WHAT’S THE REAL STORY ON OFFSHORE IT OUTSOURCING?

Few IT management practices have sparked as much controversy as the offshore sourcing of IT work, projected to be a $10- to $30-billion market by 2005.¹ Front-page headlines question, “Software: Will Outsourcing Hurt America’s Supremacy?” and claim offshore sourcing is stealing American IT jobs and dragging down U.S. IT bonus pay.³ U.S. companies that source offshore are blacklisted on television shows, such as CNN’s “Tonight with Lou Dobbs.”

In contrast to the political backlash, research on offshore IT sourcing has found positive effects on U.S. IT jobs, IT productivity, IT costs, and IT quality.² For example, Forrester estimates that 360,000 U.S. service jobs went abroad in 2003; however, these jobs represented only 1/4 of one percent of the U.S. workforce, which is 130 million people strong.⁵ The Cato Institute argues that offshoring low-paying IT jobs will create newer and higher-paying IT jobs in the U.S. over the next eight years. Similarly, global production of IT hardware reduced hardware costs by 30%, resulting in an additional $230 billion in U.S. GDP be-

between 1995 and 2002. Similar effects on productivity are anticipated in software development. Finally, an IBM Consulting Services survey found that 82% of IT managers reported cost savings between 10% and 50% from offshore sourcing and 68% of the respondents claimed some or significant quality improvement.

While such studies are certainly important bellwethers, many opponents of offshore sourcing claim these studies are biased. Most have been generated by consulting firms—IBM, McKinsey, Forrester Research, Gartner and Global Insight—or IT industry consortiums, such as ITAA and NASSCOM. There clearly is a need for unbiased academic research. But there has been very little, thus far. This paper is meant to address that gap.

**HOW CAN U.S. COMPANIES DO IT BETTER?**

Our research was inspired by Carmel and Agarwal’s seminal 2002 paper, “The Maturation of Offshore Sourcing of Information Technology Work,” published in MIS Quarterly Executive. Their work, based on thirteen case studies, generated a four-stage model of offshore outsourcing: offshore bystander, offshore experimenter, proactive cost focus, and proactive strategic focus. More recently, Kaiser and Hawk reported on an eight-year relationship between a U.S. financial insurance company and an India-based supplier. That paper provides lessons on evolving an offshore relationship from proactive cost focus to strategic cosourcing. But there is still a need for detailed research on how CIOs can swiftly move their organizations through these four phases. That guidance, in the form of best practices, is the focus of this paper.

**Who We Interviewed**

Our prior research contained over 100 case studies of domestic outsourcing (where customers outsourced to suppliers in their own country). In that work, we identified best practices, management frameworks, and relationship models. Our current research aims to discern whether best practices for offshore sourcing differ from those of domestic sourcing. We therefore replicated our domestic case study research method, selecting large U.S. organizations that use India-based suppliers because India continues to rank as a top sourcing locale.

We interviewed 27 people—U.S. customers, offshore suppliers and consultants, and offshore legal experts—in the Fall 2003 and the Spring of 2004 (See Appendix A). The face-to-face interviews took place on customer premises or at five offshore sourcing events (sponsored by user groups, a university, and one offshore supplier).

**What We Asked**

We asked about four offshore challenges:

- How can U.S. organizations swiftly move through the offshore learning curve?
- How can U.S. organizations mitigate offshore risks?
- How can U.S. organizations effectively work with offshore suppliers?
- How can U.S. organizations ensure cost savings while protecting quality?

**What We Found**

We uncovered 20 best practices for moving an organization from offshore bystander to offshore experimenter to proactive cost focus (See Table 1). We illustrate them through the experiences of one Fortune 500 firm, given the pseudonym “Biotech.”

**Five practices are equally important to domestic and offshore.** The good news for CIOs is that some practices for managing domestic outsourcing do indeed apply to offshore sourcing. In particular, five best practices are equally important for both domestic and offshore outsourcing: create a centralized program management office, leverage in-house sourcing expertise, use pilot projects to mitigate business risks, develop meaningful career paths for in-house staff, and create balanced scorecard metrics.

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Ten practices apply to both but are more important in offshoring. These ten are more important to offshoring because the risks and transaction costs are greater, and the delivery teams are more remote and culturally diverse. Many CIOs may not have used these practices, such as hiring a legal expert to mitigate legal risks. However, while in-house legal staff may routinely draft domestic contracts, they frequently lack sufficient knowledge to draft offshore contracts to address such important items as export restrictions, foreign tax law, intellectual property rights protection, visa difficulties, and offshore labor laws. Other practices become more important in offshoring, such as openly communicating the sourcing
strategy to minimize domestic worker backlash, using real-time dashboards to verify, synchronize, and manage work flows, and hiring an intermediary consulting firm to serve as broker and guide to foreign countries, cultures, and suppliers.

**Five practices are unique to offshoring.** One intriguing offshore practice is giving customers a choice between domestic and offshore sourcing. Program management offices can publish rates for sourcing locales and allow business unit managers to assess the trade-offs between lower costs and greater risks. Other practices unique to offshore sourcing address the rigid Capability Maturity Model (CMM) requirements used by offshore suppliers, bottlenecks caused by time zone differences, and establishing the ideal in-house/onsite/offshore ratio.

