

EXCERPT

IDC MarketScape: Global Testing Services, 2010 Vendor Analysis (Excerpt from IDC #223954)

Rona Shuchat

Mukesh Dialani

Melinda-Carol Ballou

IN THIS EXCERPT

The content for this excerpt was taken directly from the IDC Competitive Analysis, IDC MarketScape: *Global Testing Services, 2010 Vendor Analysis* by Rona Shuchat, Mukesh Dialani, and Melinda-Carol Ballou (Doc # 223954). All or parts of the following sections are included in this excerpt: IDC Opinion, In This Study, Situation Overview, Future Outlook, Essential Guidance, and Synopsis. Also included is the MarketScape vendor assessment for discrete enterprise application testing services as seen in Figure 3. Not included are the MarketScape vendor assessments for global discrete and embedded enterprise application testing services (Figure 4) and global discrete and embedded product engineering testing services (Figure 5).

IDC OPINION

This study uses the IDC MarketScape model to evaluate global and regional integrated service providers that participate in the global testing services market for enterprise application testing and product engineering (PE) testing services. IDC's MarketScape research enables a quantitative and qualitative assessment of critical vendor testing capabilities and strategies that meet current and anticipated customer needs in quality assurance. Overall, providers performed well, showing significant investment in internal Intellectual Property (IP) creation and investment that drives higher efficiencies and lower QA cost through automation, standardization, and more transparent measurement of test coverage, defect density, and resource productivity. Key findings include:

- ☒ **Need to translate test portfolio capabilities into strategic business value:** High levels of similarity across comprehensive test service portfolios demand that providers clearly articulate how their advanced frameworks can improve assurance (business and technical) at lower cost in shorter time frames with higher predictability. Long-term investment in customer relationship, differentiated value proposition, cultural affinity, awareness of shifting customer pain points, and high resource continuity, all influence a provider selection process.
- ☒ **Evolution toward end-to-end integrated test frameworks:** The shift is under way among providers to extend automation frameworks beyond the execution phase to encompass automation across the full test value chain. The long-term trend is toward model-driven testing, collaborative front-end-driven requirements validation, and integrated risk assessment with resource, cost, defect density,

and timeline scenario planning. Providers are at different stages of maturity but are investing to drive the labor-centric test model toward highly automated, reusable analytic frameworks driven by teams of domain and technology experts.

- ☒ **Innovative delivery models with flexible pricing options:** Providers are offering a mix of test delivery models, with many planning to launch new or enhanced cloud-based testing services in 2010. Performance and security testing are at the top of the list. The benefits of de-capitalization, lower initial cost, flexibility in scaling up or down, and lower shelfware costs are among the drivers.
 - ☒ **Mobility solutions:** Embedded mobility services across verticals (e.g., BFSI, healthcare, utilities) or in smarter products will accelerate demand for product engineering and domain testing skills. Rigor in up-front SDLC verification will be influenced by the mission-critical nature of new service offerings.
-

IN THIS STUDY

This study uses the IDC MarketScape vendor assessment model to evaluate the global testing services market (independent and embedded). This research enables analysis of quantitative and qualitative characteristics to provide metrics and context for end users evaluating use of third-party testing services. It will also help in analyzing a vendor's current comparative success in the marketplace and to anticipate a vendor's evolution (and ascendancy). The main user focus areas for this market include, among other factors, evaluation of depth and breadth of testing service portfolios for enterprise application testing and product engineering validation services, flexibility and range of service delivery models, pricing options, ROI modeling, testing methodology frameworks, independent test team career path and accountability structures, and vendor progress in evolving toward integrated test frameworks that support increased automation of the full test value chain.

IDC's testing services evaluation is based on a comprehensive framework and set of parameters to assess vendors relative to one another and to those factors expected to be most conducive to user demand and to market success for the short term and the long term. The IDC MarketScape strategies axis represents a three- to five-year span and future perspective, while the capabilities axis represents current testing services offered and go-to-market execution. Given the ongoing need to improve quality of product deliverables in shorter time frames, with highly optimized methodologies and frameworks, this IDC MarketScape places greater weight on current capabilities than future strategies.

