



Testing and transformation

Why quality is critical in modernization



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Modernization and transformation programs are complex undertakings. Complex programs of work unfortunately result in higher likelihoods of failure and budget overruns, leading to unsatisfactory business and customer outcomes.

For over 25 years CPT Global has helped businesses deliver successful modernization and transformation projects. In this whitepaper, our Quality Assurance experts provide some insights into the best approach for delivering successful complex programs of work – an approach we at CPT Global call “Solution Testing”.

In this whitepaper we discuss:

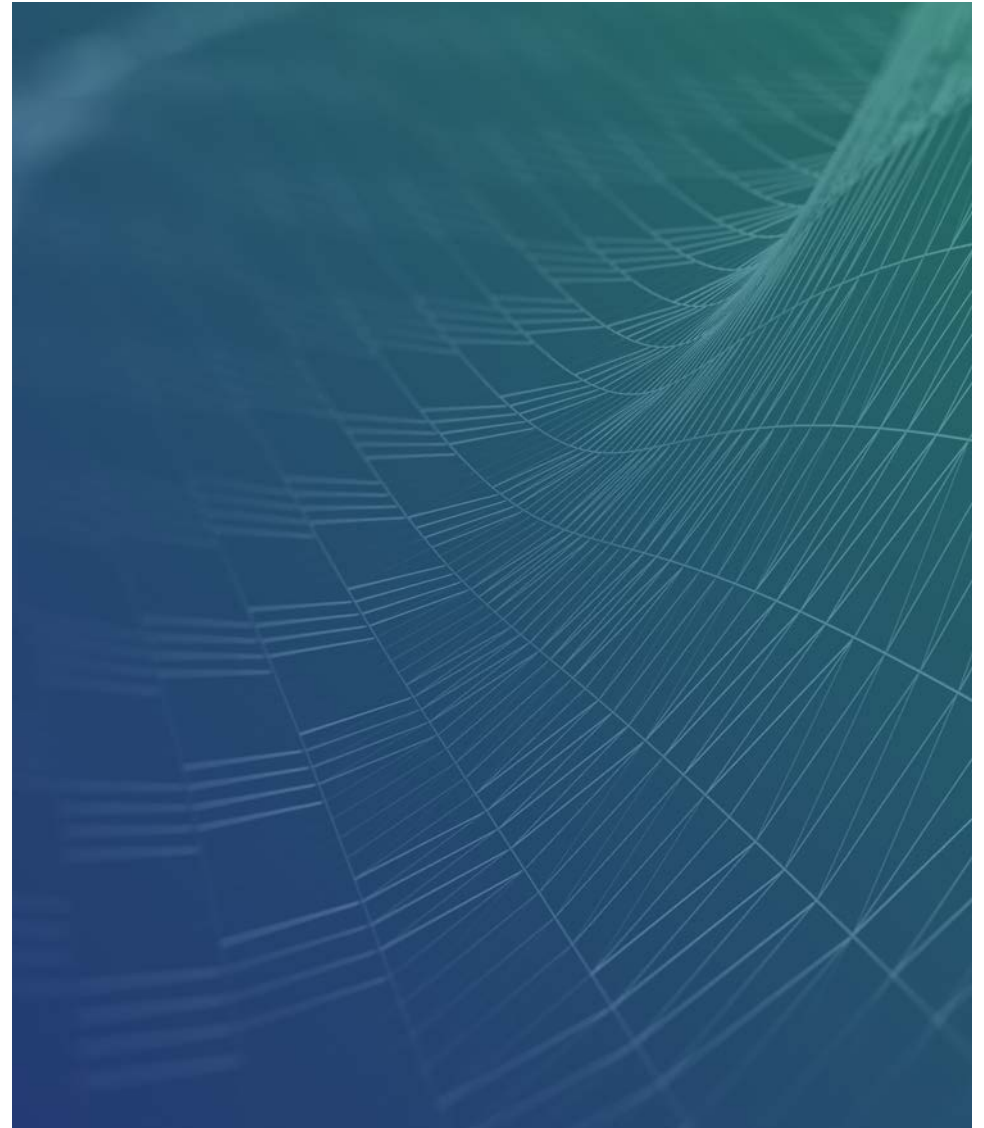
- What solution testing is and why it’s a necessity
- Why solution testing is the right approach for complex programs
- How solution testing delivers business value
- What qualities to look for in a testing partner

What is solution testing?



