

THE CUSTOM SOFTWARE **BOOM** MEETS THE TESTING **BOTTLENECK**

Breaking the Cycle
of Delays and Defects

transparency



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THE PRESSURE TO BUILD & DEPLOY CUSTOM SOFTWARE HAS NEVER BEEN HIGHER

Across the UK, enterprises in high-stakes industries like Financial Services, Healthcare, and Manufacturing are racing to innovate.

You know the drill. If you aren't moving fast, your competitors are already eating your lunch. Digital transformation isn't a buzzword anymore; it's business as usual.

BUT HERE IS THE TRUTH

While coding and deployment have modernised at breakneck speed, software testing is still stuck in the past.

We see it every day. Teams adopt Agile methodologies. They move to the cloud. They embrace DevOps. Yet, when it comes to quality assurance, they hit a massive brick wall.

Software testing, as it stands in most organisations, is expensive.

It is painfully slow. And quite frankly, it is holding organisations back from achieving true digital transformation. The irony is hard to miss. You invest heavily in top-tier developers and cutting-edge infrastructure to speed up your release cycles.



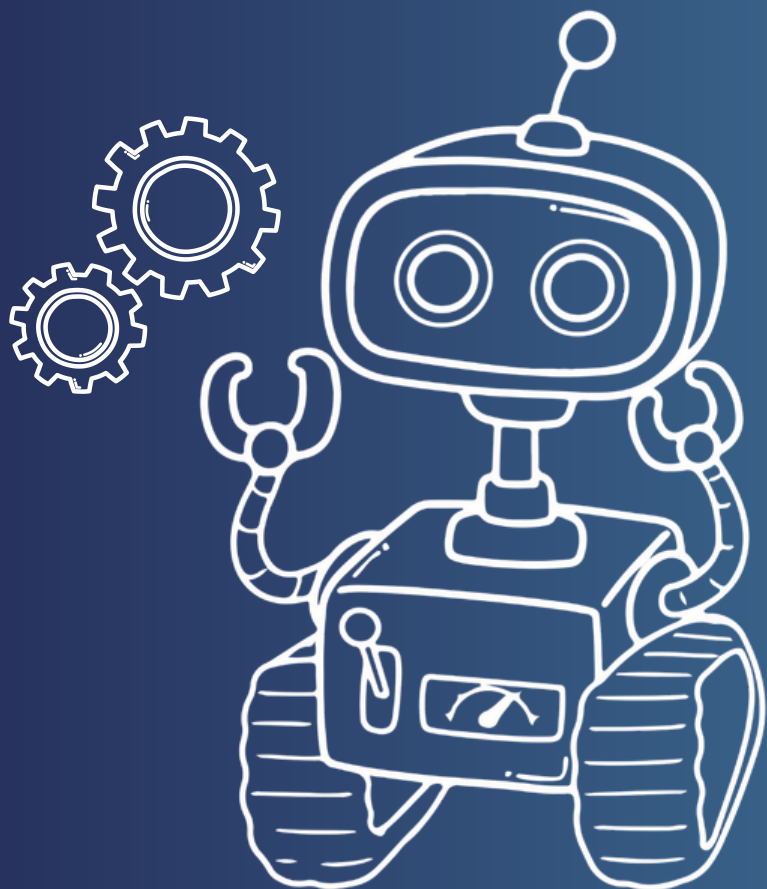
Then, you force those same brilliant engineers to wait around while a sluggish, manual testing process grinds everything to a halt.

The outcome of this bottleneck is severe. Features get delayed. Costs spiral out of control.

Worst of all, bugs slip through the cracks and end up in production, where they wreak havoc on your customer experience and your reputation.

BUT THERE IS **A BETTER WAY**

We know that automating your software testing fundamentally changes the game. It leads to a dramatically faster time to production. It guarantees higher quality releases. And it significantly reduces your operational costs.



THIS ISN'T JUST THEORY. WE HAVE THE **DATA TO BACK IT UP.**

We decided to cut through the hype and find out exactly what is happening in software engineering teams across the UK.

We wanted to understand the real-world impact of outdated testing practices and the massive competitive advantage waiting for those who automate.

