

Managed Testing Services

A collaborative and customized approach to sourcing testing and quality assurance services

Performance driven. Quality assured.





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Managed Testing Services

A single application failure at a crucial point in a transaction can be complex to repair and cost millions in lost sales and customer goodwill. Testing is an absolutely critical element in ensuring that software and applications perform as specified, are rolled-out quickly, and don't threaten business continuity during deployment.

However, for many companies, reaching this level of assurance presents significant challenges:

- Quality Assurance (QA) and testing are not core to the business, and dedicated testing resources are scarce or overstretched;
- Specialist skills and test environments, such as multisystem end-to-end testing, are expensive;
- Over-reliance on software developers results in production issues;
- Business demands continue to grow particularly for 'right first time' software launches.

Underlying the technical issues are the never-ending drive for increased productivity, reduced lead-times, lower costs, and the need to comply with the latest legislation and regulations—all of which put greater pressure on quality assurance.

As one of the largest, dedicated, and independent professional testing practices in the world, Capgemini has developed testing as a key strength, with over 6,400 professional testers and a further 11,000 resources with testing expertise. We develop our own testing Intellectual Property including the leading global testing methodology TMap®, which we use to address a wide range of testing needs from application software and firmware, to mobile devices and even aircraft, for hundreds of clients around the world.

Leveraging the skills of a specialized testing partner, like Capgemini, to manage day-to-day quality assurance, can free your management time to focus on other operational or strategic issues.

Businesses are relying more heavily on cutting edge technology as a key channel to provide products and services to their customers, making the demands on IT departments more intense and unforgiving in a complex 24/7 world. IT services must be fast, seamless, defect-free, and cost-effective.

Sharing the Risk with a Trusted Test Partner

Capgemini Managed Testing Services (MTS) is the right structured solution to these major test challenges, providing you with the test organization, processes, and environment that will achieve optimum results and dependable state-of-the-art software that performs time after time.

MTS is an end-to-end fully customized service in which we take responsibility for test activities at either enterprise or program level. Our flexible teams of testing professionals, organized in dedicated client test lines at our Test Centers of Excellence around the world, are cross-trained in multiple technologies and can be scaled up or down on demand allowing you to meet the perennial issues of resource peaks and troughs experienced by all organizations.

A collaborative approach to sourcing testing and QA services, MTS is the solution for clients who want to transform their testing function and achieve high-quality systems cost-effectively, without the expense of large overheads and day-to-day responsibilities, and without losing overall control.

The Essentials of Managed Testing Services

TMap®

Fundamental to the MTS governance model and test execution is TMap®-our business-driven, risk-based approach for structured and industrialized software testing, designed to address your key issues of quality, time, and cost across the whole development lifecycle. Used as a standard at our test centers, TMap® achieves the benefits of our client experience, industry benchmarks, and economies of scale, all aligned with business objectives.

State-of-the-Art Industrialization

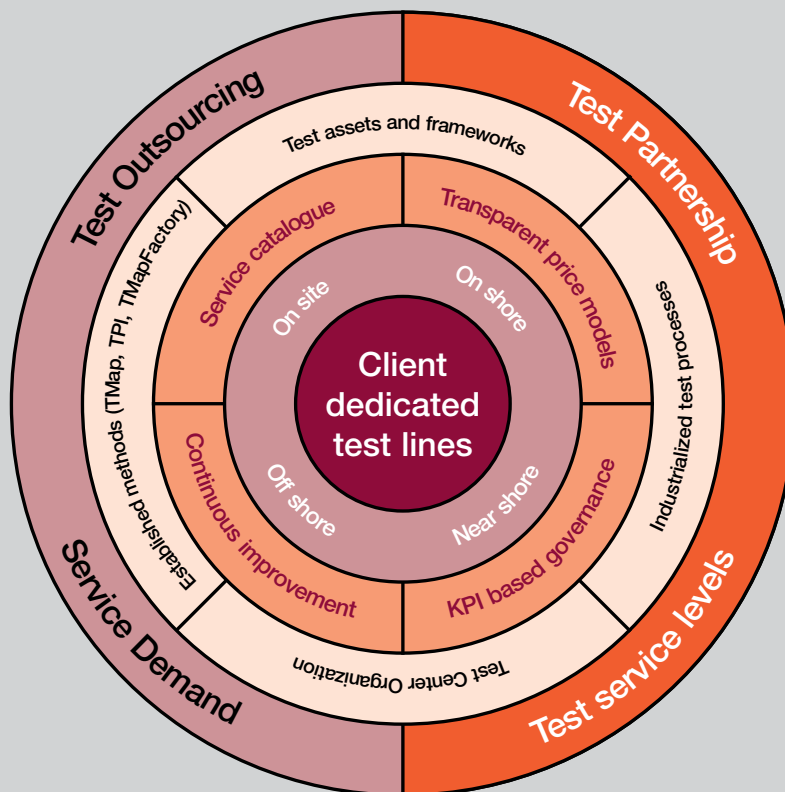
Our solution combines business-driven test management processes with test automation frameworks, tools, and test workbench solutions. These accelerators are both generic test environment management, model-based testing, process templates, and test engines for test tools-and customized for specific industry sectors.

