

The Business Case for Outsourcing Software Testing to a Separate Vendor

How an independent software testing company can help you improve your quality and time-to-market while reducing risk and cost

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Introduction

Increasingly companies are coming to realize that delivering high-quality software on-time and on-budget requires that they partner with the best-of-breed vendors for all aspects of the software development process. These companies want to use more than one vendor, or multi-source, allowing them to select vendors who are expert in development, as well as vendors who are expert in software testing.

This paper will explore both the single-source, and the multi-source approach to application development, highlighting the advantages and disadvantages of each, and pointing out the distinct advantages that multi-sourcing has over single-sourcing. This paper will then highlight LogiGear's strengths, expertise, and thought-leadership as a preferred multi-source partner for your software testing needs.

Single-Source Application Development

In single source application development, a single vendor is hired to develop an application or applications, as well as perform all or most of the software testing and quality assurance (QA) functions. The selection of a single-source vendor may be part of a larger outsourcing effort or business process outsourcing (BPO) engagement. The goal in selecting a single vendor is to achieve the efficiency of only having to deal with a single vendor, while, of course, driving down costs.

The advantages of having a single source vendor for both software development and testing are that there is a single point of management, a single service level agreement (SLA), and a single point of accountability. Many companies incorrectly assume that this organizational simplicity will further help to drive costs down, while delivering quality software on-time.

Single source application development is not necessarily the panacea that it would initially appear to be. There are many trade-offs and potential problems with single sourcing both application development and software testing. The potential problems with single sourcing can include:

- **Compromising on best-of-breed in testing** – When single sourcing, companies usually focus on selecting a software development partner who *also* does software testing. Typically, *the primary focus of a vendor is on software development*, with software testing being an additional item for which they can bill. In many instances, *testing is an afterthought*, or an adjunct to their primary development business. It is important to remember that *software testing is its own discipline*, with its own methodologies that are separate and distinct from software development. Treating testing as an afterthought to software development can potentially lead to quality problems with the resulting software.
- **Testing can be in the hands of less-experienced and less-interested engineers** - It is common practice for software development firms to assign their *junior staff* to software testing. Testing is often the first step in the career path of new software engineers who aspire to become software developers. As such, they typically *do not have a testing background*, or a good understanding of the fundamental concepts and practices that make up good software testing, *nor do they want to do testing*. Further, they typically do not have, and do not receive, any formal training in software testing. This can leave one of the most important parts of the software development process, the testing, in the hands of relative novices. To make matters worse, these junior testers may be hesitant to point out problems in the work of their more-experienced co-workers.
- **Lack of independence introduces risk into the development process** – When developers and testers are in the same organization, testers can come under intense pressure to not delay or prevent delivery from occurring. This can be especially true in an outsourced relationship where meeting or missing delivery dates may have financial ramifications for the outsourcing vendor. Because of this dynamic, the customer (outsourcer) may not get true insights into the quality of the application under development. Even with an SLA, bugs may go unreported to the customer so that the outsourcing firm can keep its delivery costs down and meet its delivery commitments.

Multi-Source Application Development

With multi-source application development (multi-sourcing), multiple “best-of-breed” outsourcing firms are hired, each to perform its own specialized tasks. Using this approach, a firm would hire both an independent software development company, and an independent software testing company. Each of these companies would be expert in their particular discipline.

In such a multi-sourcing arrangement, onshore managers would manage the multiple vendor relationships and the coordination between the various vendors and themselves. In many cases, the relationships would be managed at the departmental level with a company’s development department managing the software development vendor, and the software testing or quality assurance department managing the testing relationship. Such a structure would actually create *beneficial independence* between development and testing.

There are many advantages in favor of multi-sourcing. These include:

- **Companies gain access to best-of-breed firms** – By multi-sourcing, a company can gain access to vendors who are specialized experts in their own discipline, in this case they would be outsourcing to both a firm expert in development *and* a firm expert in software testing.
- **Companies gain access to trained testing experts** – From the standpoint of software testing, hiring a dedicated vendor that is strictly focused on software testing means that a company would be acquiring the services of engineers who are *trained software testing experts*. Such engineers understand testing processes, methodologies, and tools to a high degree of proficiency. This enables them to perform a more thorough and complete job testing software. In software testing companies, software testing is not a step towards becoming a developer, but rather a chosen *career path* with a clear progression of professional growth.
- **Companies lower risk** – Risk to the development effort is reduced on many fronts by multi-sourcing. Companies will be obtaining a high degree of software testing expertise and professionalism. Companies will also be creating the necessary and desired independence between the two disciplines, development and testing, that can contribute to delivering higher quality software. Since the testing vendor has no “vested interest” in the developed software, they can be very honest about its quality and readiness for market. Such insight can be invaluable to company management as they try to weigh quality/time-to-market trade-offs. Having good information from a testing vendor that you trust can enable you to make more informed decisions.
- **Companies can save money by tapping smaller outsourcing markets** – Breaking up the development process into the components of development and testing means that a company may be able to tap into smaller outsourcing markets and vendors, enabling them to lower costs and potentially reducing their exposure to the engineering turnover (churn) that exists in larger markets and firms.

The main disadvantages of multi-sourcing are that there are multiple vendor relationships, no single point of contact, and the onshore employees will have to manage and coordinate the work of multiple companies. This is mitigated by the desired effect of creating independence between development and testing. Such independence can inherently contribute to the goal of higher quality software while reducing the risk of delays, unacceptable post-release support costs, and embarrassing software failures.