Read on to discover what we found, and more importantly, how you can fix the testing bottleneck for good.

METHODOLOGY:

HEARING FROM THE RIGHT PEOPLE

We wanted to get to the heart of what is truly holding software engineering teams back.

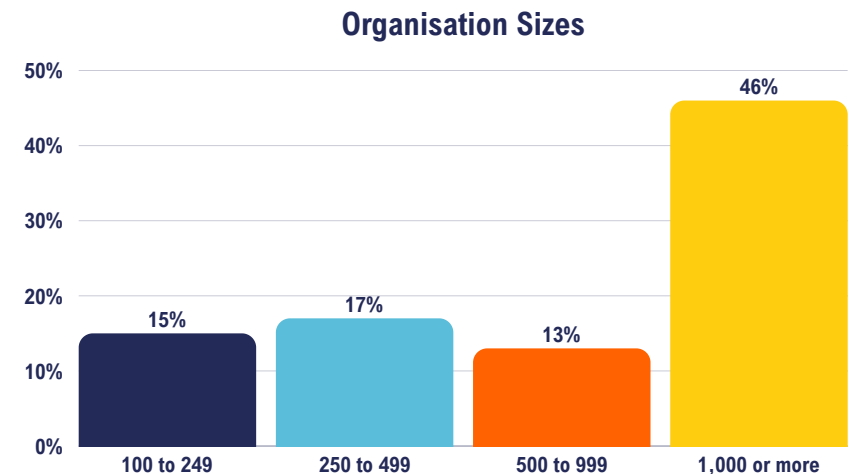
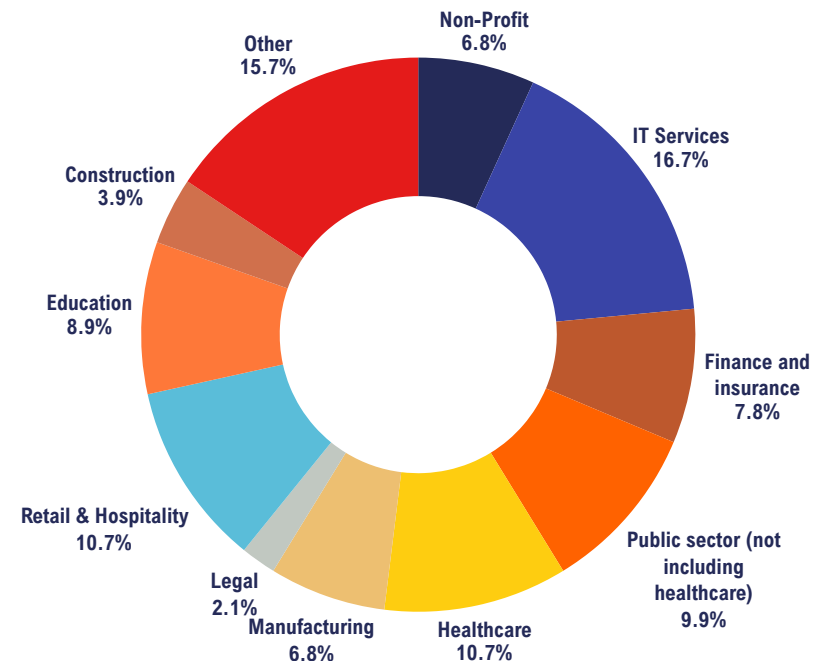
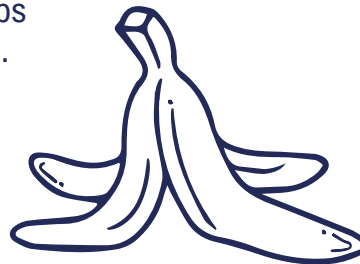


So, to get the full picture we partnered with YouGov, a global public opinion and data company, to survey approximately **500 UK IT leaders and decision-makers** from organisations from **a range of industries** made up of **100 – 1000+ UK employees**.

We spoke to IT leaders from enterprise-level organisations across key sectors including Professional Services, Non-profits, Financial Services (FSI), Health, and the Public Sector. Our goal was simple: to get an accurate, unbiased look at the state of software testing today.

