

Driving Productivity through Smarter Sourcing



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Introduction

The trend to move application development and maintenance work to lower cost resources has consumed much of the IT industry in recent years. The ease of moving work and the growing pools of globally-available qualified resources reinforce the feasibility of this model; however, outsourcing for less expensive labor alone does not provide enough value in today's demanding economy. Wage arbitrage—the practice of buying skills in different markets to benefit from lower prices—yields limited returns against ever-increasing IT wages, foreign exchange fluctuation and attrition. Companies must go beyond traditional outsourcing and wage arbitrage to establish a more strategic or smarter sourcing approach.

To achieve true business impact, companies and their sourcing partners need to seek not only cost-takeout but also to adopt a strategic relationship that targets process improvements that result in improvements in quality and cycle time. This approach needs to be governed by business process maturity that returns real productivity improvements. The smarter sourcing approach integrates and improves onshore and offshore capabilities while preserving critical expertise and ensuring high quality results. The lack of effective process management in outsourcing impacts the ability to truly drive change and realize cost takeout.

Smarter sourcing combines process-based effectiveness with the ability to leverage wage arbitrage selectively to yield better results at lower costs. For years, companies have reported dramatic results in predictability, productivity, quality and ROI from process maturity. The next wave of improvement in process maturity will yield more gains in each of these areas due to the ability to tap into the best skills for the job regardless of location, skill specialty, labor rate or the size of the work effort.

The need for flexibility and speed in the delivery of applications has never been more apparent than in today's highly-networked, fast-paced, globally-distributed environment. Smarter sourcing addresses those needs by integrating and improving onshore and offshore capabilities while preserving critical expertise to ensure high quality results.

Why smarter sourcing now?

In the past, the large cost difference between “onshore” and “offshore” IT skills outweighed many potential quality and coordination issues. Work was often moved to lower-cost geographies to generate savings, even when the sponsoring organization’s IT development processes and workflow were poorly defined or business requirements were somewhat vague. The higher levels of rework and additional defects that often resulted were acceptable due to the savings achieved.

Wage arbitrage for application development and maintenance is no longer an attractive strategy for the many organizations pursuing the greatest cost savings. Current analysis now supports the fact that the cost of offshore labor continues to rise. For instance, the IT cost ratio for India vs. the U.S. used to be 5-to-1; it is now just 2-to-1 or 3-to-1, and it continues to decline¹.

Moreover, due to inhibitors that impact productivity and cause rework, many organizations continue to fail to even realize these savings. These inhibitors include unclear roles, lack of accountability, coordination and communication issues, and poor approaches to vendor management.

Some of the other causes for the failure of complex IT projects include:

- Lack of appropriate funding
- Scope creep
- Lack of process methodology
- Poor planning
- Objectives changing during the project
- Unrealistic time or resource estimates
- Lack of user involvement
- Failure to act as a team
- Inadequate skills

To address these inhibitors, organizations need to look beyond pure wage arbitrage toward a more intelligent approach to sourcing. In-depth analysis of the applications and environment provides the data needed to evaluate the appropriate offshore model and the competency pools that will comprise it. The process improvements and movement of work to the best competency are then implemented in a synchronized project which results in a global organization with governance in place to deliver predictably and cost savings while enabling innovation.

The smarter sourcing approach

To realize cost benefits from highly productive models like “follow the sun” and competency-based resource pools, organizations also need to implement more mature process frameworks. To be successful, companies need to undergo a comprehensive assessment of the organization’s in-house processes, resources, skills, and tools to identify areas for improvement as well as gaps. The assessment helps to prevent merely moving broken processes and organizational deficiencies to an offshore location where issues are even harder to identify and resolve.

A 2008 Forrester Research report states that,
“... successful transition to a managed outcome relationship typically yields an additional 20% to 30% savings improvement beyond the benefit of labor arbitrage.”¹²

The next stage in the offshore evolution includes addressing resource requirements based on the application analysis. The key is bringing process disciplines and organizational maturity to the retained or onshore organization to facilitate working with the offshore partner. Companies need to bridge inherent global communication, cultural and process gaps through leadership, and consistent and structured organizational behaviors, including regular communication from leadership. Such improvements have been proven to minimize problems with cultural training, work ambiguities, shifting directives, employee morale and organizational change. For instance, employees are empowered and have higher morale since there is less guesswork in their project roles and responsibilities. Overall improvements from these changes also enable higher levels of productivity and quality within the organization as well as with its offshore resource partners