Solution testing is a full-stack approach to testing that ensures the components of an enterprise solution work together. At its core, solution testing provides assurance that new components integrate and harmonize with existing platforms, software, processes, and procedures.

As modernization takes place throughout an enterprise, legacy systems are replaced with new technologies and applications that provide critical functionality. Solution testing helps you find and resolve problems before they impact integration and system integrity.



What is solution testing?

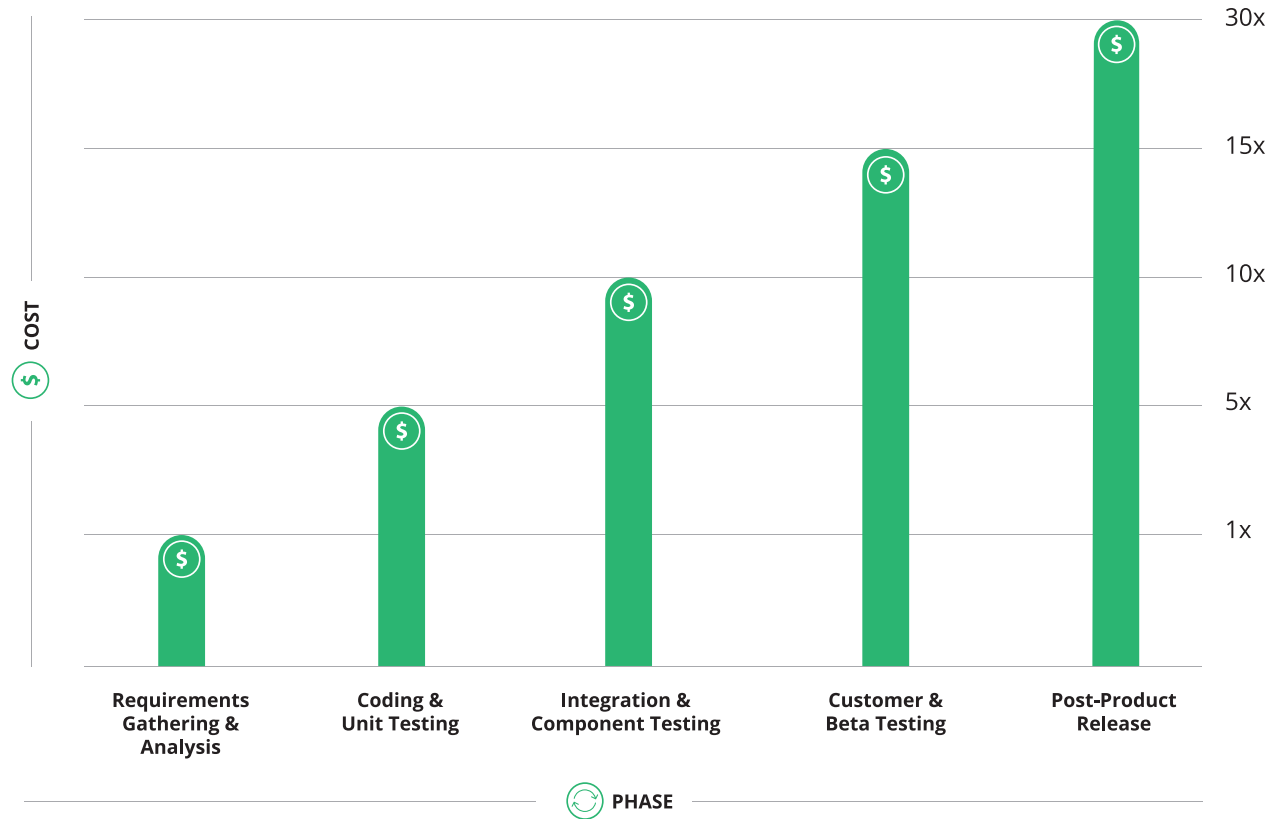


When is solution testing most effective?

Solution testing is most effective when it is considered strategically, ahead of any changes or updates to the IT environment, ensuring critical components of an enterprise solution work seamlessly together before implementation.

For modernization to be successful, quality testing and assurance practices must be instituted early. Waiting to undertake solution testing while you're midstream in a project or after changes have been made may not only lead to broken processes, it can put your whole system in jeopardy as relatively small issues turn into huge modernization obstacles, potentially risking every aspect of IT delivery.