We know that maintaining and developing custom apps is challenging and here are inevitable **"banana skins"**.

By pinpointing the exact bottlenecks in testing and delivery, we can identify what is really slowing down progress.



FROM TEAM STRUCTURES TO RELEASE CADENCES

We dug into their defect rates, their remediation times, and their biggest fears when it comes to software quality. We compared the organisations relying on manual testing with those who have embraced automation.

The results are eye-opening.

This research provides a clear roadmap for businesses that want to modernise their practices, innovate faster, and drive real growth. It highlights the stark difference between the organisations that are stuck firefighting and those that are pulling ahead.

If you want to understand why your releases are delayed, why your costs are high, and how you can fix it, you are in the right place.

**LET'S LET THE DATA
DO THE TALKING.**



THE **SHIFT** TO AUTOMATED TESTING: A MISSED OPPORTUNITY

The technology industry loves to talk about artificial intelligence and automation. If you listen to the hype, you would think every enterprise is running a fully automated, AI-driven utopia.

But when you look at the reality of software testing, the picture is vastly different. It is a massive missed opportunity.

Here are the standout statistics from our research:

76% of organisations still rely heavily on manual testing.

28% of businesses use manual testing exclusively to catch errors.

51% of organisations operate with small software testing teams.

27% have no dedicated testers at all, meaning the burden falls on developers or business users.

24% of organisations rely on teams of 21+ people just to handle the manual testing load.



BOTH EXTREMES ARE PROBLEMATIC.

Having no testers means quality suffers. Having an army of manual testers means your operational costs are through the roof.

The early adopters, however, are already reaping the rewards.

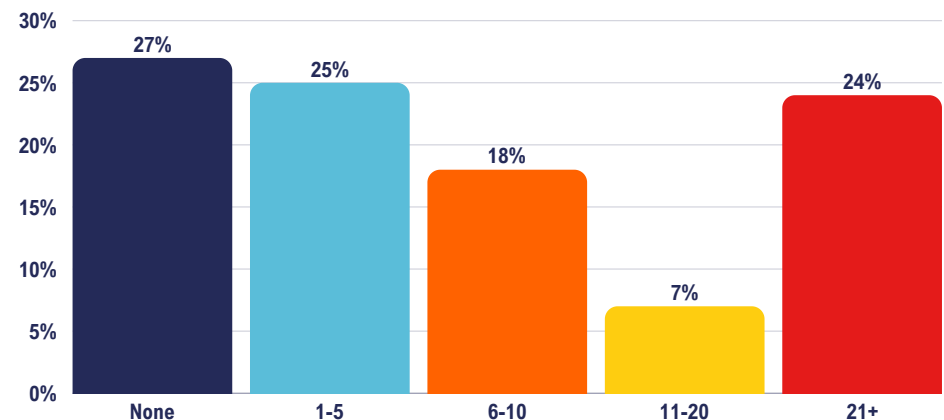
**CURRENTLY
ONLY 4%**

of respondents are "all in" on 100% automated testing.

**ANOTHER
24%**

are doing the majority of their testing with automation. These are the organisations that are pulling ahead.

Number of Software Testers



SNAIL'S PACE TO MARKET



SPEED TO MARKET IS THE ULTIMATE COMPETITIVE ADVANTAGE.

Industry leaders are delivering new features, security updates, and performance enhancements daily. But manual testing destroys agility. It bogs teams down in repetitive, slow work.

Our research exposes just how much of a drag manual testing really is.

31% - NEARLY A THIRD OF ORGANISATIONS TAKE MONTHS TO RELEASE NEW SOFTWARE VERSIONS.

