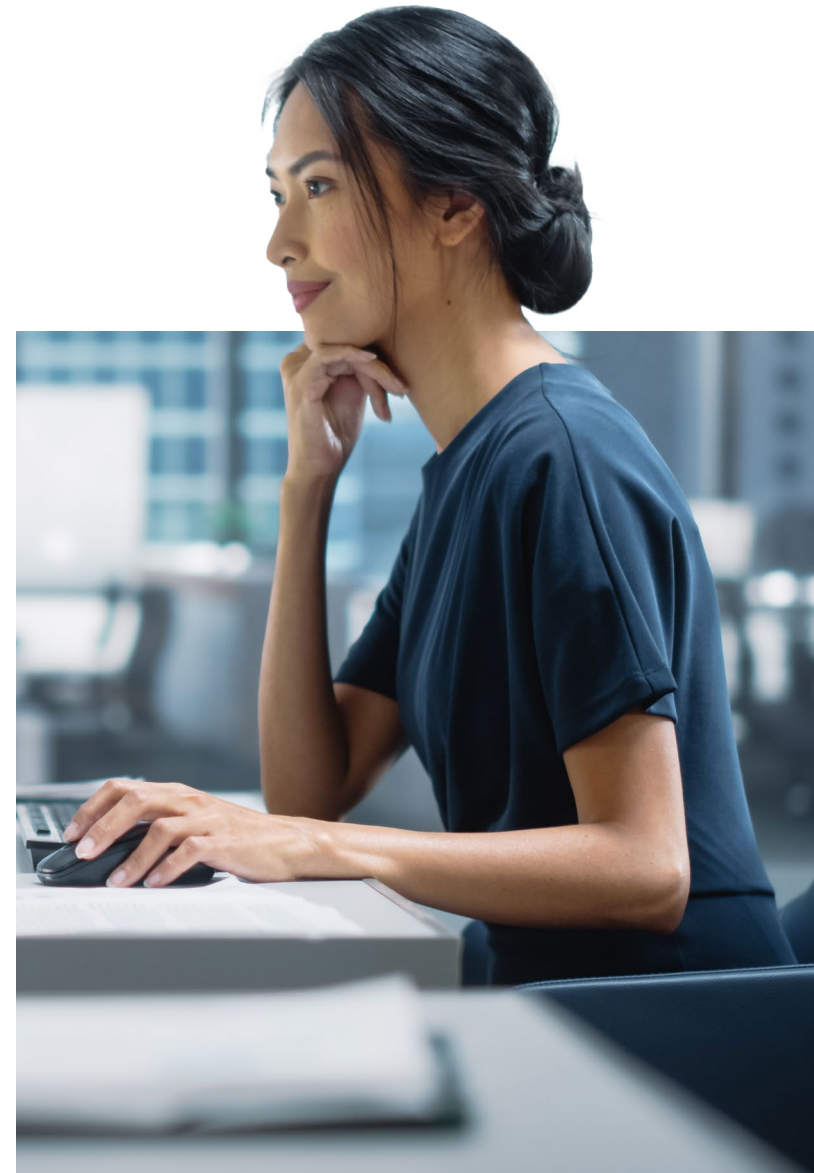
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Harnessing Operational Agility for a Competitive Edge

In today's fast-paced software development landscape – where customer needs evolve quickly, and competition has never been fiercer – business agility is the name of the game.

Agile and DevOps methodologies have had a transformative impact.

They've ushered in a new era of rapid development, redefining how organizations approach engineering and driving greater collaboration, innovation, efficiency, productivity, and business value.

Two in five businesses prioritize their software development and delivery goals by time to delivery and implementation to keep up with a rapidly changing market.¹ And this leads to a range of benefits within the business, with almost 60% of companies who have adopted agile methodologies and techniques saying it has boosted collaboration.²

But this can be a double-edged sword. Agile development efforts can only succeed if downstream processes don't act like a bottleneck. Yet, increased velocity puts greater demand on testing.

In this environment, the right testing approach is essential to increase delivery speed without compromising quality. **Traditional manual efforts can't keep up, creating a barrage of operational and financial headaches.**

¹ <https://info.digital.ai/rs/981-LQX-968/images/RE-SA-17th-Annual-State-Of-Agile-Report.pdf?version=0>

² <https://info.digital.ai/rs/981-LQX-968/images/RE-SA-17th-Annual-State-Of-Agile-Report.pdf?version=0>



Ineffective testing – such as focusing on a single function or condition – negatively impacts business performance and can have far-reaching consequences.

US businesses are losing \$60 billion a year due to software bugs.³ And the cost of fixing a bug identified during implementation is 6x higher than during design.⁴

The situation is made more challenging by the enterprise landscape becoming so complex. Continued adoption of cloud platforms, integration of existing systems and custom applications, and the drive to unlock data-driven decision making means testing needs to happen faster, and more often.

Making sure all your applications are working and your data is flowing is essential to deliver on the business outcomes promised by cloud adoption and digital transformation.