TESTING COSTS ACROSS PROJECT PHASES *



* Source: NIST

Why solution testing is the right approach for complex programs of work



Getting leadership on board with testing can be tricky. But there are many compelling business reasons for making the investment.

✓ Solution testing delivers business value

Solution testing enables your organization to validate business applications in a live environment. This can help lower risk before launch, ensuring systems are ready to fully support users and processes.

In terms of deeper analytics, solution testing not only touches the code but also the entire system, helping your business better understand its new environment and problems that exist, thus providing a deeper understanding of issues that may arise in the future.

✓ Solution testing saves companies money

If your company invests in several major implementations per year, solution testing can keep these projects organized in parallel and on schedule, helping your business avoid costly reworks, delays, and cancellations.

Solution testing also helps your business identify areas where a project can be trimmed down or simplified, and which areas of your business are more susceptible to risks, enabling you to focus on adopting processes and risk-mitigation measures that make the biggest impact at the lowest cost.

✓ Solution testing helps set expectations

To ensure proper communication about the testing process, leaders must foster a collaborative environment with clear ownership. IT teams can help set realistic expectations about the testing process and identify pathways that best suit your organization.

✓ Solution testing is everyone's responsibility

Solution testing requires collaboration throughout your business as it can impact critical processes and workflows. Ensuring alignment with leadership before a modernization project kicks off helps ensure resources are properly allocated, so that solution testing runs smoothly and on schedule.

To ensure that modernization is as successful as possible, getting buy-in from leadership, business users, and IT teams is essential. Otherwise, bottlenecks and missed deadlines can occur that negatively impact the entire organization.

How solution testing delivers business value

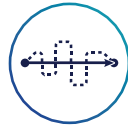


Solution testing offers plenty of advantages to companies ready to modernize.



Happier customers

By testing critical business processes and complex integrated workflows, it's possible to uncover issues that directly impact user experience. Solution testing identifies issues early so they can be fixed before your customers ever encounter them.



Streamlined business processes

Solution testing enables validation planning for an entire solution early in the delivery lifecycle, providing timely insights into the solution's quality. This ensures time and resources are used efficiently throughout implementation, greatly reducing costly mistakes at launch.



Reduced risk

Large-scale implementation projects are ideal candidates for solution testing. Risk of failure can be reduced by the full-stack nature of this testing approach, identifying and resolving issues that might otherwise trigger greater risks if a project were to move forward.

How solution testing delivers business value



Solution testing offers plenty of advantages to companies ready to modernize.



Lower total cost of ownership

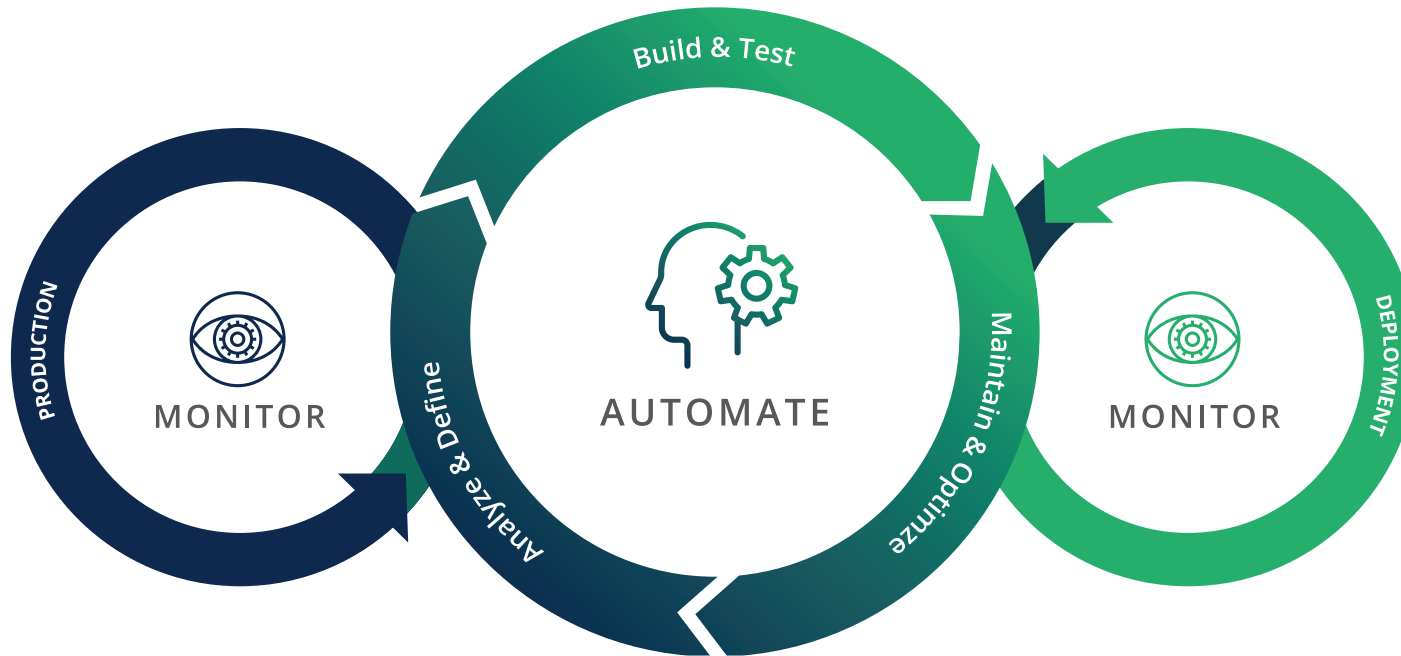
While testing a solution in bits and pieces might seem faster and cheaper at first, fixing problems later in the process is generally much more expensive. By testing holistically and strategically, you can ensure modernization goes as planned, minimizing the need for costly firefighting down the road.