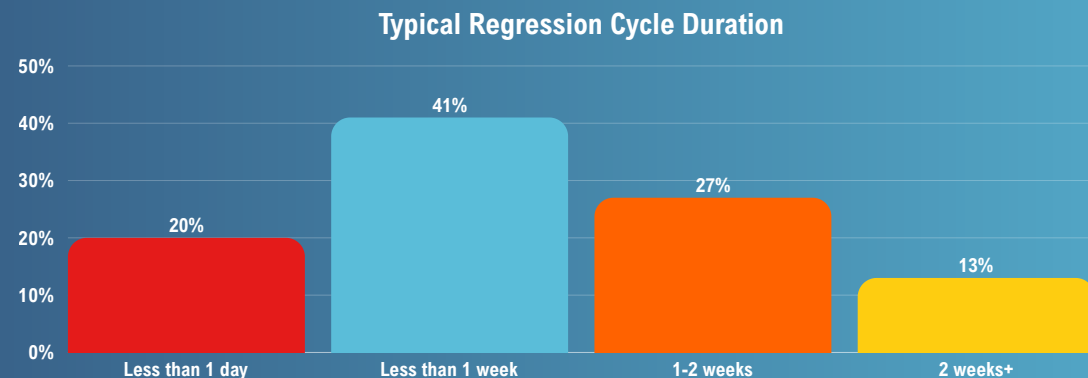
WHILE 8% LAUNCH UPDATES ANNUALLY, ONLY 12% ARE LEADING THE WAY WITH DAILY UPDATES.

The bottleneck becomes clear when you look at the regression cycle.

61% OF ORGANISATIONS take up to a full week to complete their regression cycle, while **13%** take over two weeks.

AN AVERAGE OF 60% slowdown in release cycles is driven by manual regression and test debt, as highly skilled software engineers waste between **14 and 16 hours¹** every single week waiting on inefficient tests, broken pipelines, and outdated internal tooling.

That is almost **TWO FULL DAYS A WEEK** where your most expensive, innovative talent is stuck in treading water.



SLIPPING THROUGH THE CRACKS (DEFECTS AND RISKS)

MANUAL TESTING DOESN'T JUST SLOW YOU DOWN.

It actively fails to protect your business. Humans get tired. They miss things. When you rely on manual processes to check complex, interconnected codebases, bugs inevitably slip through the cracks.

THE DATA PROVES IT.

A worrying **41%** of organisations find a significant number of production defects every single year.

Let's be clear about what a **"production defect"** actually means. It means broken code has made it past your QA team, past your staging environment, and directly into the hands of your customers.

IT MEANS YOUR SOFTWARE IS FAILING IN THE REAL WORLD.

CRACKS

For IT decision-makers, this is the stuff of nightmares. When we asked respondents about their top concerns regarding errors making it into production, the answers were telling:

48% - Damage to organisational reputation

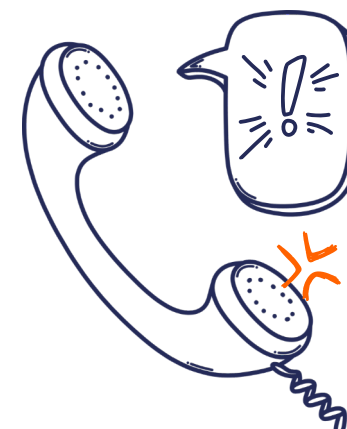
47% - Security risks and compliance breaches

46% - Reduced customer satisfaction

THESE DEFECTS HIT YOUR BOTTOM LINE.

42% RISE

in customer complaints are reported when development speeds up without improvements in testing quality².



THE COSTLY REMEDIATION TRAP



Finding a bug after you have released your software is what keeps your software engineers up at night.

It disrupts your operations. It angers your users. And it drains your resources at an alarming rate.

Industry benchmarks from IBM and NIST show just how brutal this trap is. Fixing a bug in production costs **15 TIMES MORE** than catching it early in the design and architectural phase. The further a defect travels down the software development life cycle, the more expensive it becomes to fix.