Although first journeys to offshore sourcing are met with many challenges, once learning curves are conquered and best practices are institutionalized, we believe offshore sourcing will assume its rightful place in the IT sourcing portfolio. CIOs will continue to “best source,” using a mix of in-house IT staff, domestic contractors, domestic suppliers, near-shore suppliers, co-sourcing with strategic partners, and offshore suppliers.

The next section describes “Biotech’s” offshoring journey. It provides a rich description of the underlying challenges of offshore sourcing and anchors the following discussion of best practices by comparing its experiences with those of others.

**ONE CASE EXAMPLE: “BIOTECH”**

Biotech is a Fortune 500 company and a leading provider of biotechnology-based products. The firm has experienced moderate revenue growth for the past four years, earning billions a year in sales but generating significant net losses in 2002. There were several temporary reasons for the loss, including an accounting restructuring and a major litigation. But one of the enduring reasons for the loss was an excessive amount of Sales, General, and Administrative (SG&A) costs. One main company goal, stated explicitly in the annual report, is to significantly reduce the cost of SG&A. Because IT is part of this cost burden, reducing IT costs became a major goal for the CIO, which ultimately led Biotech down the offshore sourcing path.

**IT Needs to Cut its Costs**

At U.S. headquarters, Biotech employs 600 IT personnel and augments this staff with nearly 200 domestic contractors. The Corporate CIO reports to the CFO. IT Directors in each of the strategic business units report directly to the Corporate CIO, who also has a Global Leadership Team of 12 to 15 IT people who serve as liaisons and leaders to the business units.

From 2000 to 2002, the IT budget remained flat. Then it was reduced by five percent to partly subsidize the net losses from that year. “Doing more with less” became the CIO’s major challenge. A few members of the Global Leadership Team championed investigating offshore sourcing to reduce IT costs by replacing some expensive domestic contract labor with cheaper, offshore equivalents. Because Biotech did not plan to reduce its in-house IT staff, its offshoring effort did not elicit the political stigma other U.S. companies have experienced.

**The Global Leadership Team Investigates India**

Three members of the Global Leadership Team began their offshore investigation by visiting U.S. companies that were currently engaging in offshore outsourcing. Convinced by the cost savings they witnessed, they hired an intermediary to serve as a guide to India and to Indian suppliers. They selected India as the offshore venue because Biotech already had R&D facilities in Bangalore. In that facility, Biotech had full-time IT employees who ultimately played a significant role in managing offshore sourcing.

In August of 2002, two members of the Global Leadership Team made the trip to India and were subsequently convinced that Biotech should pursue offshore sourcing. Upon their return, the Global Leadership Team began to rally senior management support for offshore sourcing. The CIO approved and created a new Offshore Program Management Office (PMO). The PMO signed Master Service Level agreements with 4 Indian suppliers, two large and two small.

**Biotech Launches 17 Offshore Pilot Projects**

Members of the Global Leadership Team started bringing pilot projects to the Offshore PMO. The idea was not to immediately generate cost savings, but rather to gain experience with the types of applications, suppliers, contracts, and work processes needed to ensure offshore sourcing success. In all, 17 pilot projects were undertaken. Biotech purposefully selected very different types of applications; including replatforming from PeopleSoft to SAP, back end systems development, and entire end-to-end systems development. They tested the suppliers’ capabilities with new (wireless) and old (ERP) technologies. They experimented with different sized projects rang-
ing from a 20-person day project to an 800-person day project (four FTEs for eight months). In several instances, Biotech gave small pieces of the same project to two vendors so that the project served as a control group for better supplier comparison.

Statements of Work (SOWs) were appended to the Master Service Level Agreements for each specific pilot. Fixed-price contracts were used when requirements were clearly defined. Time and materials contracts were used when requirements were still emerging.

Four pilots were launched in March 2003. They exemplify the learning Biotech accrued during their offshore experimenter phase.

**Testing one supplier’s staff augmentation capabilities for a small sub-project.** Jerry, a member of the Global Leadership Team, was in the midst of launching the new Biotech Intranet. He asked his team to find a small sub-project that was both low risk and highly separable to give to one of the Indian suppliers. They estimated the size of the sub-project to be 20-person days if done in-house. However, the learning curve with the offshore supplier was significant, and the sub-project took longer than estimated. The top challenges identified were: working with the supplier’s advanced CMM processes, time zone differences, language differences, and cultural differences. Because Jerry anticipated the learning curve, he did not pick a sub-project on his critical path. Thus, although the pilot took longer than 20 person days, it did not delay the overall delivery of the New Generation Intranet.

**Testing one supplier’s development capabilities for an end-to-end system.** The pilot required the supplier to do both analysis and development for a new web-based system. This project was riskier than other pilots because Biotech had a mandatory installation date. Initially, there were no in-house IT staff or contractors working on the project; thus, the supplier had to create this system from scratch. Biotech selected one of the larger Indian suppliers for this project. The analysis and design phases took longer than anticipated, again due to challenges with working with the supplier’s processes, time zone differences, language differences, and cultural differences. The ultimate project deadline was met by speedier than anticipated coding and testing phases. Overall, our participants rated the project a moderate success.

