"TCS has displayed considerable professionalism in completing the Managed Service Transformation Program. This work has combined a number of other transformational activities like process streamlining, automation of regression test packs, customer experience testing and risk-based testing to name only a few, to put us in a much stronger position. I also appreciate and acknowledge the extra efforts that went into achieving this within the timescale specified."

- Managing Director, Europe’s largest telecom operator

"TCS has the highest penetration of its validation services in the financial services, retail, communication and media sectors. Customers also look to TCS for validation of safety and mission critical systems. TCS is well positioned in the assurance market because of its deep involvement in the product engineering and R&D initiatives."

- International Data Corporation (IDC)

"The wide range of services, the size of its practice and its experience in managed testing services contracts and complex engagements position TCS among the leaders in specialized testing services."

- Nelson Hall

"TCS is benefiting from continuing investments in its nearshore presence, consulting capabilities, acquisitions and the development of its global delivery network."

- Pierre Audoin Consultants (PAC)
Verification and validation take up to 40% of effort and resources in software development. Fighting time-to-market and cost constraints, enterprises often risk production quality with inadequate testing, resulting in higher maintenance costs, increased chances of failure, and customer dissatisfaction. We work with organizations across the globe to meet their testing requirements. By leveraging our domain, frameworks, tools, and methodologies, we enable enterprises to reduce time and effort spent on testing, thus making the entire software development life-cycle more efficient and achieve the desired business outcome.

Overview
In a fast-moving and often unpredictable world, you need abilities and instincts that match up. You need to be able to identify market needs, create new products or services and maintain existing ones, and then make your moves before the competition does. In addition, enterprises are coping with the explosion of disruptive business events like technology paradigms, new growth markets, mergers and acquisitions, distributed systems, multiple IT touch points that increase the need for high availability and reliability of systems, complex, seamless and distributed IT architectures, and a demanding and ever-changing regulatory landscape. These factors drive enterprises to continuously strive to stay competitive in the new business scenario. Testing is one of the strategic levers that helps achieve these business imperatives.

Your development cycle has to be fast but thorough and it cannot get bogged down in bureaucracy or antiquated processes. As IT and business processes become integrated and tightly linked, organizations have realized the importance of testing, but are often faced with the challenges of performing this task effectively.

TCS Assurance Services is built to provide you with the nondomestic, agile, digitized, standardized and transformative solution that you need to turn your ideas into revenue-generating products and services. Our spectrum of services help you do just that for less money, in less time, and in a simpler manner. Your strategy is to thrive in an uncertain world and our expertise and experience can help you do that.

The TCS Advantage
Our assurance services triple-play offers a compelling proposition served on a global stage with multiple facilities to choose from. You can benefit from three unique TCS advantages: domain heritage, innovation, and delivery assurance - for excelling in your QA services.

Domain Heritage
TCS has a rich heritage of domain knowledge spanning across all major industry verticals. By virtue of its decade-long expertise in independent testing services coupled with multiple man-years domain experience, TCS has achieved deep domain advantage and created a master library of domain-based, reusable business functions. This gives you the necessary edge and transforms your business by reducing time-to-market for new products by 15-20%. TCS also provides you a well-balanced engineering structure with the right blend of domain, technology, and testing.

Innovation
TCS has set up state-of-the-art labs for test automation and performance engineering to develop and deploy test and loading tools, analytics, and accelerators to customers. TCS has also partnered with top notch universities and co-innovation partners with primary focus on testing and QA, TCS innovation and flexible pricing options cost leadership to customers.

Delivery Assurance
All testing solutions are personalized to your requirements, and assured delivery is realized through proven engagement models, two pillars of product and process quality, instances of QA guardian, test value chain digitization and synergistic independence in testing services.

How We Help Customers
Leading Telecom Company able to deliver defect-free handset faster
This large European telecom company was looking for a partner to handle its critical mobile handset testing processes that would improve time-to-market, ensure high quality, and cut operating costs. We developed an automated test solution that enabled a complete handset machine with reduced effort and more than 40 types of functions. Test process optimization, greater test modularity, and overnight test run taking advantage of the time zone difference reduced the turnaround cycle time from weeks to 4-4 weeks while test coverage improved to almost 100%. Development of a mobile testing framework to test 3G applications yielded more than 50% cost benefits over other third party vendors. Overall, we have been able to help the customer consolidate a USD 1 million annually through various innovative approaches and solutions.

What TCS offers
TCS Assurance Services offers a wide spectrum of services in both the “Think” and “Execute” phases of testing. The “Think” phase entails Test consulting services and “Execute” phases offers the implementation and execution aspect of testing services. Our comprehensive pack of testing solutions helps you improve time-to-market for new product releases, increase cost savings, and achieve outstanding quality through better processes, tools, and techniques.

