Accenture Application Testing Services
Embedding quality into the application lifecycle
Quality applications power the high performance business

Today's testing challenge:
Balancing quality, speed and cost
IT budgets continue to be limited. Technology too is getting more complex. Add in the new realities—social, mobility, analytics and cloud—that are fundamentally changing the way companies do business, opening new avenues to customers, markets and growth at an unprecedented rate.

The business demands the highest level of application availability and stability. Development turnaround times are getting shorter, and many large enterprises are adopting DevOps and agile. Testing teams are under intense pressure to quickly and thoroughly test applications to support a wide variety of end user devices, such as laptops, tablets and phones, without sacrificing quality and speed of delivery.

IT executives globally are looking for new ways to improve application quality and speed and lower cost while managing their digital transformation. This is especially true when they spend as much as 10 to 12 percent of the annual IT budget fixing core application problems.

Accenture's approach:
Radically improve productivity and manage complexity with intelligence
Our clients come to Accenture because we help them rise to these challenges. Accenture thinks differently about application testing—more innovatively and holistically. Instead of testing for quality at the end, we focus on it throughout the application lifecycle. In other words, we adopt a "quality in, quality out" mindset to cope with shrinking budgets and increasing technology complexity.

Our decades of experience delivering leading, end-to-end application testing services have taught us that, by adopting industrialized processes and infusing intelligence into delivery, costs can be reduced and application reliability improved.

And we go one step further. We work with you to improve testing productivity through predictive analytics, automation and industry specialization while also driving higher quality across your application lifecycle. In many cases, we also assume the day-to-day responsibility for your testing operations.

Accenture Application Testing Services offers an intelligent approach to testing strategy and execution to help you unlock the potential of your business and reduce the cost of poor quality to less than five percent of the IT spend.
Testing delivers business results

All organizations care about their bottom line. Accenture Application Testing Services can help improve your company’s financial position through cost reductions, accelerated speed-to-market and productivity improvements with an end-to-end testing strategy.

We conduct comprehensive quality improvement activities in each phase of the application lifecycle—from plan, analyze and design to build, test, deploy and run—across both agile and waterfall based delivery models.

Shift left
We complete these critical but often missed series of activities by adopting a ‘shift left’ approach to help improve upstream aspects of the testing process related to requirements, release and software configuration management. Only then do we focus on validating the design, functionality and performance of the application using innovative tools, automation and standardized testing processes to help improve productivity and reduce costs. As a final step, we help you operate your testing capability with a stronger focus on quality at a lower cost.

Benefits
Accenture Application Testing Services can help you deliver benefits such as:

- Up to 50 percent reduction in test operations costs
- 30-50 percent productivity improvements
- Up to 90 percent reduction in critical defects reaching production
- Improved application and environment stability
- Up to 90 percent automation penetration depending on business process complexity
- Greater staffing flexibility with a global delivery model
- Up to 15 percent savings when using 1: many testing ‘solution factories’
- Up to 45 percent reduction in test delivery cost when leveraging cloud-based services
- Up to 50 percent accelerated speed-to-market when using an agile delivery model

