ERROR

**ROLTA**

*When It's All Said & Done*
**TESTING WILL TELL**

## When It's All Said & Done
# TESTING WILL TELL

No matter what you produce or where you produce it, business success demands speed from concept to completion, and when it comes to software application development, the pace must be clocked at faster than the speed of business. Software and its uses grow in requirements and complexity nearly daily. Our high-tech world demands ever newer, faster and more agile solutions to business challenges. Whether your company is one that creates software for sale or your IT department frequently customizes applications to meet your organization's unique operational needs, software testing must be done. And done right. And quickly. And let's not forget cost-effectively.

It's not only new software development that requires testing. Upgrading to new software releases can bring significant challenges. As companies upgrade from one highly complex application to the latest release, expensive mistakes can be avoided with a strong testing protocol in place. In fact, testing can be the difference between successful, on-time implementations and the need for disastrous re-work.

Companies must plan to incorporate a comprehensive testing phase to project plans for new releases and upgrades. Unfortunately, that's rarely good news to stretched IT departments tasked with managing dozens of applications across multiple business units.

Software testing is kind of like taxes. You know you have to do them every year, and that it will take quite a bit of time to accomplish. You also know that the best person to handle your taxes is someone who is intimately knowledgeable about the ever-changing tax laws. Someone who does taxes for a living, like a CPA. But you don't keep an accountant on staff year-round. He's not just sitting on your couch hogging the remote May through January until it's time to get busy organizing receipts. No, you hire a tax preparer when you need him. Then wave goodbye.

> *"Testing is an infinite process of comparing the invisible to the ambiguous in order to avoid the unthinkable happening to the anonymous."*
> *- James Bach*

Testing software can be achieved in much the same manner. If a testing team isn't constantly testing and learning new methods and using new tools to accelerate the process while maintaining high levels of quality, your testing projects aren't running as quickly or as smoothly as they could. You need a professional. Someone who does testing for a living, not occasionally when the need arises.

### THE COST OF SOFTWARE QUALITY ISSUES

**COST:** 80% of development costs involve identifying and correcting defects (National Institute of Standards and Technology)

**COST:** 25 to 40% of all spending on projects is wasted as a result of rework (Carnegie Mellon)

**BRAND:** 40% of problems are found by end users (Gartner)

There's more to software testing than running a Raid party. It's not just finding the bugs and eliminating them. It's also making sure new software meets business goals, is compatible with other programs needed to run the business and operates on the company's hardware. Testing software applications has become increasingly complex and specialized, driving the need for improved processes, tools and capabilities.

Many companies struggle with testing applications for a variety of reasons. It's not uncommon that organizations lack team members with the specialized skills needed to adequately and accurately test certain complex applications. And since most company IT departments are under pressure to deliver results faster, a knowledgeable testing team that has recently done the same or very similar work can make a huge difference in the time it takes to get to project completion. Simply, you get better results faster with highly skilled and trained software testers.

Of course it doesn't go un-noticed that in today's tight budgets there is a cost to testing, whether it's conducted in-house or outsourced. There's the cost of taking IT personnel away from core business tasks to tackle testing. There's the cost of acquiring the tools to test certain applications effectively and efficiently.

A handful of large IT consulting organizations have established Test Centers of Excellence with innovative test automation platforms and domain test accelerators that can lead to a dramatic reduction in scenario identification and test case creation. Importantly, moving testing to outsourced COEs moves the cost from capital to operational expenditures, something that will certainly make your CFO smile.

And when applications must be reworked time and time again, that adds to the cost and time to deliver. More importantly, there's the cost of damage to the company's reputation if the test process is faulty and bad software is passed out the door or to your own employees. Whether for external sale or internal use, applications that fail to meet the business needs for which they were intended cause organizations time and money, plus a bucket-load of frustration.

## Types of services commonly offered by testing service providers:

### Functional Testing
- Application-centric validation methods
- Defects identified early to reduce cost and enhance quality
- Industry-standard testing techniques

### System Testing
- Validation of end-to-end business processes
- Regression testing of the entire application
- Functional and non-functional testing
- Ensuring that the system meets overall customer requirements

### Performance Engineering
- Ensures good performance under heavy user load
- Simulates deployed environment
- End-to-end assessment tuning and benchmarking
- Finding performance bottlenecks, including root cause analysis

### Automated Testing
- Speeds up regression testing and data-driven testing
- Unique frameworks accelerate script generation
- Reduces testing costs

**Top Benefits from Outsourced Testing Services**

**1** Optimize Costs While Improving Time to Market

**2** Improve Your Customers' Satisfaction

**3** Eliminate Risks

**4** Free Up Your Business & Operational Staff

**5** Flexible Engagement Model -- CAPEX to OPEX

## In or Out, Start with a Plan

Whether you use in-house resources or outsource testing, success relies upon the development of solid plans to conduct the testing in a systematic and comprehensive manner and to deploy the right skills to accomplish business objectives.