**Testing two suppliers’ conversion capabilities.** The third pilot was a large conversion from PeopleSoft to SAP. Biotech decided that before they would commit to one supplier, they would have two of the large Indian suppliers do small pieces of the conversion. Biotech experienced much better project leadership from one of the suppliers in terms of onsite coordination, project status reporting, technical fit with Biotech, and superior daily communications. Biotech selected this supplier to complete the entire conversion. Three months later, when Biotech went live with SAP, the Indian supplier was granted an ongoing maintenance contract for seven FTEs. The overall project was rated a great success.

**Testing two suppliers’ development capabilities.** The fourth project entailed the development of a new marketing application. Like the ERP conversion, Biotech initially assigned small, eight-week pieces of work to two Indian suppliers, one large and one small. To further reduce risk, Biotech required delivery of milestones every two weeks. While the large Indian supplier performed well, the small supplier did not. The small supplier missed deadlines and failed to communicate the project status in a timely manner. Biotech selected the large Indian supplier to complete the system.

**Moving Forward with Offshore**

Overall, the 17 pilot projects were successful in that Biotech extracted the learning they wanted and demonstrated proof of concept. Pam, a member of the Global Leadership Team, offers the following assessment:

“I think the one comment I’ll make is, all of our startups were difficult. I don’t think there’s one startup that happened in that March to July 2003 timeframe that didn’t hit some startup issues. But they all delivered at the economic level we expected. They all delivered on the date. And when I say, pretty much on the dates, we probably had 1 or 2 out of 17 that missed a little bit, but I wouldn’t call those significant.”

By accumulating all of the learning from the pilot projects, Biotech’s IT management determined which two suppliers they preferred (one large and one small supplier), the types of processes Biotech needs to develop in-house to facilitate offshore sourcing, and the types and size of projects best handled offshore. Biotech outgrew their intermediary and began using the IT staff located in the Bangalore R&D facility “to do the ground work.” In September 2003, Biotech was ready to move from offshore experierner to proactive cost focus.

During the second phase of offshore sourcing, Biotech aims to gain significant cost savings. While the pilot projects experienced lower hourly wages, overall cost savings were not evident because of the learning curve
and risk mitigation practices, such as small project sizes. In order to truly leverage offshore savings, Biotech is embarking on larger projects.

**PRACTICES TO OVERCOME OFFSHORE CHALLENGES**

Biotech, like our other case sites, faced four tough challenges when moving IT work offshore: How can we swiftly move through the learning curve? How can we mitigate risks? How can we effectively work with offshore suppliers? How can we ensure cost savings while protecting quality? Participants identified 20 practices that served to meet these challenges (See Table 1).

**Practices to Move Swiftly through the Learning Curve**

U.S. CIOs who have never sourced IT work offshore are anxious to move swiftly through the learning curve. Participants identified three helpful practices: create a centralized offshore program management office, hire an intermediary, and carefully select locations, projects, suppliers, and managers to leverage in-house sourcing expertise. These practices are important for both domestic and offshore sourcing, but the need for intermediary consulting firms is greater with offshore.

1. **Create a centralized program management office (PMO) to consolidate management.**

PMOs set up preferred supplier relationships, negotiate contracts, assess overall performance, define best practices, and disseminate learning. This best practice is not unique to offshore sourcing. The issue here is whether CIOs should create a separate program management office for offshore, such as Biotech did, or whether to integrate offshore into an existing PMO. Participants suggested that CIOs should create a separate office if the offshore initiative represents a significant departure from domestic outsourcing practices or they intend to create a captive center or joint partnership that will require dedicated management. CIOs should create an integrated PMO if they want business requirements to drive the supplier selection and if they want the onshore and offshore suppliers to compete aggressively. Retail, a Fortune 100 company, used competition managed by the integrated PMO to cut the domestic supplier rates by 20% to 50%.

2. **Hire an intermediary consulting firm to serve as a broker and guide.**

The intermediary consulting market is certainly growing fast, with players such as NeoIT, SourceQuest, Soft Access, Cincom, TPI, and Providio Technology Group. Experts estimate that by 2005, 64% of offshore contracts will be brokered by intermediaries. Biotech certainly found considerable value in hiring an intermediary:

“I think it absolutely engaged us more quickly with respect to them informing the offshore vendors of our situation and setting up the arrangements. We would have just had to spend a lot more of our own time with all of that. So I think it streamlined the initial process.” --Pam, Global Leadership Team member

3. **Select locations, projects, suppliers, and managers to leverage in-house sourcing expertise.**

CIOs have many sourcing experiences that will transfer to the offshore domain. Many companies, such as Biotech, choose a location because of the existence of manufacturing, R&D, or other subsidiaries. These locations serve as a home base to launch an offshore IT initiative.