The question is, **how should you go about it?**

³ <https://www.computerworld.com/article/1326875/study-buggy-software-costs-users-vendors-nearly-60b-annually.html>

⁴ https://www.researchgate.net/figure/IBM-System-Science-Institute-Relative-Cost-of-Fixing-Defects_fig1_255965523





Move Faster With Test Automation

Enterprises must replace slow and expensive manual efforts that occur later in the cycle with responsive and cost-effective continuous testing designed to keep pace with today's development landscape.

The faster development cycles needed to maintain quality while also delivering business agility have made continuous, automated testing a company-wide priority. Test automation has become vitally important as a result, seeing significant uptake. In fact, the global test automation market is expected to double from its value of \$28.1 billion in 2023 to \$55.2 billion by 2028.⁵

While there will always be a need for manual testing – particularly for exploratory testing – relying on it across the board is burdensome for any organization. So, for most scenarios where manual testing is no longer viable, there are two routes forward:



Build your own automation suite

A bespoke approach, whether you are leveraging an open source tool or licensing a commercial solution. However, this can be both time- and resource-intensive – and not just the initial implementation.



Leverage an 'as a service' quality engineering platform

Built to move fast and designed for today's digital landscape, delivered through a cost-effective model.

⁵ <https://www.marketsandmarkets.com/PressReleases/automation-testing.asp>

Key Testing Considerations and Business Benefits

Today's enterprises have unique needs. It stands to reason then that you require a solution that meets those needs and unlocks new possibilities.

Let's look at four key considerations that will help you decide which approach is right for you:





1

Testing Cost / Cost To Implement

Although building your own automation suite offers several savings compared to manual testing, it comes with an array of costs that need to be factored in.

Licensing is the big one – as is development and implementation. Even in the case of an open source solution, you'll need to account for engineering time to customize and implement the tool.

Additionally, what's your expected return on investment? Calculating the ROI of test automation involves assessing the end-to-end costs of the resources and tools required, and setting up and maintaining the test automation environment. You will also need to cover maintenance, operations, support, and staffing and training of key people involved.

These costs can mount quickly. Of course, part of evaluating ROI also involves working out the benefits of test automation, such as the long-term cost savings – both in time and money – of automating manual testing, the reduction in the number of defects found in production, as well as the increased coverage and speed of testing.

But if it takes six months to a year to build the testing automation suite you need before it starts to deliver ROI, **that's a huge amount of missed opportunity and business value.**





'As a Service'

Why?

An 'as a service' automated testing platform lets you tap into a solution with no licensing costs, no hardware or software costs, and no internal resource costs. This allows you to reap rapid ROI and the business benefits of automated testing without having to overcome the challenges of building your own system.

In Action

With an AI-powered quality engineering platform that enables end-to-end testing to accelerate your automation journey, you can achieve:

35-50%

reduction in total
cost of testing

50%

accelerated
time to market

5x

faster testing
and automation





2

Resource Availability / Scalability

Building your own automation suite requires an entire team of software engineers that are not only experts in that specific automation tool, but also possess the required knowledge in scripting languages and testing methodologies – particularly as script maintenance represents a significant part of the total automation effort.

Hiring and retaining talent with the necessary programming skills and experience can be challenging in a field as competitive as test automation – and can serve as a significant barrier to scale.

The cost of hiring the right people is also only one side of the coin.

Training and upskilling / reskilling of employees is a major expense. Some of the areas engineers may require up- or reskilling include programming language training, automation framework training, and specific tool training.

However, the right approach can help mitigate these outlays.





'As a Service'

Why?

This model offers access to a highly scalable, easy-to-use automation platform that simplifies and customizes enterprise software testing. It provides on-demand access to a wide range of testing infrastructure and resources, and comes with an extensive pre-built test library. It's designed for scale, with minimal training or certifications and no infrastructure requirements.

In Action

With a user-friendly quality engineering platform that offers pre-built test libraries and touchless execution, you too can achieve:

2x

increased speed of new feature adoption

100%

test coverage and defect-free releases

70%

reduction in overall regression testing efforts





3

Test Coverage

Achieving a high percentage of test code coverage is the holy grail, but can be tricky – and resource-intensive – to get right. Enterprises need to understand the software requirement, develop different user personas to understand how different users may interact with the software, identify test scenarios and outline test cases, incorporate various coverage metrics, and more to get the best possible result.

This starts by asking critical questions. **Does the automation tool you've chosen support various technologies and types of testing?** Is it able to effectively identify test scenarios and outline test cases, and measure coverage metrics?

If it doesn't, you'll be looking at a multi-tool solution with multiple frameworks.

Relying on different tools for each technology compounds inefficiencies and makes it more of a challenge to achieve 100% test coverage. It also results in siloed testing with no end-to-end view of quality – meaning testing that doesn't reflect real-world environments and which invites the risk of errors and bugs in software pushed to production.

It is imperative to consider the integration capabilities of your chosen solution. Robust and comprehensive integration is important for testing continuity, as is a centralized testing strategy.





'As a Service'

Why?

The 'as a service' model creates end-to-end tests with a solution that supports every phase of the test automation lifecycle, from requirements to reports. It enables continuous testing with the goal of improving the overall quality assurance process – ensuring that testing is not a one-off exercise and becomes a strategic enabler for driving business value through software development.