Innovation

Innovation is at the heart of all we do. We make significant investment in staying ahead of the competition, funding business-focused research at our dedicated Innovation Labs in Europe, the USA, and India.

We develop specialized tools and reusable accelerators, including model-based testing, test automation frameworks, performance test utilities, defect prediction, RBT techniques, orthogonal array, and cloud testing. We use these to help resolve our clients' particular testing challenges and embed best practice.

Figure 1. The components of a Managed Testing Service



Our complete test solution is a cost-effective combination of industrialization, innovation, intellectual property, industry expertise and scale.

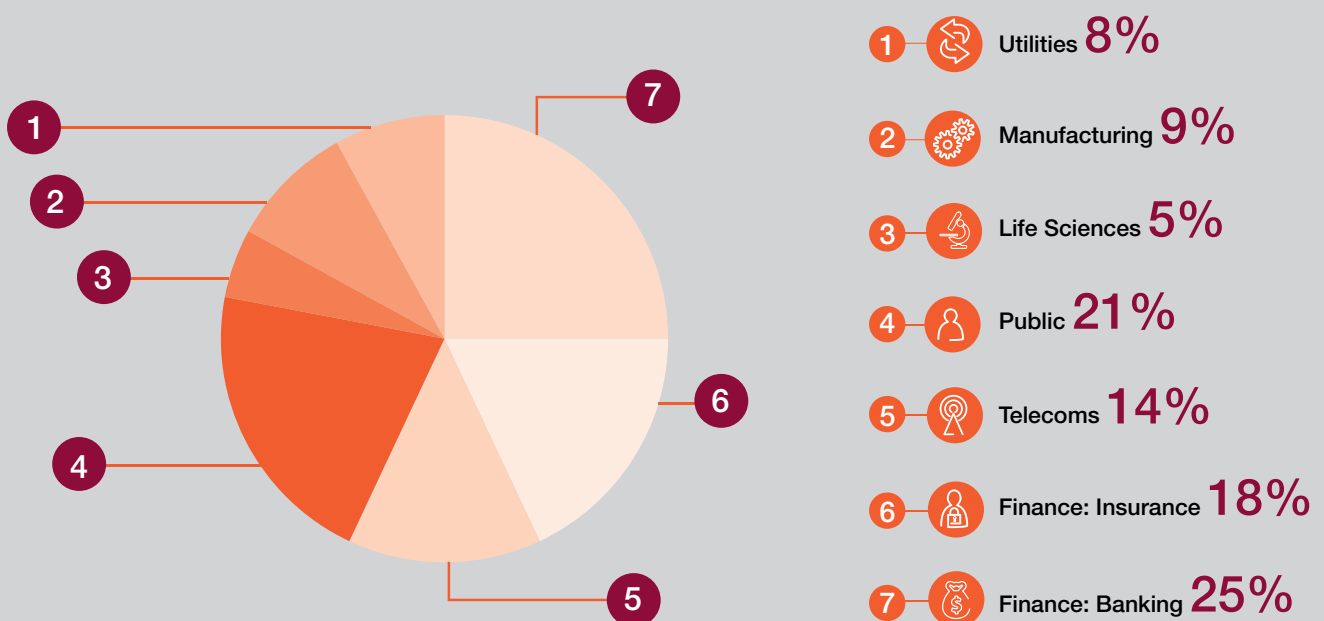
Through our long-term partnerships with the world's largest technology suppliers including HP, IBM, and Microsoft, we have developed special TMap® plug-ins, providing our test process guidance and templates within the market-leading software test management tools.