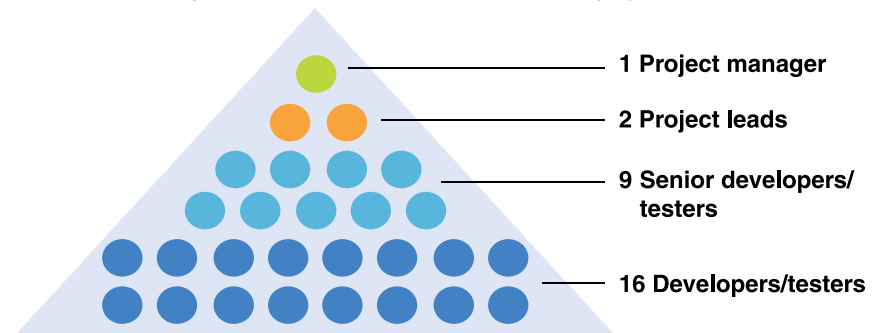
Best practices in using global resources to achieve cost savings and realize greater innovation is to build a strong foundation of application development and maintenance disciplines within the onshore organization. These disciplines include the methodologies, metrics, tools, skills, organization, and culture necessary to enable a high performing, integrated development organization. While the implementation and institutionalization of these practices is not simple and can't be bought, it is achievable and yields measurable returns in a relatively short timeframe. Results can be achieved in a matter of months, and can begin to yield a return on investment during the implementation period,

Three critical areas must be considered to achieve the full benefits of smarter sourcing:

Staffing Pyramid Optimization

Smarter sourcing analysis provides recommendations to ensure the application development and maintenance (AD/M) organizations are best positioned to effectively utilize global skills and maintain the proper staffing mix. IBM's staffing pyramid optimization maximizes the most effective resource mix in the organization from the appropriate competencies, with a balanced mix of project managers, projects leads, senior developers, and developers. The pyramid describes the span of control that each project manager can effectively manage. Many organizations have a diamond- or barrel-shaped resource pool with too many project leads or senior developers. Balancing this mix can greatly reduce the cost incurred when experienced, costly resources are performing work that can be accomplished by less skilled workers.

Figure 1 Example of optimized staffing pyramid



Source: IBM Research

An optimized model ensures that the analysis and design work would be assigned to a specialized group, while sending coding and testing to a team with those skills. The span of control for one project manager is more clearly defined by approximating the ratios in Figure 1. This approach enables organizations to pay for the right skill at the right time, thus saving money, and avoiding wasting resources on the wrong activity set.

Application development process effectiveness

The purpose of application development process effectiveness is to identify practices that need improvement to ensure the effective use of low-cost resources. These practices may include things like the control of requirements scope, the consistent documentation of technical artifacts, financial tracking or standards in status reporting. The information gathered in the application study will be used in planning the use of competency pools that are available through wage arbitrage. These include application characteristics like language platforms and availability requirements that will help determine the best resources qualified to support them.

Application Development Process Effectiveness uses interviews and reviews of project and process documentation to determine if and how the current staff is utilizing the processes that may be in place for performing AD/M functions. The importance of a defined, repeatable methodology cannot be overstated; it removes ambiguities and guesswork which frees technical staff to focus on innovation and deliver the desired outcome. Therefore through this work, the processes, methodology and tools are benchmarked with specific recommendations for improvements.

Application review

Finally, to understand which software applications would benefit from global teams requires in- depth understanding and analysis of the applications. Application characteristics are mapped and analyzed through defined tools and with agreed-upon metrics. The output shows the best opportunities for global staffing based on risk and reward based on application complexity and support requirements.

These three aspects of the smarter sourcing analysis help ensure that onshore and global resources are comprised of the optimal staffing mix and are following common, standardized, mature processes to best leverage labor arbitrage savings.

Benefits of smarter sourcing - A case study example

Challenge

A large telecommunication company entered into a massive program in 2006 to offshore work from multiple disparate divisions to lower cost delivery centers. A close look at one of their divisions after the migration of work was scheduled to have been completed revealed severe problems, including excessive defects, morale problems, communication failures and cultural impediments. Unaddressed, these issues can impede if not altogether inhibit progress and innovation.

Solution

The remedy for this company lay in the implementation of common processes across all the teams to provide the appropriate levels of understanding with effective communications, documented work flows with consistent handoffs, accountabilities supported by approvals and mandatory activities fundamental to any organized effort. After putting these initial processes in place the organization pursued a formal implementation of SEI CMMI processes.³

Process improvement activities in key areas should precede the movement of work offshore and continue as the organization stabilizes with the global team. Critical process areas for an integrated global team include work request management, production change management, problem management, communications, configuration management, life cycle definitions and fundamental quality processes. This allows the work to be moved, the pyramid to be optimized, and the client and vendor teams to improve through the sourcing.

As the organization reaches the state where work is distributed globally, processes should continue to mature in the areas of project management, requirements management, quality practices, testing, defect management and metrics. The benefits of mature process combined with the cost savings from sourcing successfully and the ability to engage diverse resource pools for specific tasks making up a larger, complex activity offer a powerful solution which will position the organization for significant technological advancement.