Gartner recommends that organizations begin the testing process by first taking the time to define an overall test strategy and the dependent requirements for handling testing.[1] Start with the reason for the application. You can't identify defects to an application if you're not sure what the ultimate use case for the product is. What are the business needs the software must fulfill and how will it benefit end users? Testing must be designed to ensure these goals are met.

A clear requirements statement can also help an organization qualify defects. No application will be released bug free. Not all defects are equal – while some are small irritants, a few can be game-stoppers. It's important to know what will have a serious impact on functionality so that resources can be allocated where they will have the most impact.

Don't plan on waiting until the end of the development process to begin testing. While many companies do, it's neither a cost-effective or efficient method. Rather, testing throughout the development process enables defects to be repaired and the software refined while still in production. The sooner you test, the sooner you are able to resolve problems. Testing throughout the development process also enables IT departments to better monitor progress and more accurately predict release dates.

## Making the Business Case for Outsourcing

While nearly all IT department managers would like to farm testing out, the focus on cost efficiency in today's lean business operations requires a well-crafted business case to justify the investment. Documenting the need and solution can help get buy-in from decision makers, and can provide a road map for moving the process forward. Clearly articulating the need, parameters, benefits, costs and return on investment helps establish boundaries around the project.

Establishing a strong business case for outsourcing application testing not only helps you get approval of the program, but can also guide how you identify and work with vendors. A well thought out business plan should include a solid evaluation of current and desired states.

There's a growing trend for companies to seek outside help with testing applications. Since most organizations don't need to have testing conducted 5 days a week, 52 weeks a year, they don't need to staff for testing services to the extent that major testing service providers do. By outsourcing testing, companies are able to gain the services of highly skilled and experienced specialists, and use these professionals only when they need them.

Companies that outsource IT testing needs are being efficient with personnel utilization, not only eliminating the time to do infrequent testing but also the ramp up time to learn new techniques or identify new tools that will ensure quality results. Eliminating the learning curve is one of the top reasons companies outsource. And saving time between project begin and completion not only saves money, in many instances it can improve project ROI.

> *"A computer lets you make more mistakes faster than any other invention in human history, with the possible exceptions of handguns and tequila."*
> *- Mitch Ratcliffe*

Naturally, cost is a factor in every business decision these days. So evaluating cost versus return on an outsourcing project is a key part of the evaluation process. The speed to market or to release to internal stakeholders of important software applications is a key element in determining the need for outsourcing assistance. With extremely tight production schedules on most IT projects, adding special expertise can help hit milestones with precision and make a big difference in obtaining early buy-in on new or customized applications. Speed to market for external releases also moves revenue flow into the pipeline faster.

Ultimately, the key point of application testing is to obtain software of the highest quality. Outsourcing can support the delivery of quality software solutions for a variety of reasons. Testing providers' independence from the applications development team can enable the kind of third-party evaluation of software that ensures the final product meets identified business needs.

## Evaluating Vendors

Everyone says they can do testing. Not everyone does it well. And not everyone will offer up the kind of advice and guidance that can actually improve your processes. Choosing the right testing team is crucial to your ability to deliver well-running solutions to the market faster and at lower costs.

There are a number of criteria to consider when seeking a testing services provider. Naturally, you want a company that has a strong track record in evaluating the kinds of applications you need tested. While vendors should have an appropriate level of standardization in their processes to ensure cost efficiencies, you want to avoid cookie-cutter processes that might fail to identify defects or be unable to provide domain expertise for your specific business needs.

Gartner recommends that organizations seek out providers with dedicated testing units that have exhibited consistent revenue growth to help identify those vendors with robust testing capabilities.[1] To identify best choices among testing service providers, seek partners able to offer the following capabilities:

- **Domain Experience** – a deep understanding of requirements and test planning through working with various businesses in your industry

- **Product & Technology Expertise** – significant successes around the entire technology stack, including open system platforms as well as Mainframe, Oracle and MSSQL database technologies

- **Innovative Testing Tools & Processes** – proven competence delivering quality services through well-defined testing frameworks that incorporate expertise in various automation tools

- **Solid Delivery Management** – extensive experience setting up and operating testing capabilities for various clients utilizing well-established communications processes and strong knowledge management practices supported by established reporting procedures

Try to select a testing service provider who can be a true partner to your IT department. Major IT consulting firms with strong testing units have the bandwidth and expertise to provide value-added services beyond bug checks. Organizations benefit from resources able to improve processes and provide the kind of knowledge transfer that delivers continuous improvement.

