Four Hidden Costs of Offshoring

A Catalyst Business Brief

Executive Summary: As innovation enabled by technology continues to play an increasingly crucial role in driving business results, the expectations for timely, high-quality and effective strategic IT initiatives are higher than ever. This rising pressure is highlighting the limitations of a longstanding approach to reducing IT costs – offshored development. With CIOs and business leaders discovering a range of hidden costs attached to the practice of IT offshoring, a growing number are looking to bring development of core applications closer to home.

The way that corporate America views technology has changed radically. For decades, technology was a decidedly unglamorous back-office function that was rarely understood or discussed outside of the IT department. As PCs began appearing on desks in offices everywhere and software applications replaced manual processes from the factory floor to the customer service kiosk, technology began to earn recognition outside the IT department from those who track cost reduction and improved efficiency. It still lacked glamor, but its visibility was on the rise.

And then came the Internet, followed by the more recent spread of mobile devices. It is hard to imagine a single business that has not been affected by these two revolutionary forces. Whether a company is B2B or sells directly to consumers, whether it makes products or provides services, whether it offers low-cost commodities or high-end luxury offerings, every company has had to adapt in reaction to always-on connectivity and accessibility from computers now small enough to fit in a pocket.
As a result, technology has gained a newfound prominence and respect in the hallways of corporate America. It is now critical to competitive differentiation and innovation, and even corporate reputation. One indicator of technology’s ascendancy far outside the IT department is the number of marketing executives and consumer product companies that now flock to the annual Consumer Electronics Show. In 2014, companies as diverse as Pizza Hut, Lowes and every car maker from Detroit’s Big Three to BMW to Kia all gathered in Las Vegas to unveil the ways they are using technology to improve the customer experience or deliver innovative new products. Indeed, every company is now a technology company.

With its ability to help companies diversify revenue streams, introduce new products and services, develop brand-enhancement programs and better connect with customers, tech is enjoying unprecedented attention that extends right up to the CEO. However, today’s chief executives have little patience for a corporate approach to technology that isn’t keeping pace with what they experience on their tablet or smartphone.

LIMITATIONS OF PREVIOUS APPROACHES

For CIOs, it’s a classic case of “be careful what you ask for.” In this changing corporate landscape where technology solutions are suddenly a core and highly visible enabler of a company’s business, previous IT approaches are falling short.

Offshoring is a prime example of this.

For decades, U.S. companies have been shipping IT work offshore in order to cut costs. The practice began with simple and highly predictable help-desk type services and then spread to programming as companies discovered the lower labor costs available in such countries as India, China and Russia.

But the limitations of this approach are becoming clear when exposed to the pressure-cooker environment of today’s IT function. Business leaders within the company, often the corporate sponsors of the company’s most strategic IT projects, have high expectations for rapid delivery, quality, intuitive user experience, and overall effectiveness. Those leaders also expect technologists to help envision what is possible, and to share their knowledge about what technology can enable by participating actively in the conversation about the project and product strategy.
In this high-pressure and often unforgiving environment, more and more CIOs are frustrated with traditional offshore solutions for all but the most mundane and repetitive tasks. Today, more strategic business projects are coming back to the U.S. (a practice called “re-shoring” in the manufacturing world) to be completed or redone here – or are outsourced right from the start on U.S. soil.

**FOUR HIDDEN COSTS**

Companies that have evaluated or used offshore application development have discovered four important hidden costs that can cancel out the anticipated gains of paying lower hourly programmer rates. Unlike other IT decisions, the choice of where to go for help with application development is not as simple as effectiveness vs. efficiency.

**#1 Communication Barriers Inhibit Collaboration**

Application development suffers when teams have trouble communicating clearly with each other because they are working from diverse locations. These communication gaps compromise newer approaches to development such as enterprise agile even further. That is because agile requires frequent iterative releases, and these rely on rapid real-time collaboration, development of trust, and shared understanding between developers and line-of-business project owners. But major differences in time zones create time lags that slow down rapid iterations, and the inability to communicate clearly and in real-time can be a major barrier to developing the teamwork and trust critical to effective execution.

The demands of successful agile development are not the only barrier. In addition, because technology is now at the heart of how well a company performs, technical teams need to be part of the business conversation, and they need to contribute to that conversation. Offshore teams are challenged to provide that input.

Modern applications generate large amounts of data. The ability to effectively manage and analyze Big Data yields valuable business insights. However, the power of Big Data can only be harnessed if those building the systems to manage it can participate in the conversation about how it will be used and what it can do. When teams are separated by great geographic and cultural distance, those critical conversations cannot happen.
Offshore providers and their onshore representatives often do not fully comprehend the project objectives they are working on. They can read the requirements but they are rarely customers of what they are developing. This inhibits their full participation in the project and product strategy --
but even more fundamentally, it means they frequently do not understand what is left unsaid, the context of, or an error in a requirement or user story.