This combination of best-practice methodology and tools accelerates test strategy development and consistent delivery, and facilitates test automation, reporting and collaboration—valuable for you in ascertaining and mitigating business risk.

Dedicated and Scalable Resources

A core team is allocated to your business to maintain and reuse the accumulated knowledge of testing in your organization. Importantly, this team can be scaled on demand to deliver expertise across multiple technologies and efficiently solve the problem of limited testing resources.

Figure 2. Capgemini domain expertise



Our One Team approach means that our team members work with you seamlessly-whether onsite, onshore, nearshore, or offshore- using standardized processes and collaborative tools to drive the best out of your business.

Business-Driven Vertical Expertise

We have built up an enviable track record, delivering long-term MTS contracts for many multi-national organizations across a range of industries, including financial services, telecoms, public, manufacturing, utilities and life sciences sectors. By combining deep technological know-how with valuable business and sector-specific insight (see Figure 2), we can rapidly identify and deliver exactly what is required.

Onshore, Offshore, Rightshore®

High quality and efficient testing processes are leveraged using our global delivery model Rightshore® via multiple onshore test centers, offshore centers in India and China, plus nearshore facilities in Eastern Europe, South America, and North Africa.

Rightshore® provides an ideal combination of scalable professional resources at the right place and right time, at a competitive price.

Our 'One Team' approach means that our team members work with you seamlessly-whether onsite, onshore, nearshore, or offshore-using standardized processes and collaborative tools to drive the best out of your business.



The Road to Managed Testing Services

For each customer, we structure the service around the following milestones, outlined in Figure 3:

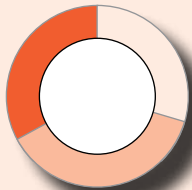
- The business case ensures that the solution proposed is fully aligned with organizational goals and will generate the required level of tangible business value;
- Detailed analysis identifies potential KPI targets and crucial transformation steps;

- Transition consists of installing demand management and acceptance processes, building a test line and implementing the first projects;
- Operation and Innovation-full responsibility for all domains and systems, the introduction of initial innovation measures, and early value-added results are typically achieved in the first 3-12 months. Continuous monitoring of KPIs leads to further reductions in test costs and test activity lead times;
- A clear exit strategy is defined, should the contract not be renewed.

Customized Service-Measured by Performance

Each service is built around business requirements and measured by client-specific Service Level Agreements (SLAs). These are directly aligned to business objectives, with detailed

Figure 3. Managed Testing Service Roadmap

Phase 1 Business case	Phase 2 Detailed analysis	Phase 3 Transition	Phase 4 Operation & Innovation	Phase 5 Exit strategy
<ul style="list-style-type: none"> • High-level analysis: <ul style="list-style-type: none"> - Business / IT objectives - Current issues - Scope - Responsibilities - Readiness scan • High-level solutions: cost / benefits • Go-ahead decision 	<ul style="list-style-type: none"> • Base line: <ul style="list-style-type: none"> - Test process - Test environment - Testware - Test capabilities - Organization - Responsibilities - Transition priority • Workshops: <ul style="list-style-type: none"> - KPIs / SLAs - Demand-supply - Service maturity model • Partner selection 	<ul style="list-style-type: none"> • Supply process: <ul style="list-style-type: none"> - Proof of concept - Core team set-up - Knowledge transfer - Operational procedures - Test environment preparation - Project calendar • Demand process: <ul style="list-style-type: none"> - Forecast - Engagement request - Acceptance 	<ul style="list-style-type: none"> • Operations & governance: <ul style="list-style-type: none"> - Business-driven testing - Industrialization - Work package distribution - Improvement - KPI management - Performance reporting - SLA evaluation - Steering committee 	<ul style="list-style-type: none"> • Processes: <ul style="list-style-type: none"> - Exit planning - Exit team - Knowledge transfer back 
<ul style="list-style-type: none"> • Business case • High-level plan 	<ul style="list-style-type: none"> • Adjust business case • Transition plan • KPIs / SLAs 	<ul style="list-style-type: none"> • Adjust business case • Service contract • Generic test agreement • Test organization 	<ul style="list-style-type: none"> • Tested systems • Test ware • SLA Reports • Improvement plan 	<ul style="list-style-type: none"> • Exit plan • Transfer back

KPIs that are closely monitored, evaluated, and continuously improved upon, such as:

- Cost reduction-achieving a lower targeted level of budget spend on testing;
- Test quality-improving the percentage of defects (usually high severity), detected by testing;
- Flexibility-ability to scale up or scale down test capacity within guaranteed response times;
- Time-to-market and reliability-delivery of test results within agreed project milestones;
- Innovation-proposal and implementation of new technologies to accelerate performance improvements.