Assurance as insurance

Solution testing enables validation planning for an entire solution early in the delivery lifecycle, providing timely insights into the solution's quality. This ensures time and resources are used efficiently throughout implementation, greatly reducing costly mistakes at launch.

How solution testing helps you achieve application automation



Automating your business applications is no longer an option, it's a necessity. As companies implement more channels to serve customers, having a partner in place that is skilled in automation enablement is essential. Without solution testing, automating without fixing inputs often leads to 'garbage in, garbage out' scenarios.

Having a testing partner that understands the big picture can help you better identify which areas of an application should be auto-

mated and how best to do so. This is especially important when it comes to legacy applications that have been cobbled together over time or in cases where a modern solution must be integrated with older systems.

A good solution testing partner will help you get the most out of your automation investments, not only identifying which areas can be automated, but also helping your team develop a plan for how best to achieve this goal.

Automation across methodologies



Without solution testing in place, businesses often waste time and money trying to automate tests for specific processes or modules, only to find the resulting scripts break easily.

When used to build quality into business applications, solution testing naturally improves the stability and effectiveness of automation across leading delivery methodologies.

Agile: Solution testing helps IT teams integrate automation into the earliest part of an agile team's activities, ensuring automation can be designed into the application up front, which reduces the likelihood of project backtracking as it is added to the solution later.

DevOps: Solution testing helps build confidence in automation accuracy before a solution goes live. This not only helps ensure the solution's success, it boosts DevOps maturity with an established testing framework and enables tests to be created and updated in parallel so organizations can achieve automation faster.

Waterfall: Solution testing gives project teams the ability to optimize for automation at every stage of the delivery process instead of compensating for coverage gaps later. Each time changes are made in development and implementation, testers can update automation and use it as a foundation for future phases.

A successful shift to automation requires strong collaboration between testers, developers, and business users. This ensures that the right tests are being automated in the most effective ways and that new features can be added with little to no interruption. Additionally, it keeps testers involved throughout the development lifecycle, which is vital to maintaining overall product quality.

Solution testing ensures the quality of business applications and creates a stable foundation for long-term automation. An experienced testing partner can help you choose the right path forward and further mitigate project risk by guiding manual testing where it is still required.