Many U.S. CIOs initially select staff augmentation because of their vast experience with domestic contractors. In addition, the time and materials contract for staff augmentation requires less precision than a fixed-price contract for end-to-end systems development. Biotech certainly had a considerable history of using domestic suppliers for staff augmentation and purposefully chose similar staff augmentation projects to test offshore sourcing.

Concerning suppliers, some U.S. CIOs move offshore via one of their domestic suppliers such as EDS, IBM, or Accenture because they can leverage the existing relationships. For example, AT&T preferred to move offshore through its existing partnership with IBM, rather than try to build a new relationship with a new supplier in a new country. Other customers, such as Financial Services 3, prefer to select established offshore suppliers such as Wipro because of their maturity. Still other customers, including Biotech, look for smaller niche suppliers with domain expertise.

All participants cited the need for veteran project managers as a critical success factor. However, there

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13 For more on project leader veterans, see Brown, C., and I. Vessey, “Managing the Next Wave of Enterprise Systems: Leveraging Lessons
was some debate as to the type of experience required. Most participants believed the offshore project managers should have successfully managed in-house projects on the same subject matter as the offshore engagement. But one participant found that it was better to select a project manager with domestic supplier management expertise than it was to select a project manager with subject matter expertise. To this participant, the more important skill was vendor relationship management rather than domain knowledge.

**Practices to Mitigate Risks**

All CIOs are aware of the risks associated with offshore sourcing including business, legal, political, infrastructure, workforce, social, and logistical risks. While many of these risks are also present in domestic outsourcing, most are greater with offshore sourcing, and 11 risks are unique to offshore sourcing (See Appendix B). We asked participants to provide specific examples of successful risk mitigation practices. They identified common, but important, best practices such as using pilot projects, hiring legal experts, and openly communicating the offshore initiative to assuage fear. Some identified more unique and intriguing practices such as giving the customer a choice.

4. **Use pilot projects to mitigate business risks.**

Biotech brought the concept of piloting to reduce risk to a new level. Biotech chose 17 pilot projects that were mostly small in size, required frequent delivery of milestones, and gave pieces of the same project to two suppliers. In some ways, Biotech may have reduced risk at the expense of some additional learning:

> “I am not sure our selection of projects told us as much as it could have. Bad project selection skew your results in both ways. If the pilot was too small, it led the teams to conclude the overhead is too large and we can’t be successful, we won’t have savings. We had other projects that were not complex that lead us to believe, offshore is wonderful, it’s wildly successful. But we didn’t really test the supplier’s capabilities. Neither view is correct.” -- Laura, Global Leadership Team member

A pilot project must be large enough to extract learning and metrics, but small enough to minimize risk. But experts do not agree on the ideal size. According to a Gartner Group Senior Researcher, an ideal pilot size is ten to fifteen people for six months. According to the CEO of an intermediary consulting firm, pilot projects should be sized at two man-years, representing a project cost between $50,000 and $100,000. According to Biotech, the ideal project size is four full time equivalents for four months.

5. **Give customers a choice of sourcing location to mitigate business risks.**

Using an offshore provider for customer-facing activities presents considerable risks. CIOs need look no further than Dell Computer’s experiences to see the effects of poorly executed offshore service centers. In a widely publicized move, Dell Computer “re-shored” technical support for its corporate customers (approximately 85% of its customer base) due to customer dissatisfaction with the call center in Bangalore, India.

The CIO of Financial Services 4 allows strategic business units a choice for application development. The SBU can source IT from three preferred offshore suppliers or from approved domestic suppliers. Rates are lower with the offshore suppliers, but risks are lower with the domestic suppliers. The CIO believes the business unit managers should be the ones assessing the trade-offs.

6. **Hire a legal expert to mitigate legal risks.**

Hiring a legal expert for domestic outsourcing has been a standard best practice for 15 years. Many legal firms, such as Shaw Pittman and Milbank Tweed, specialize in outsourcing. The need for legal expertise with offshore sourcing is even more pronounced because customers must abide by different legal systems and more regulatory requirements. Participants hired legal firms to help with tax implications, protection of intellectual property, business continuity, regulatory compliance, visa formalities, governing law, and dispute resolution. For example, lawyers helped participants define arbitration clauses to resolve disputes rather than rely on India’s 15-year litigation process.

7. **Openly communicate the sourcing strategy to all stakeholders to mitigate political risks.**

At Financial Services 1, senior management viewed offshore sourcing as a potential way to decrease the immense application backlog caused by the refinancing boom. But senior management chose to keep the pilot project “low key rather than panic the IT staff while we were simply testing the waters.” One day, the domestic IT staff showed up for work to find 11 people from India working in cubicles. The domestic IT staff began to panic and question the future of their careers. The Indian workers were isolated and treated

with suspicion, if not contempt. The IT staff found
frequent reasons for complaining about the offshore
sourcing projects. Eventually, the CTO held a town
meeting and told the staff that there would be no lay-
offs caused by offshore sourcing. However, he would
fill fewer in-house vacancies caused by natural attri-
tion. In contrast, Biotech was very open about the
offshore pilots and told the internal IT staff that off-
shore sourcing was about “doing more with a flat
budget” and that no internal IT workers would be fired
as a result of offshore sourcing.