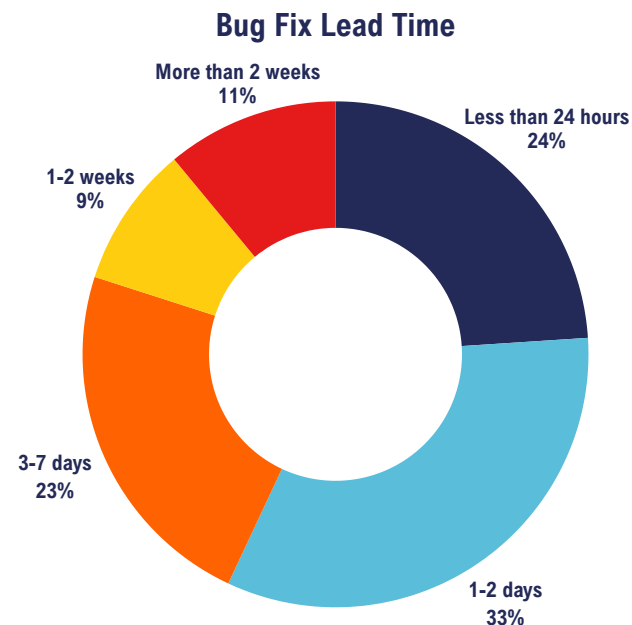
OUR RESEARCH HIGHLIGHTS THE STRUGGLE TEAMS FACE WHEN TRYING TO CLEAN UP THESE ISSUES.

24% OF ORGANISATIONS

manage to remediate production errors within 24 hours.

20% OF ORGANISATIONS

take weeks to resolve issues.



THE SOLUTION IS AUTOMATION

SO, WHAT HAPPENS WHEN YOU STOP RELYING ON MANUAL TESTING AND EMBRACE AUTOMATION?

The data speaks for itself. We drew the battle lines and compared the outcomes of the organisations using 100% automated testing against those relying primarily on manual testing.

The advantage of automation is undeniable.

SPEED TO RELEASE

AUTOMATED TEAMS MOVE INCREDIBLY FAST.

40% of fully automated teams release new software versions frequently, with **20%** reporting daily updates.

They are agile, responsive, and constantly delivering value. Contrast this with manual testers, where a massive **64%** are stuck releasing monthly, quarterly, or even annually. Furthermore, **80%** of automated respondents finish their regression cycles in under a week. Only **58%** of manual testers can say the same.

DEFECT DETECTION

AUTOMATION CATCHES WHAT HUMANS MISS.

40% of fully automated teams report finding very few defects in production (just 1 to 10 per year).

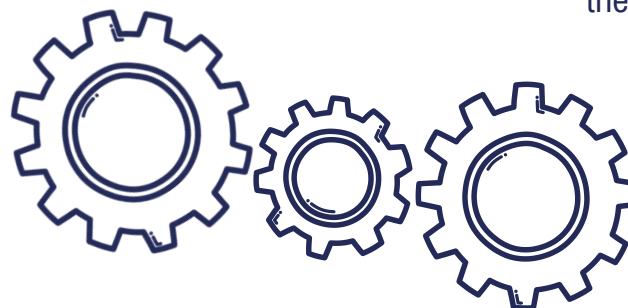
On the flip side, **23%** of manual teams report 26+ bugs per year.

POST-PRODUCTION IMPACT

BOTH GROUPS ARE DRIVEN BY FEARS ABOUT THE IMPACT OF A BUG MAKING IT PAST TESTING.

30% of automated teams cite improving security as a top concern. Proving that automation is a strategic security play, not just a speed hack.

Meanwhile, primarily manual teams cite damaging the organisation's reputation as their biggest fear (**46%**).



THE SOLUTION IS AUTOMATION

CONTINUED.

REMEDiation SPEED

WHEN BUGS DO HAPPEN, AUTOMATED TEAMS FIX THEM FASTER.

30% of automated teams resolve production bugs in less than 24 hours, and **85%** do it in less than a week.

Meanwhile, **11%** of manual teams take more than two weeks to fix a live issue.