Benefits of smarter sourcing

Essentially, establishing a smarter sourcing approach elevates the relationship with a vendor to a partnership, ensuring that each party has a stake in a successful outcome. Additional benefits derived from this type of partnership include better insight into the progress, status, and risks of in-flight projects, more effective knowledge transfer from the sourcing partner to the organization, and the opportunity to leverage a vendor's leading-edge development practices within the client organization. Organizations have even noticed enhanced morale among their staff as a result of transitioning from a staff augmentation arrangement to a smarter sourcing partnership. Practitioners realize greater job fulfillment when they are fully enabled to do their jobs well. Consistent processes and methodologies ensure that no guesswork is required when an assignment is made, and that the resources, tools and environment support the level of quality needed for optimal performance.

Organizations that implement smarter sourcing typically realize significant, measurable benefits in three key areas: cost, quality, and cycle time. In addition, clients report higher satisfaction with the sourcing experience itself from such factors as stability, predictability, and innovation. Cost savings are derived from more effective staffing strategies and standard role definitions, enabling organizations to hire the right level of employee for the right task. A 2008 Forrester report states that, “successful transition to a managed outcome relationship typically yields an additional 20% to 30% savings improvement beyond the benefit of labor arbitrage.”³¹ Quality improvements are generated from the implementation of standard process disciplines for better requirements, change management, and accountability. Each of these results in identifying and eliminating defects earlier in the development process. The overall duration of the development lifecycle is shortened, as a result of fewer defects and less rework, accelerating the cycle time for delivery of applications.

Improvements can be achieved in all of the following categories using a smarter sourcing approach:

Figure 2. The implementation of best practices can produce productivity improvement in many areas.

Criteria	Results
Business Partner Satisfaction	30% to 90% improvement
Severity 1 Defect Rates	58% to 82 % reduction
On - Budget	27% to 41% improvement
On - Schedule	20% to 41% improvement
ROI	3.6 to 9 times

Source: IBM Research

Effectiveness is defined as both quality and productivity. At one time, quality and productivity were seen as inversely related: for instance, “you can have it now, or you can have it right -- which do you want?” But quality and productivity are seen today to have a very direct, if loosely coupled, relationship. Only minimal productivity improvements can be made without addressing quality. Quality improvements may not affect productivity immediately, but higher quality creates greater long-term productivity improvement.

It is clear that the added savings possible with wage arbitrage can yield dependable outcomes with dramatic savings. There are documented improvements in all of the following categories using smarter sourcing:

Figure 3. The implementation of best practices yields significant, measurable improvements in productivity, cost and quality.

Solution Area	Description
Automation and Technology	Develop one standard approach to defining a strategy to leverage common tools
Consolidation	Balance resources across portfolios increasing the overall flexibility of the resource pool
Global Development	Utilize global capabilities to provide planning and execution activities in lower cost locations
Governance	Establish sponsorship and align the organization to a common set of management standards
People	Implement programs to assess skills, define roles and career paths
Quality	Provide capabilities to identify defects earlier in the development process and reduce the overall number of products software defects released
Standardization	Leverage best practice methods to drive consistency across portfolios

Source: IBM Research

Summary

Attaining the levels of responsiveness most businesses demand of their IT organizations requires vision and leadership from application development executives. It requires re-engineering the application development process itself and the continual introduction and integration of new techniques, methods, tools and the best resources to use them. It requires meaningful measurements to guide process improvement and to ensure competency pools are providing the benefits expected at the best costs available. These are the benefits that should be realized in smarter sourcing partnerships.

The true value of a smarter sourcing approach comes from engaging quality-focused, responsive and efficient providers. The right provider will help to ensure the transfer of process knowledge, metrics acumen and best practices supported by tooling. In the words of one client, 'low cost labor ultimately is as replaceable as any other commodity: smarter sourcing, combined with efficient labor, is irreplaceable.' The smarter sourcing approach will improve the output and performance of the client, providing the savings and productivity benefits needed in our challenging economic environment.

For more information

IBM's Application Development and Global Sourcing Effectiveness Methodology

ibm.com/services/applications

IBM Application Services Brochure

Optimizing application and technology investments to drive business value and risk reduction

ibm.com/common/ssi/fcgi-bin/ssialias?infotype=PM&subtype=BR&appname=GBSE_GB_AM_USEN&htmlfid=GBB03033USEN&attachment=GBB03033USEN.PDF

IBM Application Benchmark Assessment Online Tool and Industry White Papers, in association with the Bathwick Group.

ibm.com/gbs/applicationbenchmark



- 1 *Organizational Effectiveness*, Mark A. Thompson, Dean, Quinnipiac University School of Business, Fall 2007
- 2 *"From FTEs To Results: Going Beyond Labor Arbitrage To Managed Outcome Relationships,"* Forrester Research Inc., April 18, 2008"
- 3 Carnegie Mellon® Software Engineering Institute (SEI), Capability Maturity Model® Integration (CMMI) is a process improvement approach that provides organizations with the essential elements of effective processes. www.sei.cmu.edu/cmmi

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