8. Use secure information links or redundant
    lines to mitigate infrastructure risks.

Early articles on offshore sourcing focused on poor
infrastructure quality in countries with low labor costs
as a major risk factor. Our participants reported only
minor problems because in India, at least, the infra-
structure has improved. First, many participants use
secure communications links between the customer
and offshore supplier to enable easy and secure ac-
cess. Second, many U.S. customers opt for redundant
lines so that downtime is not an issue. Third, the In-
dian government has replaced the telecommunications
monopoly with a competitive market. According to
the former President of MCI, India is in the process of
laying fiber optic cables to 100,000 Indian buildings
as compared to 30,000 buildings wired in the U.S. All
of these initiatives will serve to increase telecommu-
nications service quality and reduce costs.

9. Use fixed-price contracts, when possible, to
    mitigate workforce risks.

Several participants complained that some of the sup-
pliers’ employees were inexperienced, overworked,
and frequently turned over. The customer is most af-
fected by workforce risks when using a time and ma-
terials contract. Because the customer is billed hourly,
the customer subsidizes a new supplier employee’s
learning curve. Also, supplier employees who are
unproductive take more hours to complete tasks, again
reflected in a higher customer bill. Some customers
try to mitigate this risk by demanding to see resumes
of supplier employees or by setting minimum years of
experience. These practices place the customer in the
business of managing the supplier’s resources, which
can increase transaction costs and create animosity
between customer and supplier. A better practice is to
incent the supplier by using a fixed-price contract with
clearly defined deliverables. The supplier can best
decide how to staff the project to meet their contrac-
tual obligations while maximizing their own profit
margin. The supplier is incented to put their most
productive people on the project to increase their mar-
gin, or the supplier may make a strategic decision to
finance their own employees’ learning curves.

10. Elevate your own organization’s CMM
certification to close the process gap be-
tween you and your supplier.

Every participant brought up the need to coordinate
work processes, particularly with suppliers who are
committed to the Software Engineering Institute’s
Capability Maturity Model. While Indian suppliers
were all certified at CMM level 4 or 5, our U.S. cus-
tomers were at best a level 2. At higher levels of cer-
tification, an immense amount of documentation is
required. U.S. project managers had never before been
through such a rigorous process to define require-
ments.

At Biotech, requirements definition is an informal
process when done onshore. Project managers speak
frequently with users who are usually located on site.
The user feedback cycle is quick. In contrast, project
managers working on the offshore pilots had to en-
gage in many formal and planned communications
with suppliers and users to create the required docu-
ments. One Biotech Global Leadership Team Member
said, “the overhead costs of documenting some of the
projects exceeded the value of the deliverables.”

So what can be done to more effectively coordinate
work processes? One Indian supplier places a CMM
expert who is purposefully naive about the business
process at the client site. This person reviews the cli-
ent’s business requirements from a CMM perspective
to raise issues of ambiguity before sending it offshore.

Other participants suggested that the best way to ex-
tract value from the supplier’s CMM processes is to
become CMM certified yourself:

“A real problem we had was our CMM level
1.5 guys talking to the vendor’s level 5 guys.
So together, we have worked out a plan with
our vendor to help bring our CMM levels up. When we do, it will be a benefit to both of us; our specifications will be better and so they can use them more efficiently.” -- Director of Application Development Outsourcing, Transportation

The outstanding issue is the level of certification required to effectively work with suppliers. The Vice President at Financial Services 4 believes that customers only need to reach level 1.8 to extract value. The Office of IT Services at Financial Services 3 set a more ambitious goal as he pushes hard to bring his own organization up to at least a level 3.

11. **Negotiate the CMM processes you will and will not pay for to not waste money.**

The project manager at Financial Services 1 noted, “You ask for one button to be moved and the supplier has to first do a twenty page impact analysis. We are paying for all this documentation we don’t need.” He is negotiating for exactly which documents Financial Services 1 will and will not pay. This will enable him to only use the CMM processes he perceives to add significant value. While this practice is unique, a customized interface with each customer could serve to increase the supplier’s costs, which may eventually result in higher prices.

12. **Cross-examine, or even replace, the supplier’s employees to overcome cultural communication barriers.**

We heard from many participants that Indian employees would not challenge the customer, readily deliver bad news, or express incomprehension. One frustrated participant said, “The place could be on fire and they would say, ‘Oh it’s great, a little warm, but it is great!’”

One American who works for a major offshore supplier says he learned to cross-examine his Indian counterparts to ensure they tell him bad news. Whereas in America he asks, “How is the project going?” in India he asks much more pointed questions, to the point where he worries about being rude. Another participant solved the issue by complaining to the supplier’s senior management that the supplier’s project manager was evasive about the project status. The supplier replaced that individual with a woman who was much more forthcoming.

13. **Let the project team members meet face-to-face to foster camaraderie.**

As a corollary to the previous lesson, the need for the customer’s project manager to visit the supplier site is clearly emerging as a best (and expensive) practice to get past cultural communication barriers. It is much easier to switch to lower cost media such as teleconferences and e-mail after meeting people face-to-face.