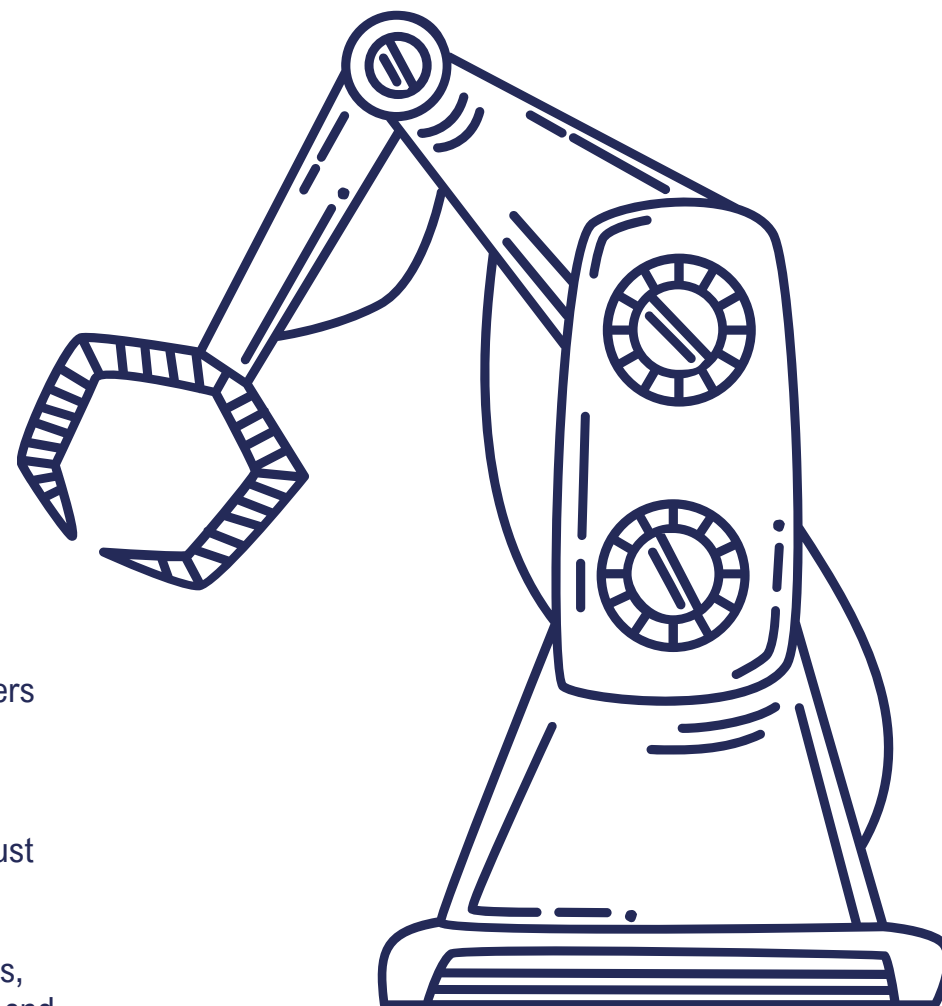
TEAM EFFICIENCY

AUTOMATION SCALES.

60% of fully automated setups achieve these superior results with zero dedicated human testers, freeing their engineers up to focus on what comes next.

Meanwhile, **42%** of manual testers require huge teams of 21+ people just to keep their heads above water.

Automation gives you faster releases, better security, cheaper operations, and leaner teams.



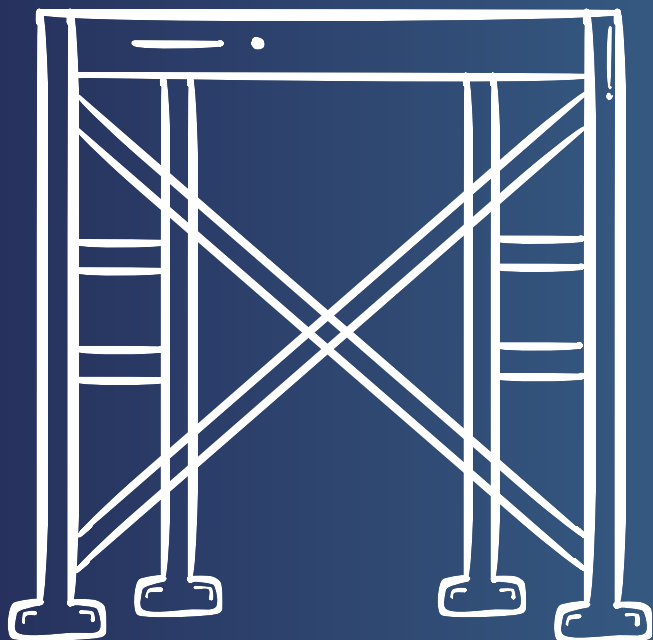
WHY ISN'T EVERYONE AUTOMATING THEIR TESTING?