Full Test Service Concept

Supported by a wealth of test tools, innovative accelerators, and test environments, our range of MTS services includes functional testing (system testing, acceptance testing, regression testing, E2E-testing), non-functional testing (performance, load and stress, security, usability), and specialist test activities (test automation, test environment management).

Passing the Test

Managed Testing Services deliver cost optimization as well as demonstrable improvement in the quality of testing, processes, deliverables, results, and flexibility of test operations.

Typical benefits from an MTS contract include:

- Significantly reduced total cost of testing-an optimal balance between local and offshore execution can result in cost savings of at least 25% in year one;
- Standardization of reliable best-practice test processes-the right conditions can produce up to 30% reduction in the overall test effort;
- Measurable improvement in quality and greater precision-proven detection rates of 97% or higher for high-severity defects can be achieved;
- Improved time-to-market of 15% or more and greater transparency of your testing processes and procedures;
- Scalable resource and delivery flexibility-highly skilled capacity to accommodate increased demand from your business;
- Skills transfer-capabilities and a quality focus are embedded into your organization and consistent quality assurance is delivered across multiple supplier environments;
- Continuous optimization and access to innovation techniques, such as Cloud Testing and Virtualization, to establish and maintain a competitive edge.



Why Choose Capgemini?

Extensive Track Record and Deep Domain Expertise

Our testing heritage stretches back over 20 years, making our accumulated technical and sector knowledge unparalleled—particularly in financial services, telecoms, and government. Over 500 clients from across the industry spectrum trust us to deliver consistently, time after time.

Dedicated Resources

We are one of the largest dedicated professional testing practices in the industry providing expert global delivery. We have over 6,400 career test specialists worldwide and up to 11,000 further application testers available when you need them most.

Global Delivery Network -Rightshore®

We have a global delivery capability and scalable testing resources. Our dedicated onshore/onsite client teams are balanced by an extensive offshore capability and 24x7 operations.

World-leading 'Best in Breed' Intellectual Property

- TMap®-the de facto industry standard for structured testing;
- TPI®-the world's number one model for assessing and improving test processes;
- Quality Blueprint-market-intelligence benchmarking and accelerated implementation using the Group's Innovation Lab techniques;
- *Our World Quality Report*- data from over 400 organizations worldwide providing intelligence on market trends in testing technologies, processes, organizations, outsourcing, and economics.

Continuous Investment in Testing Innovation

We make significant investment in the development of leading testing thinking and fund business-focused research and development through our Innovation Labs across the globe.

Phased and Controlled Roadmap

Our low-risk, proven, and incremental roadmap to test sourcing allows you to choose how much test management control you keep or delegate to a trusted and experienced provider.

Partnering with the Market Leaders

We work in partnership with the world's largest technology suppliers including HP, IBM, and Microsoft; their market-leading testing software suites help us streamline service delivery to clients, while our partners use our TMap® methodology as plug-ins to their tools.



About Capgemini and Sogeti

With around 120,000 people in 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2011 global revenues of EUR 9.7 billion.

Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

Sogeti, its wholly-owned subsidiary, is a leading provider of local professional services, bringing together more than 20,000 professionals in 15 countries and is present in over 100 locations in Europe, the US and India.

Together, Capgemini and Sogeti have developed innovative, business-driven quality assurance (QA) and testing services, combining best-in-breed testing methodologies (TMap® and TPI®) and the global delivery model, Rightshore®, to help organizations achieve their testing and QA goals. Capgemini and Sogeti have created one of the largest dedicated testing practices in the world, with over 9,500 test professionals and a further 14,500 application specialists, notably through a common center of excellence with testing specialists developed in India.

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