

Using Offshore Resources for Software Development

Two Success Stories

By Kelly G. Stephen

Introduction

For well over twenty years, many US based companies have utilized offshore resources to augment their domestic teams. The most well-known example may be in call center operations, but companies today are using offshore resources for accounting, software development, professional support, and many more. Some companies have found success using offshore resources, while others have struggled. I was fortunate enough to work for a company that had success in this area, and this paper will outline what we did and how we succeeded so that others can hopefully learn from our success and have success of their own.

Background

The company I worked for, let's call it XWare, was a \$100+ million business-to-business company delivering software for two distinct industries. The software we built was mission-critical software that typically had to be running 24/7 by the companies we sold to, and we sold the products globally. The products were complex, requiring about 1-2 weeks of configuration and training for our customers.

I came on board as the Vice President of Global Products, responsible for the end-to-end product strategy, development, and delivery of the entire product portfolio (consisting of five primary products) for one of the industries. I was a member of the executive management team and had global responsibility for Product Managers, Business Analysts, Software Engineers, and our Quality Assurance staff. The Product team was split between two locations here in the US and also groups of engineers and quality assurance staff in two offshore locations; one in India and one in Malaysia.

When I came on board the Product team was really struggling. We suffered from poor quality, missed delivery dates, over-commitment to customers, and upset customers. We needed to improve across the board, and how to more effectively use our offshore team was one key area. This turned out to be an extremely important factor in our overall success.

Offshore

As mentioned above, the company already had invested in offices in Malaysia and India that housed development resources and other staff. The offshore development teams consisted of both software engineers and quality assurance personnel. Both of these locations became a successful part of the product team's turnaround.

In addition, when I came on board the company had already decided to invest in offshore contract resources to augment our global staff. Their focus was going to be on fixing the resounding number of defects we had in our products and to help us improve our overall product scalability.

Success with Our Teams

When I started, our team in Malaysia was struggling. Our team in India was underperforming but improving. We were able to turn both teams around to become strong contributors to our overall improvement. Here are some of the key factors in this turnaround:

Strong Management: We were extremely fortunate with our India team to have a very strong General Manager for the entire office. He was a great communicator who had developed an incredible esprit de corps in that office. I visited there less than two months after I started and was blown away by how focused and energetic my team was. While not functionally managing the product teams, the GM had

taken the time to invest in their well-being as contributors. His leadership was fundamental to our success. He also had a very strong India-focused HR partner as part of his team who really helped out. In addition, stateside we had brought on a new Director of Quality Assurance to build out our team. She was extremely cognizant of the offshore teams and did an outstanding job bringing them into the entire engineering process. Her QA team, in 3 continents, was a very strong team due to her strong leadership.

Communication: I spent a lot of time early on communicating with our global team and focusing the leadership team under me to do the same. I made sure my leadership team was having regular weekly calls with the entire team, and I attended from time-to-time as well. We brought the managers and supervisors into discussions on a regular basis. We had regular calls every week with the entire team, and include them in kick-off meetings for new projects. I also had an all-hands meeting with my entire team every six weeks and included the offshore team, and I made sure to schedule the meetings at times that worked for them.

Dedication of our Offshore Staff: Our teams in India and Malaysia all wanted to be part of a successful team. After we brought them “into the fold” and treated them as part of the team, they really rallied around our efforts. They were putting in extra effort, they were available any time we wanted to get on the phone, and they delivered.

Infrastructure and Tools: Two of our products were based on the Microsoft .Net framework, but we were using an older version. There had been previous efforts to upgrade the entire framework and also implement Microsoft’s Team Foundation Server. I pushed to make that happen, even though our US-based Director of Engineering had continued to find reasons not to do it. Once that decision was made, the Malaysia and India teams went into overdrive to help implement. It turns out, not surprisingly, that trying to manage code between three locations, with one central, semi-disconnected site was so painful to the offshore teams that they would do whatever possible to correct it. We also installed a new defect tracking tool (OnTime from Axosoft) that supported multi-location and offshore teams, which really helped as well.