CASE STUDY – DOMESTIC SOURCING DELIVERS MEASURABLE IMPROVEMENTS

When a Fortune 500 sports apparel company was looking to create a critical new product that would solidify its dominant position in the market and its relationship with its customers, the company initially offshored the development of the new digital technology and associated mobile and desktop applications.

As the project progressed with a tier-one offshore provider, several issues surfaced:

- Project backlogs increased and existing resources became overloaded, which led to less productivity from development teams and missed project deadlines.
- Team morale suffered as onsite teams from overseas had difficulty developing effective relationships with client team members.
- Offshore developers struggled to understand business objectives and the desired product user experience.

In the end, a culture gap created a tangible effect on the ability of the teams to align and function as a cohesive unit with a common goal. This gap magnified each challenge that emerged.

After several months of struggling to make progress, the company concluded that launch dates and product success were being compromised, and turned to Catalyst because of its reputation for providing high-quality services onshore and on time. Within three business days, Catalyst had a scrum development team on-site, working to get the project back on track and on schedule.

Catalyst was able to fit into the company’s culture from day one and contribute to the project from the first sprint. The team delivered the first version of the product 60 days later, helping the company take its first step towards leadership in the wearable tech market. When this Fortune 500 company compared the results of the project work performed by its offshore partner versus that done by Catalyst, it discovered:

- Catalyst executed at one-third of the cost per agile story point.
- Catalyst was significantly more productive, delivering 77% more cards per month and repeatedly meeting project deadlines.
- The Catalyst team delivered with 55% fewer defects.

Based on the work of domestic onshoring partner Catalyst, the Fortune 500 company views this initiative as, in their own words, “one of the leading projects that has put technology at the forefront of the organization and its strategy.”
The absence of face-to-face, frequent and iterative interaction between offshore development teams and business stakeholders exacerbates the issue of context. Without deep knowledge of project and business value, along with changing business requirements, offshore teams are unable to provide insight and recommendations critical to improving end user experience. As a result, product architecture, design and functionality suffer. Offshore development, therefore, is performed with a mechanical aspect; the shortfalls of this effort result in a missed opportunity for collaboration that could lead to improvements in outcome.

#2 Distributed Teams Incur Hidden Ramp-up Costs
As projects unfold, organizations should expect a ramp-up period in which significant costs are incurred. Project scoping, requirements setting, onboarding of team members and knowledge transfer all have a cost. When considering distributed teams and the need to distribute systems or processes across borders, these costs can rise dramatically.

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**ANALYTICS-BASED TEAM ASSEMBLY DRIVES DOWN COSTS**

Even with the home-court advantage that escalating offshore rates offer to domestic sourcing providers, some continually seek out methods to reduce costs and pass those savings on to clients in the form of lower hourly rates and improved productivity. Catalyst’s unique “moneyball” approach uses objective data instead of opinion for hiring and team assembly, allowing the company to deliver high productivity and high quality, while keeping clients costs low. This proven approach has enabled Catalyst to deliver services at the same or lower cost as many offshore vendors. (The term "moneyball" refers to a specialized approach to analyzing baseball through objective evidence in order to assess why teams win or lose.) Media outlets like ZDNet, Computerworld and CIO have described the cost savings and other benefits afforded by Catalyst’s unique approach.

In addition, the perception of low-cost labor in core offshore countries is misleading and is based on a perception that is now over a decade old. In fact, the wages for software developers overseas...
is rising at an alarming rate. At the end of 2013, top software engineers were seeing annual wage inflation rates anywhere from 16-30%, with no sign of slowdown.¹

Also consider differences in productivity levels between offshore and onshore teams. Real-time communication and collaboration enhances productivity. In the absence of this, offshore providers consistently require significantly more resources and hours to complete a project.

#3 Low-Quality Work Often Redone Onshore

Another major hidden cost of IT offshoring is having to repeat a project onshore or rework elements of projects that were developed incorrectly. This is the additional employee hours issue writ large – and it can have disastrous consequences for project deadlines, budgets and staff morale.

According to the Carnegie Mellon University Software Engineering Institute, 60-80% of the cost of software development is in rework. Perhaps even more concerning is the fact that, when it comes to agile development, 44% of organizations report that they do not know what their rework effort on a per-sprint basis really is,² creating significant risk around budget, quality and total cost of ownership.

Rework costs can be mitigated through effective and organized development processes. For example, requirements gathering and agreement on requirements prior to each sprint reduces the rework required when business or IT stakeholders change requirements during project development or, worse, after a project is completed. But the ability to collaborate and foster a team environment to come to agreement on per-sprint requirements is compromised by having disparately located teams.

In addition, when problems arise from offshored application development, they require additional internal oversight and quality control efforts that burn through valuable employee time. This is rarely budgeted for or accounted for in project timelines, and it can represent significant lost opportunity cost in terms of other work the employee was slated to do. If employees are required to hold to original deadlines while spending unanticipated hours troubleshooting, they may be

expected to work late or on weekends to make the deadline. This not only creates morale issues, it is likely to create a negative attitude toward the outsourced development team, further hindering productivity and collaboration.