Figure 1: Accenture End-to-End Quality Model

<table>
<thead>
<tr>
<th>Plan</th>
<th>Analyze</th>
<th>Design</th>
<th>Build</th>
<th>Test</th>
<th>Deploy</th>
<th>Run</th>
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<tbody>
<tr>
<td>Plan review</td>
<td>Requirements development and/or review</td>
<td>Design review</td>
<td>Code peer review</td>
<td>Test script execution (all stages)</td>
<td>Operational readiness test facilitation</td>
<td>Metrics trends and risk review</td>
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<tr>
<td>QA estimates</td>
<td>Change control participation</td>
<td>Test script development (initial)</td>
<td>Test script development (completion)</td>
<td>Performance management and monitoring</td>
<td>Continuous improvement and innovation initiatives</td>
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<td>QA team</td>
<td>Test condition development</td>
<td>Capacity Planning</td>
<td>Test driven design</td>
<td>Test closure</td>
<td>Post-deployment validation</td>
<td>Knowledge repository and resource proficiency management</td>
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<td>Test activity roles &amp; responsibilities</td>
<td>Test cycle development</td>
<td>System performance KPI identification</td>
<td>Applied Statistics/Pairs Testing</td>
<td>User acceptance test facilitation</td>
<td>Calculate cost of poor quality</td>
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<tr>
<td>Test strategy development</td>
<td>Test approach development</td>
<td>Post-deployment validation</td>
<td>Test environment build</td>
<td>Performance test</td>
<td>Update automation plans and test scripts</td>
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<tr>
<td>Testing cycle control</td>
<td>Test model development</td>
<td>Test environment and data requirements</td>
<td>Test data build</td>
<td>Software configuration management – builds/migrations</td>
<td>Optimize regression test packs</td>
<td></td>
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Project Management—Release management/end-to-end governance, metrics and reporting
We bring together comprehensive testing services, industrialized delivery, industry and technology capabilities and intelligent tools to drive quality, speed and automation.

Comprehensive services
Accenture offers the entire breadth and depth of testing strategy and execution services—from core to specialized to digital transformation—across a broad array of applications, delivered under flexible business arrangements. Our services include:

**Assessment and Strategy:**
Based on the patent-pending Accenture Test Maturity Diagnostics aligned to the Testing Maturity Model (TMMi), we assist you with end-to-end testing assessment processes—from planning through final recommendations. We help assess your organizations' current quality maturity levels and develop a roadmap to improve it over time.

**Automation:**
We offer a robust set of intelligent tools and assets to consistently support the entire spectrum of automation-related testing activities and drive reduced costs and improved speed and quality.

**Performance Engineering and Testing:**
We help conduct a wide range of performance testing and performance engineering services to diagnose and improve the code and architecture that impacts the application performance.

**Testing Center of Excellence:**
We can help you manage or set up a dedicated Testing Center of Excellence either at the enterprise level or within specific business units, thereby enabling delivery of standardized and industrialized testing services that effectively combines our people, processes, tools and reusable assets.

For organizations looking for digital transformation we offer:

**Testing as a Service**
We deliver an elastic, on-demand suite of testing tools and environments built on the Accenture Cloud Platform that can be provisioned dynamically and repeatedly to enable consistent testing practices.

**Digital testing**
We offer a wide range of processes and innovative tools for developing digital applications—mobility, analytics and interactive—to industrialize and accelerate testing services across the experience design continuum—from innovation and strategy through to detailed design and implementation.

**Industry and Technology**
The majority of Accenture's testing professionals focus on functional test delivery while also developing industry vertical specialization. More than 80 percent of our testing professionals are specialized across 40 industries. In addition, a number of our testing team members specialize in various technology platforms, including SAP, Oracle, Workday, Salesforce.com and industry-specific applications among others. Industry and technology specialization allows Accenture to provide more focused testing services for industry applications and functionality, such as manual and automated testing scripts for health, property and casualty insurance claims, with higher quality and speed.

A deep understanding of the industry context also improves our end-to-end focus on quality and productivity, and makes service transitions smooth and less risky.

Additionally, our professionals complete comprehensive industry and testing certification programs including International Software Testing Qualifications Board (ISTQB), Certified Quality Software Analyst (CQSA) and other common testing certifications. We have a global testing training and certification program—Accenture Technology Academy (ATA) Tester and Test Designer Certifications—developed in collaboration with the Massachusetts Institute of Technology (MIT) Professional Education.
Industrialized Delivery

Accenture delivers application testing services through our Global Testing Center of Excellence Network of more than 30 centers located in 17 countries. As part of our Global Delivery Network these centers combine skilled people, industrialized processes and reusable, intelligent assets to offer cost-efficient and consistent access to extensive, industry-leading capabilities on a 24/7 basis.

The centers operate at scale and provide you strategic options across specialized skills, time zones, commutability, and especially language and culture. In each center, our testing professionals focus on providing integrated service delivery and use a successfully demonstrated approach focusing on testing maturity to help establish, maintain and improve operational excellence of your testing organization.