Biotech bore the cost of the team members meeting face-to-face: “Once you get good at specking out what you need face-to-face, then an awful lot of the work happens by e-mail and it’s just follow up questions and lots of that happens by e-mail.” -- Jerry, Global Leadership Team member

14. **Consider innovative techniques, such as real-time dashboards, to improve workflow verification, synchronization, and management.**

Project managers noted difficulties with transferring work, keeping track of programming and database versions, and when and how to verify supplier work. At Biotech, most pilot projects required transfer of work every two weeks. At Financial Services 1, the customer takes possession of programming code every 15 days, but needs to check the database architecture daily. Sometimes there are discrepancies in the database schemas. One possible solution is a real-time dashboard. Dashboards are emerging tools that allow the customer to glimpse at the supplier’s work in real-time. Although only one of our participants (Industrial Equipment Manufacturer) has implemented a dashboard, they all saw a need for better workflow management.

15. **Manage bottlenecks to relieve the substantial time zone differences.**

Time zone differences are often marketed as a bonus of offshore sourcing because operations can occur around the clock. While that benefit may be realized for call centers, time zone differences do not typically facilitate IT development projects. For concurrent tasks, like telephone conferences, the U.S. customers have to stay at work very late or the supplier has to get up very early. For sequential tasks, if U.S. customers don’t stay late to complete deliverables, the consequence is that the supplier sits idle for an entire day. For example, the project manager at Financial Services 1 said he doesn’t have the power to make the database administrator stay late to finish schemas, resulting in a bottleneck as the supplier waits.
Biotech learned that a best practice to minimize bottlenecks was co-located people: have some Indian supplier employees on site in the U.S. and some Biotech staff on site in India. A boutique Indian supplier minimized the problem by setting the work hours in Hyderabad from 1:00 p.m. to 10:00 p.m. to provide a three-hour overlap with U.S. customers.

Practices to Ensure Cost Savings and Protect Quality

During the experimenter phase, participants’ main objective was testing the concept. Substantial cost savings can only be achieved after learning has accumulated and project size has increased. In this section, we discuss what participants learned about the necessary size of projects and quality assurance practices to ensure cost savings while protecting quality. Although some of these practices apply to domestic sourcing as well, we see why they are more difficult to implement in the offshore context.

16. Consider both transaction and production costs to calculate overall savings realistically.

For U.S. companies, the initial offshore driver is undoubtedly labor cost savings, a production cost. In the U.S., average labor cost per year per IT employee is $63,331\(^{14}\), compared to less than $6,000 in India. The management challenge is extracting overall cost savings when both transaction and production costs are considered.

Transaction costs are considerably higher with offshore sourcing. According to a study by the Meta Group, Gartner Group, and Renedis, transaction costs of offshore sourcing range from 15.2% to 57% of contract value for vendor selection, transitioning the work, layoffs and retention, lost productivity due to cultural issues, improving development processes, and managing the contract.\(^{15}\) In contrast, transaction costs of domestic outsourcing range between 4 and 10 percent of contract value.\(^{16}\)

Most CIOs find it very difficult to calculate the total costs of offshore sourcing. At Biotech, the Head of the Offshore Program Management says:

“It is clear that we saved money on a per hour basis, there is no way to argue about that, but did they [offshore provider] save us money overall? Did they do it as fast as we would do it? The other big complaint came from the project managers: ‘Managing offshore projects is really hard… if I had to count up how hard this is, then we lost money.’”\(^{17}\)

17. Size projects large enough to receive total cost savings.

Our research did not identify a definitive benchmark for the size of IT project required to achieve significant savings. We asked a senior researcher at the Gartner Group how big an IT software project has to be in order to achieve 15 to 20 percent overall savings. He quoted us between 80 and 100 FTEs, although he admonished that this number was based on his personal experience. Participants from Biotech agree that larger sized projects are the key to getting overall cost savings:

“We tended to pick what we perceived as low-risk projects for the pilots. And in some cases that meant that we picked projects that were so small, the overhead crushed any value.” -- Patrick, Head of Offshore Program Management Office

After pilot tests were complete, Biotech launched two very large application development projects. These projects will be two to three years in duration and represent over a million dollars each in IT spend, with significant cost savings anticipated.

18. Establish the ideal in-house/onsite/offshore ratio only after the relationship has stabilized.

The CEO of an offshore intermediary firm stated that the ideal ratio is 15% of client staff on site to maintain direction, 15% supplier staff on site to serve as liaisons and project managers, and 70% of the supplier staff offshore. While customers are in the experimental phase, the ratio is likely to be much higher. For example, when Financial Services 3 started offshore sourcing in 2001, the onshore/offshore ratio was 50/50. Wipro, the supplier, has a dedicated staff on-site, as well as a dedicated offshore delivery team. Thus far, the relationship has been successful in that Wipro delivered 115 projects with an above average customer rating. As Financial Services 3 has conquered the learning curve and established a good supplier relationship, the Officer of IT Services aims to shift the ratio to 30/70.