Use Case In Action

Streamlined Testing Enhancing System Stability for Activision

With a robust QE platform that conducted automated testing synchronized with other software upgrades as well as a comprehensive regression testing suite for system changes with a keyword-driven approach and dynamic test data template, a top interactive entertainment company with one of the largest portfolios of recognized gaming brands in the world achieved:

142

pre-built accelerators

50%

boost to testing ROI

50%

reduction in validation time

ACTIVISION

Find out more about
how they did it





4

No-Code, Low-Touch Support

Considering that 70% of new applications developed by enterprises will be low-code or no-code by 2025, the rate of development is about to hit breakneck speed.⁶

The benefits of low-code can be applied to automation, too. It mitigates many of the training and upskilling costs typically required when implementing a new tool or platform. It also fosters agility, speed, and efficiency.

Your automation tool of choice not only needs to unlock digital performance to help you move from manual to automated testing, but also set the stage for the democratization of test automation – in addition to enabling the benefits of AI.



⁶ <https://www.gartner.com/en/newsroom/press-releases/2021-11-10-gartner-says-cloud-will-be-the-centerpiece-of-new-digital-experiences>





'As a Service'

Why?

An advanced 'as a service' quality engineering platform enables no-code testing, touchless execution, the use of pre-built test libraries, and self-healing scripts, as well as providing AI-driven benefits such as early error detection and predicting failure points, among others.

Use case In Action

No-Code Testing Transformation for a Mobile Phone Operator

Harnessing an AI-powered platform that integrated seamlessly with other software and tools to facilitate the automatic execution of relevant test cases, automated test data management, compliance testing, audit reporting, and agile development – while also enabling automated health checks, defect prediction and prevention and risk-based testing, as well as self-healing – helped a prepaid, no-contract mobile phone operator in the US achieve:

96%

test effectiveness

91%

planning accuracy

90%

test coverage





The Sutherland Transformation

Moving From Manual To Continuous Testing

It's becoming ever clearer that enterprises today need to introduce continuous end-to-end testing, modernize applications, and unlock AI-driven digital assurance to gain – and maintain – a competitive advantage.

There are various benefits that automated enterprise software testing brings. But not every test automation platform is created equal, nor are they all as transformative as they appear.

With Sutherland's expertise, experience, and advanced products and platforms, we can tailor proven and rapid formulas to fit your unique DNA and deliver:



Affordable Scalability

Delivered 'as a service' through secure cloud infrastructure, the CloudTestr platform automates and maintains tests 4x faster and at one-fifth of the cost of manual testing.



A Flexible Subscription Model

An innovative "pay per usage" or "annual subscription" model enables next generation test automation with low upfront costs and no commitments.

¹ <https://info.digital.ai/rs/981-LQX-968/images/RE-SA-17th-Annual-State-Of-Agile-Report.pdf?version=0>

² <https://info.digital.ai/rs/981-LQX-968/images/RE-SA-17th-Annual-State-Of-Agile-Report.pdf?version=0>



Enhanced Compliance and Visibility

Internal and external inspections such as SOX compliance, financial audits, and access control audits enables seamless compliance through automated documentation and real-time access to test activities and results.



Accelerated Growth

CloudTestr's extensive pre-built test libraries, self-healing scripts, auto-scaling capabilities, no-code experience, and touchless execution allow enterprises to unlock rapid results at scale.

Taking a holistic approach by blending an industry-leading platform with an 'as a service' model lets you tap into a wealth of best practice and expertise in software automation, resulting in faster and more affordable testing, the elimination of errors and failures during test executions, less need for human intervention, less risk, and resources freed up to focus on high-value tasks.





Achieve Transformative Outcomes

With Test Automation

The global testing automation market continues to grow and companies across industries have recognized the need to invest in expanding test automation capabilities to prevent testing from being a bottleneck to an agile development approach.

Now is the time to act.

The right approach can deliver speed without compromising quality to meet your business needs. And the right partner can help you accelerate your test transformation and digital assurance journey to unlock digital performance with a difference through a model that suits your enterprise's DNA.

With our unique combination of market-leading technology and domain expertise, Sutherland is the ideal partner for businesses looking to benefit from continuous testing capabilities.



Contact us to learn more about how Sutherland can help you strip away testing complexity and deliver measurable results rapidly.



Unlocking Digital Performance.
Delivering Measurable Results.

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Sutherland is a leading global business and digital transformation partner. Leveraging our core expertise in artificial intelligence, automation, cloud engineering, advanced analytics, and our advanced products and platforms, we unlock digital performance for our clients. We work with iconic brands worldwide, spanning Healthcare, Insurance, Banking and Financial Services, Communications, Media and Entertainment, Travel, Logistics, and Retail industries. Our offerings are tailor-made, combining our market-leading technology with proven, rapid formulas to enhance digital capabilities uniquely suited to each client. We bring together human expertise and artificial intelligence to develop digital chemistry. This unlocks new possibilities, measurable transformative outcomes, and enduring relationships.