These disadvantages can be further minimized or eliminated through the use of effective testing frameworks that facilitate global teams and good communication. A number of these tools are commercially available, or they can be developed in-house.

The Advantages of Multi-Sourcing with LogiGear

Clearly, multi-source application development has substantial advantages over single-source application development. Selecting the *right* software testing vendor can help to amplify these advantages. LogiGear brings substantial strengths to the table that make it an ideal choice for your software testing needs in a multi-source application development arrangement. These strengths include:

- **Experience** – Operating since 1994, LogiGear has extensive experience in delivering software testing tools and QA software, onshore and offshore testing solutions, software testing process and strategy consulting, and software testing training for a broad range of clients from early stage startups to *Fortune 500* companies.
- **Recognized best-of-breed firm** – LogiGear’s founder and senior management team are widely recognized as industry thought leaders in software quality assurance testing. Hung Nguyen, LogiGear’s CEO, President, and Founder is coauthor of the top-selling book in the software testing field, Testing Computer Software (Wiley, 2nd ed. 2002) and other publications including Testing Applications on the Web (Wiley, 2nd ed. 2003). Mr. Nguyen also teaches software testing at LogiGear University, and at the University of California Berkeley Extension and Santa Cruz Extension in San Francisco and Silicon Valley. LogiGear’s Chief Technology Officer, Hans Buwalda is coauthor of Integrated Test Design and Automation (Addison Wesley, 2001); and Michael Hackett, LogiGear’s Vice President of Business Strategy and Operations is coauthor of Testing Applications on the Web (Wiley, 2nd ed. 2003).
- **Global Test Automation** – LogiGear offers innovation, not just commoditization, by combining a unique low-cost offshore outsourcing opportunity with cutting-edge automation engineering, onshore project management and onshore account management. LogiGear has established the first and only US-led software testing company in Vietnam, the LogiGear Test & Research Center. LogiGear’s US team members are established thought leaders in software test automation, delivering a complete solution of Action Based Testing methodology, test automation tool technology, team integration training and testing strategy. Combined into this strategic approach, Global Test Automation offers you all cost and speed advantages of offshoring and automation. For more information, see the new book by LogiGear’s founders, Global Software Test Automation: A Discussion for Executives (Happy About, 2006).
- **Innovative and proven testing approach** - LogiGear also has a very innovative and proven testing approach that combines **Action Based Testing™** - a keyword-based testing and test automation *methodology*, with its **TestArchitect™** testing and test automation framework. The combination of methodology, tools, and expertly-trained staff allows LogiGear to deliver highly scaleable and maintainable test automation solutions while still providing the cost benefits of off shoring.
- **Access to lower-cost smaller markets** – LogiGear is the *first and only* software testing company in Vietnam, giving LogiGear access to the most talented engineers. Unlike other popular outsourcing locations, costs in Vietnam are not growing excessively. Since LogiGear is the *only* software testing company in Vietnam, employee churn or turnover is not a problem. All of this allows LogiGear to deliver extremely cost-effective testing solutions, with a staff of expert testers who are dedicated to their customers’ success.
- **Access to trained testers** - In addition to having access to the best of a talented candidate pool, LogiGear extensively trains its engineers in software testing

practices, methodologies, and tools, using a rigorous curriculum developed for its US training customers. LogiGear also provides its test engineers an extensive testing-based career path allowing them to grow professionally while they become more expert at delivering testing solutions. Making use of this expert test engineering staff enables LogiGear to deliver more comprehensive and thorough testing solutions at a lower cost.

- **Reduced Risk** - LogiGear's independence from development, software testing only focus, recognized thought leadership, access to lower-cost markets, and highly-trained expert test engineers all help to significantly reduce your risk. In LogiGear you have a partner with over a decade of outsourcing experience that can give you great insight into the quality and function of software under test. This provides your management with the critical information that they need to make informed decisions, ultimately helping you to deliver a higher quality software product, on-time and on-budget.

Conclusion

Companies that want to take advantage of the cost savings that can be provided by outsourcing must be careful to remain focused on the critical goals of maintaining quality and achieving time-to-market targets. For such companies, multi-sourcing has emerged as one of the critical options that must be considered. Multi-sourcing provides some very clear and distinct advantages over single-source solutions, including:

- Access to best of breed software testing firms
- Risk mitigation because your software testing vendor is looking after the interest of high quality software over simply meeting development delivery dates

When considering multi-sourcing vendors, LogiGear emerges as a best-of-breed firm with extensive expertise in providing global software testing solutions and industry thought leadership. By making use of LogiGear's highly trained and expert test engineering staff in the low-cost market of Vietnam, LogiGear can deliver low-cost and high-quality testing solutions that can help you to deliver better quality software.

"Logigear's Global Test Automation solution has allowed us to increase test coverage and quality of each release, all while reducing costs. I can't ask for more than that!"

Alan Larrabee, Director of Engineering, Openwave Corporation

"In today's business environment, startups must pursue an aggressive global model for software development and testing. In less than six months, LogiGear designed and delivered a powerful and global automated software testing solution that proved critical to our successful product launch."

Adam Au, VP of Engineering, Centrifly Corporation

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