Market share of each vendor, in the estimated discrete view of enterprise application testing service revenue, is indicated by the size of the circle representing the vendor, and the vendor's year-over-year growth rate is indicated by a (+), (=), or (-) icon next to the vendor name, representing growth in excess of, the same as, or at a slower pace than the entire market. Analysis of vendor growth in the discrete enterprise application testing market view, as shown in Figure 3 reflects 2009 YoY estimated growth in in this segment.

This study is composed of four key sections. The first is a situation overview of the market factors driving and challenging testing services adoption. The second provides a testing services definition, description, and weighting for the characteristics IDC analysts believe enable a successful testing service that is highly responsive and adaptable to user demand. These characteristics are based on buyer and vendor surveys and analyst observations of the evolving market and industry practices.

The third section is a visual aggregation of multiple vendors into bubble chart format, accompanied by written analysis. . The figure 3diagram concisely displays and quantifies scores of the 13 reviewed vendors weighted across enterprise application testing services. This particular approach was chosen based on IDC's assessment of evolving market demand and user input. Context and analysis for these views are key. Decisions related to use of third-party testing services should be made in the context of most pressing organizational QA immediate and/or long-term needs and gap assessment (tactical and/or strategic) and dialogue with solution providers, analysts, and user references (and communities) with comparable needs and solutions applied.

Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of a review board of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

SITUATION OVERVIEW

Introduction

Testing services, as defined in this study, pertain to third-party quality assurance services that are sold in discrete and/or embedded forms by major global and large regional full-service outsourcers/SIs to enterprise, ISV, technology product organizations, or OEM customers. This study focuses on providers with IDC estimated combined discrete and embedded annual testing service revenue above \$400 million. Pure-play testing providers (e.g., AppLabs, SQS Group) and tier 2 and 3 outsourcers/SIs (e.g., UST Global, MindTree, Sierra Atlantic, Symphony, GlobalLogic, Virtusa, Prolifics, Patni, Sonata Software, etc.), while excluded from this analysis, represent a growing competitive force to the global players in testing services. Some of these companies, such as the pure-play testing providers, focus wholly on the full continuum of testing services, while other outsourcers/SIs are focused across a select set of verticals or are targeting product engineering and development services. This document is not intended to provide an exhaustive review of all global outsourcers that offer either enterprise application testing or product engineering testing services.

Forthcoming IDC research will continue to examine other players in this highly competitive services segment.

As customers look to improve the quality assurance of products and services with tighter operating budgets, it becomes more critical to be aware of the scope of services available, ways to move toward higher maturity levels in testing, whether supporting targeted test execution needs, or in search of broader QA transformation. Adoption and awareness of independent testing services has been growing, most rapidly in the United States, followed by the broader Americas, Western Europe, and Asia/Pacific regions.

Overall, organizations are being driven to design, develop, and implement software, hardware, or embedded firmware releases with improved QA SDLC processes and methodologies. The overarching goal is to reduce the volume, cost, and customer impact related to defects found in production and poor performance, and to improve ROI and time to market, among other benefits. Leveraging service provider investment and expertise in tools, automation, specialized application, or vertical solution frameworks enables customers to accelerate test cycles, with a focus on improving productivity and predictability of test output while lowering the overall cost to achieve these improvements.

Historical data from IEEE to more recent data from IDC (see *Evaluating Poor Quality and Defect Costs in a Difficult Economy*, IDC #215941, December 2008) identify the fact that the cost to correct a defect in production is anywhere from 300x to 500x the cost of identifying a defect in the requirements or design phases. Significant savings and improved quality of service or product can be realized through the ongoing application of quality assurance processes and automation frameworks, whether services are leveraged for in-house QA transformation or carried out through fully outsourced arrangements. More mature usage of these services is ultimately steering toward defined levels of business assurance, taking quality assurance to the next level. While third parties help organizations navigate to higher levels of QA maturity, most enterprises are still working at tactical QA transformation (e.g., consolidating and rationalizing test tools and licensing fees, centralizing toward common processes and methodologies, etc.) with many still operating in reactive mode to shortened test cycle time frames, impacted by scope creep in requirements validation.