UNTIL RECENTLY, TEST AUTOMATION WAS A HEADACHE.

It swallowed time, drained budgets, and required specialist skills that very few people actually had, or wanted to use.

You had to build bespoke frameworks from scratch, and then you faced endless maintenance every time a requirement shifted or a UI updated.

WE'VE BUILT A BETTER WAY.



Testing bottlenecks are hurting your business, and automation offers the opportunity to transform how your engineers operate.

But getting there can feel daunting.

FINDING EXPERIENCED AUTOMATED TEST ENGINEERS IS TOUGH, AND EXPENSIVE.

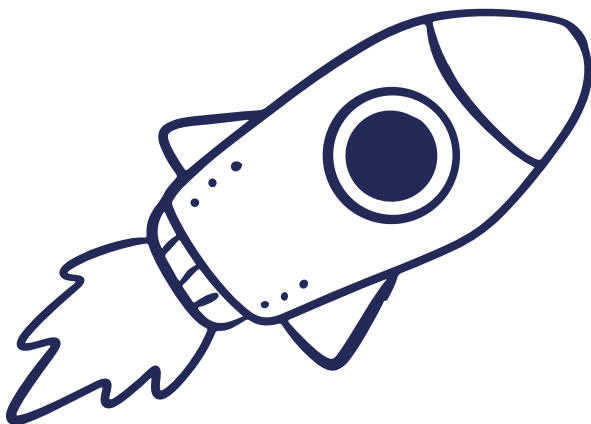
Plus, building a test suite that actually uncovers real issues in complex systems drains your team's time.

THAT'S WHY WE BUILT OUR FRONTIER QUALITY ENGINEERING SOLUTION

It is a smarter, faster, and more effective way to achieve quality at speed.

We bring together engineering-led expertise, Agentic AI-powered automation, and best-of-breed tooling to help you break free from manual testing bottlenecks.

We accelerate your journey to robust, secure software delivery.



Here is what sets our approach apart:

AGENTIC AI-ASSISTED TEST GENERATION

We augment your QA processes with proven AI accelerators. We generate tests directly from your requirements, cutting manual test creation effort by up to **50%**.

PREDICTIVE DEFECT ANALYSIS

We don't wait for things to break. We seek out high-risk areas before your code even gets to the testing phase, catching up to **60%** more defects early in the cycle.

SELF-HEALING AUTOMATION

UIs change. That usually breaks automated tests. Not ours. Our self-healing automation adapts as your interface evolves, slashing your test maintenance overhead by **65%**.

SMART TEST SELECTION

Stop running every test for every minor change. We use smart selection to run only the tests that matter, giving your developers feedback loops in hours, not days.

STOP FIREFIGHTING, START INNOVATING

THE TECHNOLOGY LANDSCAPE IS UNFORGIVING.

Customers expect flawless digital experiences. Hackers are constantly looking for vulnerabilities. The pressure to deliver secure, high-quality software at speed is relentless.

Our research proves what we see in in our customers every single day: Automating your testing leads to a faster time to production, significantly higher quality releases, and drastically reduced operational costs.

The organisations that embrace automation are releasing code daily or weekly, resolving bugs in hours, and running lean, highly efficient teams.

You don't have to settle for slow releases or the fear of a production defect tanking your customer satisfaction or violating compliance standards.

Most importantly, you don't have to force your most talented software engineers to waste their days running manual regression tests or fixing old code.

It is time to stop firefighting and start innovating.

There is a different way to tackle your complex technology challenges. The Transparency Way. We bring the clear, dependable Microsoft expertise you need to modernise your QA processes and scale with confidence.



READY TO UNLOCK YOUR YOUR SOFTWARE POTENTIAL?

Book a strategic consultation with a **Transparency Frontier Quality Engineering** expert today. Let's turn your testing bottleneck into your biggest competitive advantage.