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19. Develop meaningful career paths for subject matter experts, project managers, governance experts, and technical experts to help ensure quality.

Participants stressed the need for subject matter experts (SMEs) and good project managers to define and deliver business requirements and governance experts to manage external suppliers. But as U.S. organizations increasingly outsource entry-level positions like programmers, how will future generations of SMEs, project managers, and governance experts be groomed?

“All of the best project managers I have ever worked with all started as coders. If all the hardcore coding is being done offshore, where will we get our good project managers?” -- Pam, Global Leadership Team Member.

This worry prompted the Vice President of Technologies for Financial Services 6 to work with local universities to create a Center of Excellence for the development of skill sets aimed at “priming the pump” to ensure the talent pipeline does not dry up. These centers work with Financial Services 6 to understand the changing landscape of IT work and adapt their curriculum to create graduates with the necessary combination of business, project management, and technical skills.

20. Create balanced scorecard metrics.

All participants identified the need for measures that consider costs, quality, timeliness, and risks, but only participants from one company were fully satisfied with current assessment measures. Industrial Equipment Manufacturer, a Fortune 100 firm, tracks in-house, domestic and offshore suppliers’ costs, quality, and productivity using a standardized activity measure. The data is captured by an in-house dashboard and analyzed monthly by management to monitor real development costs and trends. They learned that real savings from offshore do not occur until after they have invested significant upfront training of every offshore developer and team leader. They also share this data with vendors so that all parties understand the total cost trends.

In contrast, at Biotech, offshore measures are still in the formative stage. Traditionally, Biotech’s IT managers conduct subjective audits on the back end of a system implementation. Critical feedback from the customers and the sponsoring SBU is deemed the most important assessment factor. As the CIO notes, “IT cannot make this assessment alone, it has to be done with the sponsoring and user group.” The Head of the Offshore PMO is developing more quantitative metrics, but the effort is not complete.

Some participants are pressuring suppliers to develop a set of metrics to serve as industry benchmarks:

“Our vendor must have many customers who are all trying to do the same thing. And maybe some have already done it. If they could just come up with five to seven key measurements to help me, I could better manage the project and explain the process to my boss. But every time I ask for ‘best of breed’ metrics, they tell me, ‘metrics really need to be company specific and business driven, not vendor provided.’ That does not help me!”

CONCLUSION

Despite the media hype predicting the demise of U.S. jobs and the political uncertainties that could affect offshore sourcing, we predict that offshore sourcing will become part of the rich and multi-faceted sourcing of IT work at most large U.S. firms. The best practice has been and will continue to be best sourcing, including a mix of in-house IT staff, domestic contractors, domestic suppliers, near-shore suppliers, co-sourcing with strategic partners, and yes, offshore suppliers. The good news for CIOs just adding offshore sourcing to their IT sourcing portfolios is that many sourcing experiences transfer to the offshore domain. In this paper, we highlight best practices for offshore outsourcing and compare them to those of domestic outsourcing. These practices can help CIOs swiftly move through the learning curve, mitigate risks, work with offshore suppliers, and achieve satisfactory costs and service levels. But what next?

There will be many shifts in preferred offshore sourcing locales and players. Countries such as the Philippines and China may resume the role traditionally held by India: low cost staff augmentation for repetitive or highly defined tasks. India will remain a strong player, but with a different focus. The large Indian suppliers are trying to position themselves higher in the value chain, competing on par with IBM, EDS, CSC, and Accenture. As the large Indian suppliers gain experience and build relationships with U.S. customers, they will be able to demand higher prices to reflect higher value. However, the transition will be tough because Indian suppliers are coping with significant challenges caused by rapid growth. By the same token, IBM, EDS, CSC, and Accenture established captive centers or joint ventures in India to leverage offshore advantages on behalf of their U.S. customers. Smaller Indian firms are also effectively competing on quality of staff, domain expertise, and...
flexibility. There is still much to be learned in terms of better customer/supplier coordination, types and sizes of projects best suited for offshore, and balanced scorecard metrics to compare internal, domestic, and offshore sourcing alternatives.

ABOUT THE AUTHORS

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Mary Lacity
Mary Lacity (mary.lacity@umsl.edu) is a Professor of Information Systems at the University of Missouri-St. Louis, Research Affiliate at Templeton College, Oxford University, and Faculty Advisor at Washington University. She has written five books and published papers on IT sourcing in the Harvard Business Review, Sloan Management Review, MIS Quarterly, MIS Quarterly Executive, IEEE Computer, Communications of the ACM and many other academic and practitioner outlets. She is Senior Editor of MIS Quarterly Executive and U.S. Editor of the Journal of Information Technology.