FUTURE OUTLOOK

IDC MarketScape Global Testing Services Market Assessment

The IDC vendor assessment for global testing services (enterprise application testing services and product engineering testing services) represents IDC's opinion on which tier 1 (global or major regional) vendors are well positioned today through current capabilities and which are best positioned to gain market share over the next few years. For the purposes of this analysis, IDC divides potential key strategy measures for success into two primary categories: capabilities and strategy. Positioning in the upper right of the grid indicates that a vendor has a very solid combination of capabilities to continue to be successful in today's highly competitive testing services

market and has the right mix of strategic initiatives and investments to maintain and grow their future position in this dynamic landscape.

Positioning on the y-axis reflects the vendor's current testing service capabilities, menu of delivery offerings, and how well it is aligned to meet customer needs. The capabilities category focuses on the testing capabilities of the company *today*. In this category, IDC analysts look at how well a vendor is building, pricing, positioning, and differentiating its value proposition and delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis or strategy axis indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategy focuses on high-level strategic decisions and underlying assumptions about road maps for offerings, customer segmentation, business, and go-to-market plans for the future, which in this case is defined as the next three to five years. In this category, analysts look at whether or not a supplier's strategies in various areas are aligned with expected customer requirements in terms of spending, procurement, and delivery over a defined future time period. On the x-axis, a position toward the right (east of center) indicates a strategy that is not only well aligned with customer requirements but is flexible, adaptable, and, to the extent possible, differentiated from the pack.

Figure 3 presents vendor positioning from a discrete enterprise application testing services vantage point. Analysis of vendor growth, as shown in Figure 3, reflects 2009 YoY estimated growth of individual vendors against market growth in the discrete segment. IDC uses this perspective and analysis to help focus users in their RFP vendor evaluation and to encourage vendors to evolve their capabilities and strategies in areas that will prove most beneficial to increasing the value clients receive from these third-party services and related technology investments.

Summary Market Analysis

As a whole, the vendors covered in this analysis are established players, some with discrete testing service practices that have been evolving over almost a decade, highlighted by larger market share in discrete testing service revenue. Others have evolved their testing practices from within larger embedded application and infrastructure outsourcing portfolios and have been aggressively building out their discrete testing service portfolio. On the product engineering front, most vendors have embedded testing services rather than discrete practices in support of product development services.

While customers expect vendors to have increasingly sophisticated teams, which build their knowledge and expertise upon well-known and highly adopted third-party vendor test tools (e.g., HP, IBM, Micro Focus), interview results from this study and others indicate that customers ultimately make their decisions in vendor selection based on comfort level in relationship, cultural affinity, vendor experience in their vertical specialization, and available peer customer references. It is also apparent that customers that are evaluating vendors to support partial to fully managed testing services (e.g., centralized or dedicated) often spend many months evaluating portfolio capabilities, with each vendor promoting its capabilities, test IP frameworks, and

flexible delivery models with use of best shoring depending on customer needs. (As was mentioned previously, testing framework depth, content, and evolution are a key resource for users seeking to transition their process and organizational approaches. These frameworks also enable the service providers to build on prior successes and evolve engagements effectively as an external resource for clients and to improve on execution themselves.) While utility-type pricing and corresponding delivery models are still in the early adopter phase, customers are looking to work with vendors that are gaining experience in these industrialized, standardized, or customized on-demand testing service solutions.