Our consulting offerings help in strategy definition as we work with customers to derive strategy based on risk analysis, feature prioritization, and automation opportunities as well as with test refinement, where we assess and improve testing processes using industry standard models. In our Execution services, we work in a variety of engagement models with our customers to help in functional testing, system testing, regression testing, and user acceptance testing. Our nonfunctional testing services are based on the principle that performance has to be engineered into a solution rather than tested and include performance testing, tuning, and optimization, and benchmark tests.

Effective testing leads to quick release of products
A leader in providing high quality content products and smart information tools for health, financial services, tax, accounting, legal, and education businesses, this enterprise had earlier engaged with contractors for their QA needs. Faced with time-to-market delays, rising costs, and inefficiencies in their software development cycle, they realized the need for standard processes and methodology and dedicated resources for QA activities. We set up a Testing Centre of Excellence (TCoE) to manage the QA testing requirements of their corporate legal services division. The success of this TCoE led the enterprise to use the model across the organization. With nearly zero defect delivery, testing effectiveness improved by 60-90 percent. In the absence of any defects being detected beyond our testing, the enterprise decided to remove the UAT phases for some of its applications.
### Overview

In a fast-moving and often unpredictable world, you need abilities and instincts that match up. You need to be able to identify market needs, create new products or services and enhance existing ones, and then make your moves before the competition does.

In addition, enterprises are coping with the explosion of disruptive business events like new technology paradigms, new growth markets, mergers and acquisitions, distributed systems, multiple IT touch points that increase the need for high availability and reliability of systems, complex, scattered and distributed IT architectures, and a demanding and ever-changing regulatory landscape. These factors drive enterprises to continuously strive to stay competitive in the new business scenario. Testing is one of the strategic levers that helps achieve these business imperatives.

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### How We Help Customers

**Leading Telecom Company able to deliver defect-free handset faster**

This large European telecom company was looking for a partner to handle its critical mobile handset testing processes that would improve time-to-market, ensure high-quality and cut operating costs. We developed an automated test solution that enabled six handset manufacturers with reduced effort and time for more than 40 types of handsets. Test process optimization, greater test modifiability, and overnight test runs taking advantage of the time zone difference reduced the turnaround cycle time from weeks to 4-6 weeks while test coverage improved to almost 100%. Development of a J2ME test framework to test 3G applications resulted in more than 50% cost benefits over other third party vendors. Overall, we have been able to help the customer save more than USD 1 million annually through various innovative approaches and solutions.

### Domain Heritage

TCS has a rich heritage of domain knowledge spanning across all major industry verticals. By virtue of its decade-long expertise in independent testing services coupled with multiple marques domain experiences, TCS has achieved deep domain advantage and created a master library of domain-based, reusable business functions. This gives you the necessary edge and transforms your business by reducing time-to-market for new products by 15-20%. TCS also provides you a reengineered testing structure with the right blend of domain, technology, and testing.

### Delivery Assurance

All testing solutions are personalized to your requirements, and assured delivery is realized through proven engagement model, two pillars of product and process quality, instances of QA guard, test value chain digitization and synergistic independence in testing services.

### Innovation

TCS has set up state-of-the-art Labs for test automation and performance engineering to develop and deploy test and increased productivity and quality to customers. TCS has also partnered with top notch partners to develop and provide services. TCS has also partnered with top notch partners to develop and provide the best test automation and performance services.

### How TCS delivers

#### Consulting and Advisory Services

- Structured code assessment
- Performance Test Consulting
- Testing Centre of Excellence Setup
- Test Strategy Definition
- Test Process Consulting
- QA Industry Best Practices
- In-house R&D on tools & frameworks: Digital Test Value

#### Assurance Services offerings

- Static Analysis (SAST)
- Vulnerability Scanning
- Penetration Testing
- Mobile Application Security Testing
- Application Performance Consulting
- Automated Testing
- Beyond Functional Testing – Performance, Security, Localization, Usability, Accessibility
- Functional Testing – Functional to UAT to operational readiness
- Static Testing and structural code evaluation

#### Solutions

- Industry specific solution accelerators
- Regulatory/Compliance COE
- Lab: Automation, Performance, Security
- Test Process Outsourcing, Administration, Management
- Test Environment Management
- Test Data and Code Management
- Regional and Managed Services

#### Implementation

- Site Finding and Structural Code Evaluation
- Test Automation
- Regression Testing
- J2ME, S60, OS9, EM, Other
- Managed Services Functions - Environment, Test Data, Release, Configuration and Change Management

#### Support

- In-House R&D on tools & frameworks: Digital Test Value
- Benchmark tests

#### Deliverables

- User-specific test automation frameworks
- Performance/Compliance SLD
- Lab: Automation, Performance, Security
- Test Process Outsourcing, Administration, Management
- Test Environment Management
- Test Data and Code Management
- Regional and Managed Services

### How effective testing leads to quick release of products

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“TCS has displayed considerable professionalism in completing the Managed Service Transformation Program. This work has combined a number of other transformational activities: like process streamlining, automation of regression test pools, customer experience testing and risk based testing. In many ways, it put us in a much stronger position. I also appreciate and acknowledge the extra efforts that went into achieving this all within the timescale specified.”

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