Solution testing: A high-impact, low-risk approach



Progress requires the right process. For solution testing – and ultimately modernization – to be successful, your organization needs:

- ✔ **A structured testing plan**
A comprehensive test plan outlines the steps teams need to take for solution testing, but it should be flexible enough to embrace change while also ensuring quality. A strong partner should have experience in managing the testing process from start to finish and organizing the resources to see it through.
- ✔ **Credible and applicable test data**
Accuracy of testing data can seriously impact testing outcomes. For example, if testers use out-of-date data, they might miss critical defects and give your organization a false sense of security – and this bad data may lead to bigger IT issues after launch.
- ✔ **The right testing environment**
Solution testing requires specific software versions and configurations, so teams need an environment capable of running all the solution's components to achieve the right results. Without this, it can be difficult to effectively test critical business processes.
- ✔ **A proactive and capable partner**
A quality partner should be able to show they have the knowledge and tools needed for solution testing. This includes coordinating multiple teams, providing input on how tests should be prioritized and executed, and conducting pre- and post-test analysis to gauge how the new system performs.

Have you chosen the right testing partner?

An effective solution testing partner should bring these qualities to the table:

Deep technical skills

Find a partner with deep technical skills and an understanding of integrated systems, and the ability to mentor the developers that keep your system running.



Expert knowledge of testing techniques

Modernization projects require quality and speed. That's why it's important to work with a partner that brings deep expertise across the full range of modern testing strategies and tools.



A modern approach to modernization

A strong testing partner understands how to make testing a seamless part of production and employs a comprehensive approach to reduce inefficiencies, helping your organization deploy faster and boost modernization effectiveness.



Ability to mentor

Strong technical skills aren't enough. A solution testing partner must be able to train and coach others on best practices, effectively closing any skill or knowledge gaps on your IT team.



A deep understanding of business processes

The right solution testing partner understands your industry at the business level but also has cross-industry experience, enabling your business to adopt best-in-class solutions that act as true business differentiators.

Have you chosen the right testing partner?

An effective solution testing partner brings these qualities to the table:

Unique testing knowledge

Look for a team with in-depth knowledge of your modern and legacy technology to ensure apps perform as expected and technologies work together.



Expertise in legacy and modern platforms and software

Find a partner that can leverage tools and execute solutions across modern and legacy technologies, and provides access to other key partnerships that benefit your business.



A focus on quality

Your testing partner should have a long history of identifying the costs and risks of modernized testing and delivering high-quality solutions to clients in multiple markets and industries.



Primed for a digital future

Your testing partner should have a plan for future-proofing your testing environments, so your organization is always prepared to evolve as future solutions emerge.



Data-driven

A good testing partner provides data before, during, and after testing to enable more accurate business and risk-mitigation decisions, while helping IT adopt a data-driven culture focused on delivering high-quality solutions.

Have you chosen the right testing partner?

An effective solution testing partner brings these qualities to the table:

Broad IT experience

Engage a testing partner with diverse skills and a 'big picture' view on making modernization work.



Tool-and methodology-agnostic

No matter which tools or software development methodology your business uses, a competent testing partner should be able to adapt and bring tailored, fit-for-purpose solutions to the table.



Well-informed on industry standards

Having the ability to work with industry standards is the hallmark of a strong testing partner because it helps ensure testing is effective and efficient.



Experienced with modernization

The more experience a partner has with the modernization process, the better chance they can help you accelerate your own modernization project.



A successful track record in complex IT environments

High-performing teams should possess hands-on experience with both applications and automation, so they can offer practical advice on getting the most out of solution testing.

Is outsourcing testing a good modernization strategy?



While a testing strategy helps assure release quality, it doesn't always account for other areas of your business that connect with IT. This makes having the right testing partner even more important.

Outsourcing has long been a mainstay of business operations, and for good reason. It enables businesses to focus on their core competencies while delegating complex or strategic tasks that align with their primary goals. When it comes to testing, outsourcing can be a great way to ensure quality and free up internal resources at the same time, so internal IT teams can focus on other key aspects of the software development process.

However, simply finding any testing partner won't do. The key to outsourced testing is finding a partner that can help you modernize your overall business strategy. This means finding a partner that not only understands the intricacies of software testing but also your specific business goals, your customers' expectations, and how IT can achieve them.