Figure 3 presents one view of the vendor cohort group. Tier 1 vendors scoring in the leaders segments for the discrete enterprise application testing view --have breadth, depth across weighted criteria areas, and strong momentum in selling the independent testing services value proposition to clients today. Players in the major segment are also demonstrating commitment and investment in discrete testing services and are focused on differentiating their value proposition to gain market share in this rapidly growing segment.

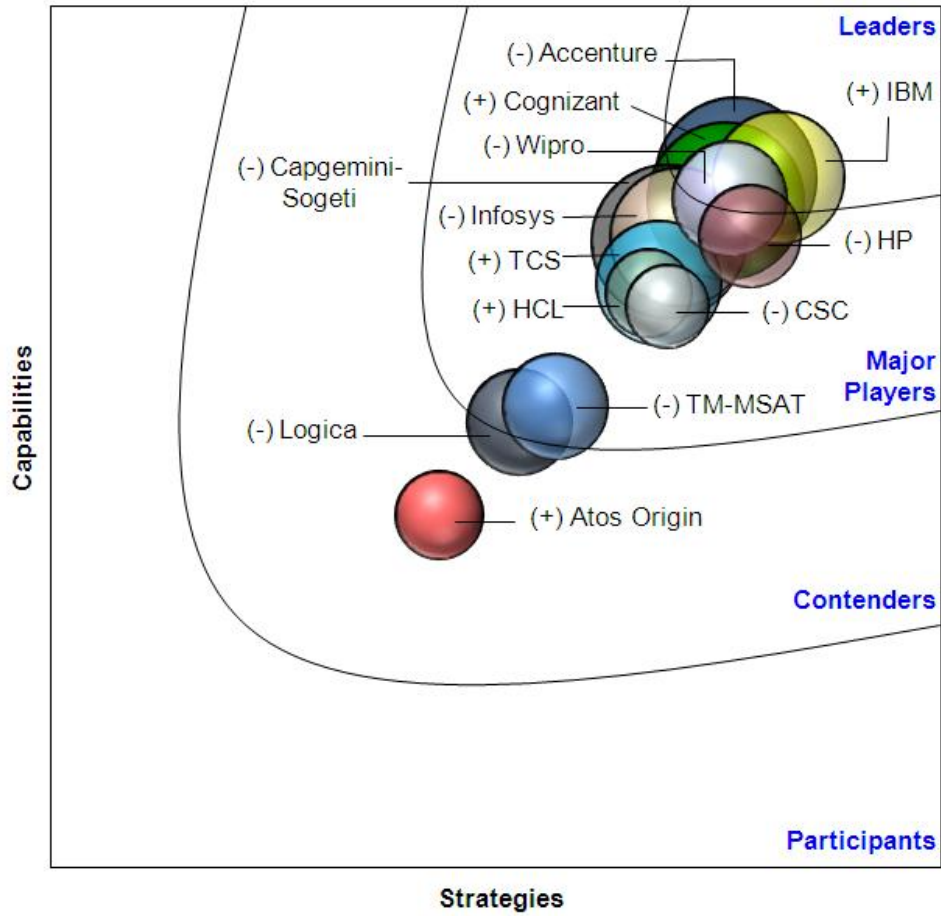
IDC MarketScape Global Discrete Enterprise Application Testing Services Vendor Assessment

Figure 3 specifically focuses on vendor positioning in the offering of discrete enterprise application testing services. As vendors have made significant investments in building out and creating independent dedicated testing teams with range of horizontal- and vertical-specific testing assets, IDC has developed a view that looks at vendor placement from this angle.

FIGURE 3

IDC MarketScape Global Discrete Enterprise Application Testing Services Vendor Assessment

IDC MarketScape: Global Discrete Enterprise Application Testing Services Vendor Assessment



TM-MSAT = Tech Mahindra and Mahindra Satyam combined

Note: Vendor bubble sizes are relative to each other in this market view and cannot be compared with other views in terms of absolute bubble size.