Given our emphasis on quality, our Global Delivery Network is ISO 27001 and Capability Maturity Model Integration-certified, and has other relevant industry certifications as well.

You can either leverage the existing centers or we can help you set up and run your dedicated Testing Center of Excellence. In this scenario, we leverage our Test Metrics Framework to drive transparency across the applications lifecycle and serve as the basis for service level agreements. We also use dashboards and tools to measure various aspects of the testing process, including how quality and productivity are improving in each testing effort.

The next testing frontier: Quality Centers of Excellence

Companies who are already conducting testing offshore and automating testing to improve productivity may be asking, what is next? Accenture is breaking new ground in application testing by taking a strategic and methodical approach to improving quality upstream in each phase of the application lifecycle—a strategic concept we call Quality Center of Excellence.

A Quality Center of Excellence creates transparency through an end-to-end view of defects, addressing them where they were injected, not where they were detected. Quality Centers of Excellence focus on incorporating measures and visibility into the application lifecycle, and providing insights into where to drive targeted improvements.

A Quality Center of Excellence identifies root causes and reduces defects earlier in the cycle significantly improving the quality of code sent to testing. Quality code also makes the testing turnaround time even shorter, which translates into improved speed-to-market.
Innovation and Intelligence

Accenture continually strives to be ahead of the curve in application testing. As part of our commitment to quality and productivity in every phase of the application lifecycle, our people collaborate to develop trendsetting testing and end-to-end quality related innovations. We help you achieve your stated IT objectives by offering proprietary, innovative and intelligent testing assets and tools.

Accenture Testing as a Service

Accenture Testing as a Service gives you the opportunity to test-drive our unique testing solutions in real time, providing you an on-demand, scalable and cost-effective model. It provides provisioning and management of test environments, data and tools to enable a significant reduction in the test delivery cost through integrated templates, accelerators, methodology, and a flexible, pay-per-use model.

The solution enables build up and tear down of test environments on an ad hoc basis without requiring the purchase of expensive infrastructure and reducing provisioning time. It also provides testing tool hosting (including the HP tools) in the cloud and enables on-demand test data management.

Accenture Testing Accelerator for SAP

The tool enables intelligent automation without scripting and knowledge of application modules to reduce the test planning and execution effort. It scans the implemented SAP system to provide insight and leverages the relationship matrix to link the configuration and technical objects to test scripts thereby enabling impact analysis and refresh of the scripts. Its diagnostics capability helps determine test scope and process variations based on actual SAP application usage.

Applied Statistics Testing

Accenture leverages the Hexawise test design tool to incorporate applied statistics-based testing into Accenture Delivery Methods for Testing, our industrialized testing approach. Applied statistics-based testing is a method for conducting more rigorous, up-front testing planning to optimize test coverage and quality while minimizing test effort.

The method drives significant productivity improvements by determining the combinations of features and data permutations to be tested and helps improve the quality and cost of poor quality by finding problems early in the lifecycle when they are least expensive to fix.

Accenture Test Repository

The global repository stores Accenture’s proprietary testing assets, including our standardized and reusable testing industry packs which facilitate acceleration of test plan development in specific industries. The asset enables savings of 25–40 percent in test preparation, industry specialization, efficient knowledge transition and lower cost to serve due to faster ramp-up, productivity gains and improved quality.

Accenture Requirements Engineering Suite

The asset is a bundle of tools that accelerate requirements gathering and maintenance and automate requirements quality validation. It provides an automated review of documented requirements in order to validate the level of detail, accuracy (from a language perspective) and ‘testability’ and generates reports to provide different views of the requirements.

Accenture Automation Integrator

This innovative asset automates the regression test phase, allowing extensive reuse of test cases for end-to-end application even across different technologies and an estimated saving of 30–70 percent of the test phase effort. The asset reduces the effort for test script creation and maintenance and ensures higher quality of delivery through faster and complete regression test.