When choosing a modernization testing partner, consider their:

- Experience with your specific industry or business type
- Ability to build bridges between teams to streamline processes and improve output
- Expertise in uplifting outsource partners and planning collaboratively to ensure a project's success
- Ability to help IT develop a comprehensive testing strategy that addresses all aspects of your development process
- Ability to provide an end-to-end solution that includes test automation

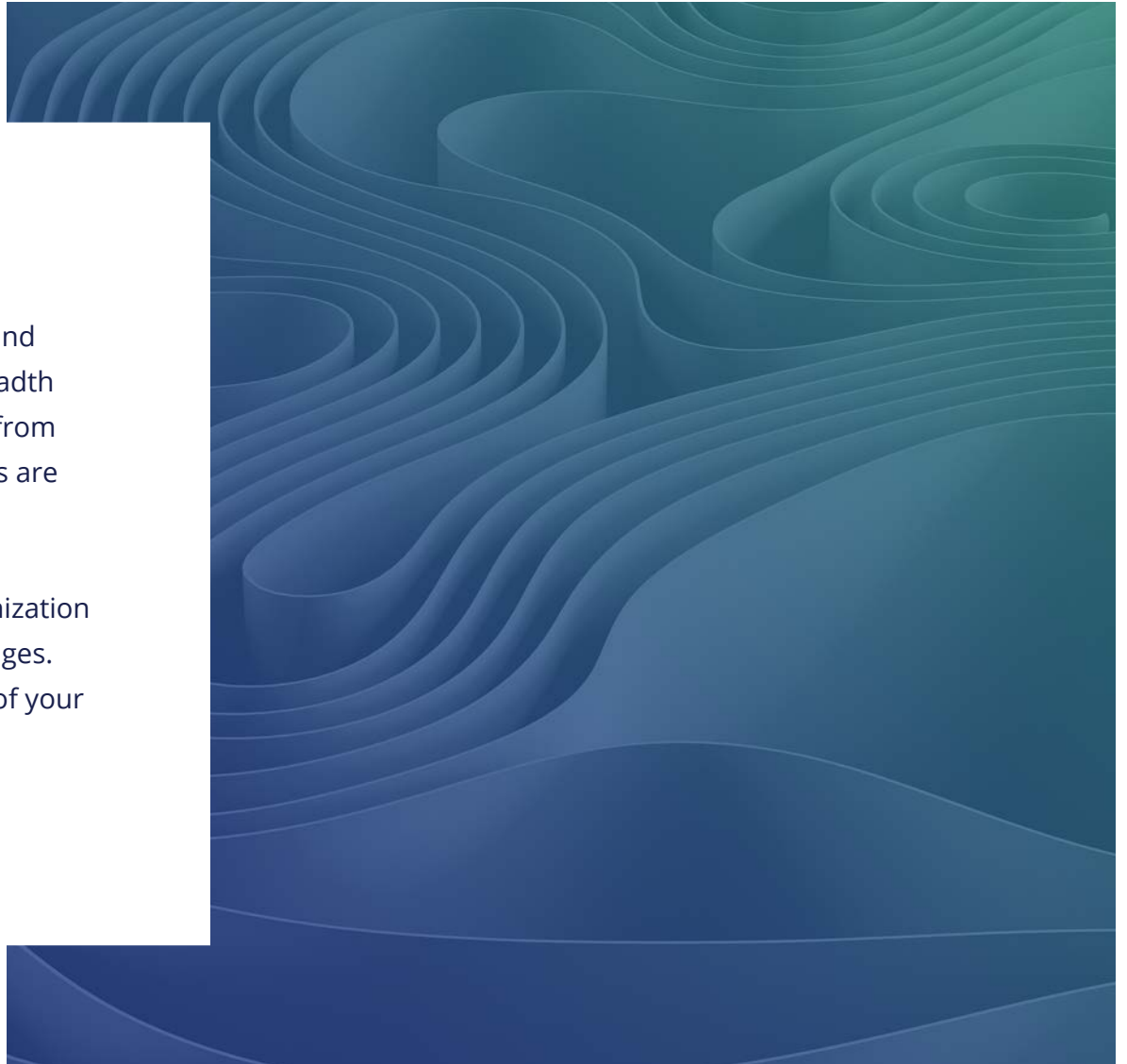
Outsourcing testing can enable businesses to focus on their core strengths. However, choosing the wrong partner can jeopardize your modernization or transformation initiative.

About CPT Global



For over 25 years, CPT Global has worked with large organizations embarking on complex modernization and transformation initiatives. We have the depth and breadth of experience to design the right assurance solutions from the beginning or remediate programs where problems are apparent or beginning to emerge.

CPT Global is an independent, expert consulting organization that thrives on solving complex modernization challenges. As your partner, CPT Global helps assure the success of your testing and modernization projects.





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