Source: IDC, 2010

The vendor analysis, specifically in discrete enterprise application testing services, indicates an intense competition among the players as vendor ratings were very close for the majority of the vendors in most subcriteria. Vendors note that when they can

put together a differentiated value proposition that hits home with the client and that can bring either tactical or strategic advantage or both (e.g., cost savings, faster time to market, risk mitigation value, improved product quality or service), they can win the business, even if they are not necessarily an incumbent player in that account. While discrete testing services historically has focused on a highly labor-centric model, the vendor investment in test processes, vertical test IP components, or horizontal test automation frameworks has been significant over the past few years. The detailed vendor profiles reveal an extensive focus on evolving standardized test processes, methodologies, automated frameworks to support large volume test cases, and the blending of these assets with expertise from different vertical domains. Many vendors are skillfully integrating vertical sales expertise with knowledge of horizontal testing service capabilities and portfolio IP. This evolution of these testing process frameworks is as key for user clients transitioning to service models (or hybrid internal/external sourcing for testing) as it is for the service providers. The human barriers to effective quality approaches are much more significant than technical barriers or issues. Capabilities here are differentiating for these tier 1 vendors. Users should evaluate content closely and determine how well the frameworks map to their own process and organizational gaps, pain points and goals for quality strategy.

Providers in the discrete enterprise testing leader segment include Accenture, Cognizant, IBM, and Wipro. Major players with emerging leadership capabilities include Capgemini-Sogeti, HP, and Infosys. Major players that are gaining momentum in growing their discrete testing practices in enterprise application testing services include Tata Consultancy Services (TCS), HCL Technologies, and CSC. Tech Mahindra (TM) and Mahindra Satyam (MSAT) are represented as one entity in this MarketScape, positioned as an emerging major player, rebuilding under a combined brand and integrating portfolios where customers can benefit. Logica and Atos Origin represent pan-European competitive testing service options, with Logica positioned as an emerging major player and Atos Origin scoring as a major contender in the discrete enterprise application testing service category.

Vendor Profile

This section provides a detailed profile of each vendor that participated in the global testing services study. Eleven of the players offer global footprint capabilities, while two are primarily focused on pan-European coverage. Each profile highlights a vendor's unique characteristics in regard to its discrete and embedded testing services practice, for both enterprise application testing and product engineering testing services. IDC included 13 vendors in the assessment: Accenture, Atos Origin, Capgemini-Sogeti (combined), Cognizant, CSC, HCL Technologies, HP Enterprise Business, IBM, Infosys, Logica, Tata Consultancy Services, Tech Mahindra and Mahindra Satyam (combined), and Wipro.

Cognizant

As of year-end 2009, Cognizant reported 9,300 testers in its independent (horizontal) testing practice. As of March 2010, this number has grown to 10,600 dedicated testers, who are structurally located under the umbrella of Cognizant Technology Solutions. Its testing practice is aligned with industries of specialization — such as financial services, healthcare, manufacturing/retail, telecommunications, and media

and entertainment. This vertical alignment parallels its broader vertical sales strategy, enabling it to leverage its domain expertise and domain-aligned testing model. Over 75% of the code tested by Cognizant is provided by client or third-party vendors. As a result of its deep and focused solution content, Cognizant 2.0 process orchestration framework, and go-to-market strategy, Cognizant ranks in the leadership quadrant in our IDC enterprise application services assessment, for both discrete and embedded views.

For its testing services employees, Cognizant offers a dedicated career test track, similar to its competitors, but focuses on three distinct tracks that provide alternative opportunities. The first is focused on project management and the handling of large complex accounts; the second track is domain focused, where its BA/QA model enables business analysts to be seeded into testing projects to help testers with required domain knowledge, supporting higher coverage and effective testing. The third track focuses on the technical test architect, with specialization in testing frameworks, functional and nonfunctional validation expertise.