Acknowledgements

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## Appendix A: Research Participants

<table>
<thead>
<tr>
<th>Title of Participant</th>
<th>Organization Pseudonym</th>
<th>Role in Offshore Outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Patrick”, Head of Offshore Program Management Office</td>
<td>Biotech, Fortune 500 Company</td>
<td>Responsible for offshore strategy and execution.</td>
</tr>
<tr>
<td>“Jerry”, Global Leadership Team Member</td>
<td>Biotech</td>
<td>In charge of offshore outsourcing pilots.</td>
</tr>
<tr>
<td>“Pam” Global Leadership Team Member</td>
<td>Biotech</td>
<td>In charge of offshore outsourcing pilots.</td>
</tr>
<tr>
<td>“Laura” Global Leadership Team Member</td>
<td>Biotech</td>
<td>In charge of offshore outsourcing pilots.</td>
</tr>
<tr>
<td>Chief Information Officer</td>
<td>Biotech</td>
<td>In charge of corporate IT strategy and execution.</td>
</tr>
<tr>
<td>Chief Information Officer</td>
<td>Retail, Fortune 100 Company</td>
<td>In charge of corporate IT strategy and execution.</td>
</tr>
<tr>
<td>Director of Contract Management</td>
<td>Retail</td>
<td>Responsible for onshore and offshore contract management.</td>
</tr>
<tr>
<td>Chief Technology Officer</td>
<td>Financial Services 1, Fortune 100 Company</td>
<td>Responsible for sourcing strategy, developing supplier relationships, ensuring sourcing success.</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Financial Services 1</td>
<td>One of the first project managers at Financial Services to manage an offshore project.</td>
</tr>
<tr>
<td>Vendor Assistance Manager</td>
<td>Financial Services 2</td>
<td>Head of Offshore Program Management Office; currently negotiating deals with offshore suppliers.</td>
</tr>
<tr>
<td>Office of IT Services</td>
<td>Financial Services 3</td>
<td>Assessing the offshore relationship with large Indian supplier.</td>
</tr>
<tr>
<td>Vice President</td>
<td>Financial Services 4, Fortune 100 Company</td>
<td>Helped CTO create the Offshore Program Management Office and negotiate deals with three offshore suppliers.</td>
</tr>
<tr>
<td>Senior Vice President Global Delivery Center of Expertise</td>
<td>Financial Services 5, Fortune 100 Company</td>
<td>Responsible for sourcing strategy, developing supplier relationships, ensuring sourcing success.</td>
</tr>
<tr>
<td>Vice President of Technologies</td>
<td>Financial Services 6, Fortune 500</td>
<td>Responsible for sourcing strategy, developing supplier relationships, ensuring sourcing success.</td>
</tr>
<tr>
<td>Product Development Manager</td>
<td>Industrial Equipment Manufacturer</td>
<td>Directs vendor engagement management for embedded software development</td>
</tr>
<tr>
<td>Director of Application Development Outsourcing</td>
<td>Transportation, Fortune 300 Company</td>
<td>Responsible for sourcing strategy, developing supplier relationships, ensuring sourcing success.</td>
</tr>
<tr>
<td>CEO</td>
<td>Intermediary offshore consulting firm</td>
<td>Founder and CEO of a company that has helped 75 large U.S. companies offshore source to India.</td>
</tr>
<tr>
<td>Partner</td>
<td>Large consulting firm with an intermediary offshore practice</td>
<td>Runs the BPO and IT offshore practices.</td>
</tr>
<tr>
<td>CEO</td>
<td>Intermediary offshore consulting firm</td>
<td>Founder and CEO of a company that has helped 9 large U.S. companies offshore source to India.</td>
</tr>
<tr>
<td>Vice President of Sales</td>
<td>Service Provider</td>
<td>Head of U.S. sales and engagement management.</td>
</tr>
<tr>
<td>Chairman &amp; CEO</td>
<td>Legal Firm 1</td>
<td>Lawyer</td>
</tr>
<tr>
<td>6 Partners</td>
<td>6 Legal Firms</td>
<td>Lawyer</td>
</tr>
</tbody>
</table>
### Appendix B: Sourcing Risks

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Sample Risks</th>
<th>Equally Risky for Both Domestic &amp; Offshore</th>
<th>More Risky for Offshore</th>
<th>Risk Unique to Offshore</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td>Backlash from external customers damages reputation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No overall cost savings</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor supplier in terms of capability, service, financial stability, or cultural fit</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wrong types of activities outsourced</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Inability to manage the supplier relationship</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Legal</strong></td>
<td>Inefficient or ineffective judicial system at offshore locale</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Intellectual property rights infringement</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Export restrictions</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inflexible labor laws</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Difficulty obtaining visas</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Changes in tax laws could erode savings</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inflexible contracts</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Breach in security or privacy</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Political</strong></td>
<td>Backlash from internal IT staff</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived as unpatriotic</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Politicians threaten to punish U.S. companies that source offshore</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Political instability within offshore country</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Political instability between U.S. and offshore country</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
<td>Supplier employee turnover</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplier employee burnout</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inexperienced supplier employees</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor communication skills of supplier employees</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>Poor telecommunications</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor utilities (electricity, gas, water)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td>Cultural differences</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Holiday and religious calendar differences</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Logistical</strong></td>
<td>Time zone challenges</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Managing remote teams</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Source:** Sourcing risks were identified by participants from the current research and compared to risks identified by previous participants as documented in Lacity, M. and Willcocks, L., *Global Information Technology Outsourcing: Search for Business Advantage*, Wiley, Chichester, 2001.