Accenture Test Case Designer

The tool automatically generates test cases from requirements to improve test design productivity. It reduces effort by up to 50 percent and enables test coverage accuracy of more than 90 percent.

Accenture Testing Frameworks for the Connected World

Accenture offers a successfully demonstrated model of testing libraries, simulator labs and remote testing labs to help original equipment manufacturers and mobile operators to test mobile devices. Using our Remote Test, Offshore, Simulate and Automate model, you can deliver higher quality handsets with potentially up to a 60 percent reduction in testing costs, while improving time to market and increasing the volume of release testing.

Accenture Quality Assistant

The tool helps to measure, track and improve application quality using analytical methods to generate the cost of defects and their source.

Third party tools

We have formed strategic alliances with HP, IBM (Rational), SAP and Microsoft and also maintain strong relationships with a number of major testing tool suite vendors such as Computer Associates, DeviceAnywhere, Grid Tools, Perfecto Mobile, Tricentis, and Worksoft in order to quickly assemble an appropriate solution for you. Accenture has been HP’s Partner of the Year for five of the last 10 years. Additionally, our arrangement with IBM Rational enables use of their Application Lifecycle Management tools at no cost to you (with some caveats).
Client case studies

A communications leader saves £45 million and dramatically improves application quality with an intelligent test factory

This communications industry leader sought to take its application testing services to the next level. Accenture helped consolidate testing suppliers from five to two and establish an intelligent test factory that will save the company £45M over four years using an output-based commercial model. These dramatic savings are delivered through a greater than 95 percent offshore solution, a rapid transition of 550 FTEs in four months, and extensive automation supported by advanced tools such as the patent-pending Accenture Intelligent Tools for Test Operations.

A large telecom service provider was able to cut production defect rates in half with the help of Accenture’s testing solution

This large US-based telecom service provider wanted to reduce application development and maintenance costs and enhance application performance by streamlining its quality assurance and testing processes. Accenture set up a Testing Center of Excellence (TCoE)—leveraging its global delivery capability—to help the client drastically reduce production defect count by approximately 97 percent, transition from a waterfall to an Agile development model and improve quality by implementing test automation frameworks, leveraging Accenture Intelligent Tools.

A leading bank significantly improves speed-to-market with testing automation solution

Following a series of large acquisitions, this leading bank needed to ensure seamless service to its existing and acquired customers while radically simplifying its application portfolio. Accenture helped the bank achieve these goals and enabled faster time to market for new application releases by establishing a Testing Center of Excellence to automate the testing efforts for more than 300 applications used by the consumer banking division, including mobile and online banking applications. The automated testing efforts reduced the risk of migration, and ensured error-free applications 98 percent of the time.

Analyst recognition

“Accenture has established itself amongst the Leaders in independent testing services through meaningful investments in building capabilities across the testing services portfolio (testing CoEs, proprietary solutions, delivery workforce, etc.). A strong global delivery model helps the company pose a strong challenge to the leading Indian service providers. Legacy strengths in consulting and system integration has helped Accenture position itself strongly in the testing strategy, assessment space.”

“Accenture Application Testing Services is well positioned to beat the market.”

“Largely due to its software testing relevance and to the overall dynamics of Accenture, Accenture Application Testing Services is well positioned to beat the market.”

“Accenture’s IP and tools strategy and breadth of accelerators is comprehensive. One of its main benefits is to expand from test execution purely to include test design. Accenture Application Testing Services’ strategy is to further enhance its IP and tools, focusing on industry-specific test repositories, test execution tools, and test design and QA accelerators. One of the specificities of Accenture is focus on bringing automation and accelerators early in the SDLC.”
References

1 Accenture High Performance IT research
2 Copyright Everest Group: Independent Testing Services – PEAK Matrix™ Assessment and Profile Compendium 2014
3 Copyright NelsonHall: Outsourcing Vendor Profile of Accenture – Software Testing. March 2013

Contacts

To learn more about how Accenture Application Testing Services can help your organization reduce testing costs and improve productivity while embedding quality into the application lifecycle, visit us at www.accenture.com/testing or contact:

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About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 305,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.