### #4 Offshore Teams Marked by High Turnover

Studies show that offshore providers face a higher than average turnover rate: up to 40% per year, according to the National Association of Software and Services Companies.³ This is a function of high demand intersected with a relatively limited talent pool in these countries, and it means an outsourced team would be completely turned over approximately every two years.

For simple work that requires little prior knowledge – such as help desk or break/fix services – high turnover at the offshore provider site is unlikely to have a noticeable impact on quality. But developing applications is a much more complex proposition. It requires familiarity with the technology environment, application architecture, and the processes and corporate culture of the U.S. company using the offshoring services. Turnover among offshored staff follows the same path as it would at the U.S. company: it requires time to find a new resource, onboard them and then wait for them to get up to speed before they can match the productivity levels of their teammates.

Turnover also threatens team productivity. New team members may be able to get up to speed relatively quickly, but the team as a whole suffers from a lack of familiarity. In a working paper from the Harvard Business School, research conducted by Robert Huckman and Bradley Staats shows that “familiarity aids team functioning by helping members locate knowledge within a group, share knowledge with each other, and apply that knowledge.”⁴

Offshored teams with high turnover rates represent a false economy, since any savings in labor rates may be offset by quality defects and delivery delays. The intangible costs to re-train and re-engage offshore team members would be a burden borne by the outsourcing company which would see project and quality delays as a result.

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³ “Combatting the challenges.” NASSCOM. http://www.nasscom.in/combating-challenges
THE DOWNSTREAM EFFECT

Jack Bogle, the founder of The Vanguard Group, coined the term "the tyranny of compounding costs." While Bogle was referring to investor’s costs and returns, the tyranny is also evident in the hidden costs described in this paper.

There is an intertwined and cumulative effect of these hidden costs that is felt by businesses over time:

- Comparing the cost of distributed teams, even with the misperception of low wages, to onshore teams is not an apples-to-apples effort. Offshore teams require additional management oversight, and that team management function (whether located onshore or offshore) requires real-time, frequent communication related to requirements, quality and velocity. As previously discussed, the ability to deliver that feedback effectively in an offshore model is compromised by myriad factors, and the additional overhead cost of this oversight, regardless of its effectiveness, must be factored into any cost comparison.

- The high turnover rates of offshore teams means those teams are comprised of individuals with lower levels of cumulative experience. Less experienced teams contribute to lower quality work as a result of a lack of knowledge regarding best practices and strategies. Lower quality work puts an unnecessary burden on QA teams, creates a requirement for additional re-work, and puts user experience at risk if/when lower quality code is delivered as “finished” product.

- High turnover rates also mean that offshore teams suffer from a lack of consistency that creates a knowledge gap – institutional knowledge about the product/project and business is not retained by the team as a whole. When knowledge is transferred, it is often borne of efforts from non-business stakeholders, starting a dangerous game of “telephone” where the message being delivered may not be complete or accurate.

- A direct relationship exists between these hidden costs and project complexity. As the number of (less experienced) resources required to complete a project and turnover rates both increase, so too does project complexity. This complexity contributes a tax on testing

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resources and creates challenges down the road for product enhancement maintenance, resulting in higher product support costs and barriers to new feature development.

The compounding effect of the hidden costs of offshoring can have a long and lasting impact on a business. Productivity, quality and cost risks threaten to offset the gains expected from innovative applications that drive revenue, competitive differentiation and/or customer loyalty. As these hidden costs increasingly become recognized truths, a fundamental shift in outsourcing is occurring.

**INNOVATION THROUGH COLLABORATION**

In addition to business and project risk, two factors are driving the shifting attitudes and lower adoption rates of offshore services for strategic technology solutions. One is the role of technology as an enabler of innovation; the second is the dramatic degree and rate of change to business that has been fueled by the Internet and spread of mobile devices. The former creates a need for a development process marked by clear communication, collaboration and rapid course corrections. The latter is creating an urgency that is felt by everyone in the company, from the board of directors, through the C-suite to line of business managers before this urgency is ultimately communicated to the CIO.

IT leaders should continue to give serious consideration to offshored IT services to reduce costs in areas that are repetitive and formulaic. But for innovation initiatives that can set the company apart from its rivals or attract new customers, IT executives would be wise to keep those projects onshore and to enhance their efforts with resources that have demonstrated the ability to collaborate and scale up rapidly as needed. Otherwise, these IT executives may discover that the hidden costs of offshoring quickly become visible – and prohibitive.
ABOUT CATALYST

Catalyst is a provider of agile onshore application development, QA and maintenance services with onshore (and onsite) resources, but at a cost comparable to offshore providers. Catalyst’s unique big data approach to hiring and team assembly enable the company to deliver application services with greater productivity, better quality, and lower costs. Catalyst has development centers in Baltimore, MD and Portland, OR.

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