Cognizant has made some significant investment in its own homegrown tools and frameworks, often complementing features of widely used COTS tools. ADPART, for example, helps model requirements to activity diagrams and to generate test scenarios and test cases. CRAFT, another Cognizant proprietary tool, provides an automation framework for testing, while NitroBooster is a customized performance testing framework for LoadRunner. In addition to its internal development, Cognizant continues to invest in third-party vendor alliances, with strategic partnership alliances noted with HP, IBM, Micro Focus (Borland), Radview, Grid-Tools, and Gomez.

Its decision to combine its performance engineering and performance test groups into a single unit in the last year sharpens its focus on usability, performance, and security, while its joint partnership with Gomez enables it to offer clients cloud-based scalable performance test solutions (Compuware acquired Gomez in 4Q09). While Compuware/Gomez brings the SaaS-based performance monitoring and test tools, Cognizant focuses on formalizing gating structures between development and test teams, addressing functional and nonfunctional requirements validation, and designing appropriate test cases, followed by execution and certification.

Cognizant has also expanded its focus in the infrastructure space, creating a joint package that integrates test data management and test environment management with infrastructure management. Most infrastructure testing engagements are conducted at the client site, enabling end-to-end testing with legacy application assets at scale. Cognizant has also invested in dedicated teams that are made up of functionally oriented consultants and testers with specializations in SAP, Siebel, and Oracle packaged solutions. Customers may buy implementation, customization, and testing as one integrated offering or select testing without implementation. To support its vertical penetration strategy, it develops expertise in particular domain products per industry (e.g., use of Temenos or Sungard products in the financial services sector) or solution accelerators for select industry requirements (e.g., ICD-9 to ICD-10 conversion in healthcare).

A key part of Cognizant's approach is to adapt to the QA maturity level of its clients, engaging systematically to find ways to reduce inefficiencies and waste, in turn

supporting redirection of investment toward business priorities. To this end, Cognizant works at creating client communities, sharing best practices in how to overcome internal customer challenges. Cognizant testing services has also developed iZone, a user community that promotes ideation and innovation among its professional testers. Its test strategy focuses on efficient resourcing, adopting scientific techniques in estimation and execution to improve productivity (e.g., application of orthogonal array), with a metrics-driven approach to test management. These assets are aggregated within Cognizant 2.0, a global delivery ecosystem that helps promote transparency in its engagements, along with process and workflow orchestration for its delivery model.

IDC views Cognizant as one of the leading players with major market momentum that is helping drive efficient process and workflow into its global testing services practice. While Cognizant has experienced rapid growth in its independent test practice, it has been primarily focused on enterprise application testing services. With its announced partnership with Invensys in July 2009 and rebadging of over 500 Invensys employees, Cognizant will expand its services and more specifically its testing capabilities in discrete and process manufacturing, energy and utilities, pharmaceutical, and consumer goods segments where Invensys brings engineering resource expertise. More specifically, Invensys brings consulting and technology expertise for control and measurement instrumentation, critical safety and distributed control systems, and a wide range of real-time operations management software. This opens up Cognizant to a more diverse client base, including potential test clients in the oil and gas, power, metals and mining, pharmaceutical, and mineral processing sectors, among others.

ESSENTIAL GUIDANCE

Advice to Customers

To derive the maximum benefit from third-party testing services, customers should consider the following:

- ☒ **Take advantage of third-party vendor IP and related testing services:** Significant investment has been made by vendors, far beyond what individual enterprise customers (even G50) have or ever plan to invest in such assets. Look for a vendor that has experience in your vertical domain and find ways to leverage such services for competitive advantage or for cost efficiency improvements within your organization.

- ☒ **Questioning the status quo:** Developing an objective view of internal organizational weaknesses in the area of quality management to effect change can be key to moving forward. Figuring out where to prioritize quality management initiatives (including business focus and effective architectural and design needs to sustain corporate initiatives) can be difficult and overwhelming to an organization that is trying to press ahead with urgent tactical deliverables. Turning to a third party that can offer objective advice can be the first step in determining alternative strategies to improvement.