Seek test service providers who create playbooks of test scripts that contain documents of all required technical activities. Vendors should manage testing engagements with a transparency that enables you to maintain and continually improve software quality long after project completion. The vendor should solicit end-user input to develop and enumerate the script scenarios and make sure all customizations are addressed and thoroughly tested.

Don't settle for order takers. Rather, find well-qualified testing resources capable of serving in an advisory capacity, helping you plan and manage the full testing lifecycle, conduct an analysis of your test portfolio and provide strategies to optimize the process. Consider the outsourcing of your testing projects to be a collaborative process wherein both internal and third-party resources learn together and work together toward common goals.

Trust between the company and vendor will ultimately make the relationship a rewarding one on both sides. That requires that you identify providers with whom you can establish a true partnership where communication is both open and frequent.

> *"Programming today is a race between software engineers striving to build bigger and better idiot-proof programs, and the Universe trying to produce bigger and better idiots. So far, the Universe is winning."*
>
> *- Rich Cook*

Companies that offer on-demand cloud-based Testing as a Service should be looked at closely. The Cloud is becoming a rapidly growing avenue for testing service delivery. The benefits for testing in the cloud are similar to other cloud computing services – lower costs, elimination of up-front capital expenditures, and easy availability.

Cloud-based Testing as a Service vendors offer more flexibility and higher cost effectiveness. Easy access to test tools and environments make management of testing services convenient anytime and from anywhere in the world. It makes setting up a testing program quick and easy, and works especially well for global organizations that operate recurring but not continuous

## Conclusion

The primary business case for outsourcing testing services and the result you should achieve by doing so is one of efficiency. And efficiency can translate into speedier time to market, decreased costs and improved ROI. Perhaps more importantly, testing done right results in stable, reliable and beneficial products. They enhance the company brand and the reputation of the IT department.

By seeking a partner to help transform processes and enhance the knowledge and skills of your internal team, the decision to outsource testing becomes a winning proposition for your organization. Find the vendor that can improve your efficiency and positively impact your ability to meet key business goals. Then stick with them.

1."Essential Metrics for Outsourcing Testing Services," Gartner, Jan. 2011

## About ROLTA

Rolta is a leading provider of Consulting, Managed Services and Technology for many vertical segments, including Financial Services, Utilities, Oil & Gas, Retail, Healthcare and Manufacturing. Enterprise-level solutions are built around Rolta's intellectual property and domain expertise to offer deep insights and understanding of industry drivers and supporting business processes that help organizations achieve their business goals. Through our innovative approach, Rolta makes a lasting impact on your business.

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# Testing as a Service
## Faster Speed to Market with Greater Condence

The cost of application development is high, driving greater need for testing experts than ever before. Choosing the right outsourced testing team is crucial to your ability to deliver products to the market faster and at lower costs.

## What We Offer:
- Diverse automation and performance frameworks with innovative tools and infrastructure
- Vast experience in industry standard ERP, CRM and other turnkey applications on multiple technologies
- Flexible support for every phase of Software Testing Life Cycle
- Expertise testing the products and projects in different domains

**PLANNING**
- Strategy
- Process
- Tools

**DESIGN**
- Test scenarios, cases and data
- Maintenance of overall test artifacts

**EXECUTION**
- Test execution
- Multiple configurations
- Results tracking

**ANALYSIS**
- Measure overall progress
- Post-mortem analysis

## How You Benefit:
We recognize that quality results come from having the right people with the right tools and the right processes from the very beginning and throughout the project. ROLTA testing teams work toward KPIs and metrics that deliver the clear business benefits you desire. We operate each engagement with a transparency that enables you to maintain and continually improve quality long after project completion.

| Test Services | What Rolta Offers | How You Benefit |
|---|---|---|
| Advisory | Test process advisory including automation, environment and optimization strategies | Decrease testing costs |
| | Test portfolio analysis | |
| | Compliance audit | Domain expertise builds confidence into applications |
| Test Centers of Excellence | Automation "proof of concept" lab | Outcome defined as part of design |
| | Pay-per-use test automation platform | Move from CAPEX to OPEX |
| | Domain test accelerators | Dramatic reduction in scenario identification & test case creation |
| e2e testing | Full Life Cycle testing | Reduces your IT team involvement |
| | Maintenance & support testing | Improved efficiencies and end-to-end functionality |
| | Performance testing | Meet key performance, financial and quality metrics |

## Why Rolta:
- Specialized Platinum Oracle Partner
    - Uniquely qualified testing teams able to ensure best design for maximum value
- Strong domain orientation
    - Focusing on Financial Services, Manufacturing, Utilities, Oil & Gas, Retail
- Offering Onsite / Offshore / Onshore or variations of all
    - Teams where you need them, when you need them

**Rolta Knows Oracle + Rolta Knows Your Industry = True Value & High ROI**