- ☒ **Multivendor governance:** Many large enterprise customer interviews reveal the presence of multivendor test environments, where there is lack of consistency and standardization across vendor approaches, in turn impacting handoff to the customer. This is being highlighted with greater urgency as more customers are looking to shift toward shared centralized test COEs. Some customer strategies have followed consolidation down to two or three vendors, depending on the nature of the testing requirements that may be spread across multiple departments. This has allowed some customers to push for higher levels of efficiency with each vendor and in turn be able to offer each vendor a larger portion of a budget with which to commit specialized domain and technology resources. Other customers report wanting to hold on to their multiple vendors due to investment and build up of vendor knowledge over time. These customers are looking for tools and techniques to steer vendors toward common governance processes and benchmarking methods for tracking progress and handoffs.

- ☒ **Shift toward centralized TCOE model:** Customer interviews indicate an increasing focus on establishing both preventive and proactive measures in the testing discipline and moving toward a central test COE model to drive innovative process improvement into the organizational fabric. Tracking progress against developed KPIs to reach targeted goals (e.g., productivity improvements) is important to demonstrating the value of such critical QA investments.

- ☒ **Clarity and specificity of contract terms:** More mature customers report the importance of pushing for greater clarity and specificity of contract terms in the up-front RFP process. This helps set clearer expectations through all phases of implementation, whether focused on target QA cost savings, defect reduction rates, or productivity improvements. This can lead to very detailed MSAs with range of SLAs (e.g., addressing availability, auditability, monitoring), which can be referenced as part of add-on SOWs as contracts progress through their term of engagement.

- ☒ **Optimizing and integrating QA extensions in the cloud with internal IT assets:** Companies are looking for help in implementing or driving greater efficiencies through the use of virtual lab environments to reduce the cost of operation. While the pooling of servers, network, storage, and other resources is already moving toward shared environments across development and test teams, there is a need to help companies determine how best to integrate these services with internal IT investments.

- ☒ **Performance metrics/data analytics:** Third-party test services, delivered via dedicated or shared services, will be expected to reduce time to market and provide increased visibility into performance metrics while enabling more rapid response to troubleshooting customer pre- and postrelease software problems. Some providers are supporting the ability to suspend and capture "live" multimachine configurations to a shared library and maintain a historical record of build and test scenarios. Some companies report leveraging the value of these capabilities through self-service provisioned test platforms, while other companies are still looking for objective third-party support to carry out testing services, with a handoff of test data output for internal IT team analysis and

repair. The capturing of these real-time views of performance problems is also a consideration for postproduction software release support.

Synopsis

This IDC study represents a vendor assessment of the global testing services landscape through the IDC MarketScape model. This assessment analyzes both quantitative and qualitative characteristics that clarify success in the business strategy and technical execution of discrete and embedded testing services, for both enterprise application testing and product engineering testing services. This MarketScape covers select tier 1 global and regional vendors participating in these segments. The evaluation is based on a comprehensive and rigorous framework that assesses vendors relative to the criteria and to one another and highlights the factors expected to be the most influential for success in the market in both the short term and the long term.

"There is close competition among the MarketScape participants in terms of breadth and depth of testing services offerings, from horizontal framework assets to range of vertically driven test solutions. Yet vendors continue to pursue ways to differentiate themselves in value proposition, evolving their vertical IP and continuing to invest aggressively in innovative strategies to enhance and optimize testing service delivery capabilities," says Rona Shuchat, director of Application Outsourcing Services.

Copyright Notice

This IDC research document was published as part of an IDC continuous intelligence service, providing written research, analyst interactions, telebriefings, and conferences. Visit www.idc.com to learn more about IDC subscription and consulting services. To view a list of IDC offices worldwide, visit www.idc.com/offices. Please contact the IDC Hotline at 800.343.4952, ext. 7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC service or for information on additional copies or Web rights.

Copyright 2010 IDC. Reproduction is forbidden unless authorized. All rights reserved.