Face-to-face Visits: After joining the company, I made my first visit to both our Malaysia and India teams within the first 45 days. I went again 10 months later. Others on my leadership team had already been there, and I pushed to get them there at least once a year (my preference was twice, but we were facing some financial issues that prevented this). The team responded extremely well to my visit. In India, the entire team had prepared PowerPoint presentations providing me with their responsibilities, education, background, experience, and their current tasks. It was, quite frankly, eye opening for me. This team was actually better suited to fix some of our problems than our US-based team. These trips helped me get a better feeling for our global team, and also gave the team a feeling that they truly were an important part of a global enterprise.



After work bonding with a few of my India teammates

Benefits: The biggest benefit to using offshore teams is cost. From a salary and benefits perspective our offshore team members provided savings of over 75% versus similar resources stateside. We could hire more than 4 resources in India or Malaysia for the cost of one in the US. Turnover is often a huge problem overseas. However, due to the strong leadership we had in place, the face-to-face visits, and the communication push we kept turnover in our India office under 8%. Other software companies were seeing turnover rates in the 20-30% range. This helped make the entire investment in our overseas offices pay off.

Offshore Contractors

By the time I had come on board, the company had already decided to engage an India-based software engineering company to assist us. We needed

additional resources to fix an inordinate number of defects in our software and to assist us in making our products more scalable. We contracted with this company to provide 18 engineers and 12 quality assurance analysts. I kicked off and managed the relationship shortly after I started. And after working with this organization for over a year I would definitely say that we had chosen a good team. We had some initial problems but overall they did a fantastic job, fixing over 2000 defects in our products and adding new features as well. This was helped by a number of factors:

Leadership: Our QA team really set the tone, due to great leadership here in the US and also a great QA manager in our India office. Both of them took ownership of the contractor resources and did an outstanding job bringing the new QA folks into the fold. They made sure the team was trained on the product and the tools, clearly set objectives and direction, and communicated with them frequently.

Performance: Quite frankly, our engineering team struggled at first. But after seeing the success that the QA team was having using these contracting resources they started assigning more tasks. Primarily working cosmetic defects at first, the contract engineering team executed extremely well. I pushed to give them more and harder defects, as well as some specific enhancements and new features. Every time we pushed them, they continued to perform. Our global team really noticed this performance and eventually treated them as part of the team.

Project Management: Shortly before I started, the company had recognized the need for better project management and had hired a Director of Project Management for the engineering team. He was outstanding. He was hands-on and jumped in with both feet. By the time I started he had already laid the groundwork and then between the two of us we really drove more structure into the product team. This was extremely helpful when dealing with our contract outsourced team.

Communication: The biggest factor in working with offshore contracting teams is communication. And this comes in many forms. We found success because we

went overboard in our communication efforts. We set expectations for the entire team from the beginning, tasks were clearly outlined, and delivery times were agreed upon. Test scripts and test plans were well documented. Defects were clearly defined in our defect tracking tool, and enhancements were well documented. Each group met twice-a-week with the outsourcing team, and we had a weekly status meeting with their project manager.

Problems and Issues

I've discussed how we were successful using offshore teams, but I want to be clear that there were also some problems and issues that needed to be addressed. The time differences were clearly a problem. Our primary engineering office was in Pacific Standard Time. At 9:00 AM PST, our other offices were at 11:00 AM (Midwest), 7:00 PM (we had one person in the UK), 10:30 PM (India), and 1:00 AM (Malaysia). It was impossible to get everyone on the phone at the same time. While I am very supportive of using offshore teams, I feel strongly that you should be cognizant of the various time zones in order to be able to create a true team environment.

We also faced resistance from our US-based leaders. Some of that was with regards to our own offshore employees, but it was more critical with our offshore contractor resources. I heard a variety of excuses, including "they don't know our products"; "they're not as good as our team"; "we don't have time to train them"; "they don't speak English very well"; "they're not as fast as our team". I ignored as much of this as I could, but I also challenged the team to provide proof. They rarely could, and when they did it was typically a minor issue that they tried to expand. It got so bad with one team that I actually ended up replacing one of my engineering directors.

Summary and Recommendations

Based on my experience, and given the tremendous cost savings, I am a firm believer in the use of offshore engineering resources. It's definitely not easy, but there are ways to make it successful. In summary:

- Rigorous communication is critical for success. Have twice-a-week (or more frequent) conference calls on status, issues, and project considerations. If

you're using an agile/scrum methodology, schedule the daily sprint meetings at a time when the offshore team can attend as well. Document requirements well and clearly set expectations early.

- Don't have multiple countries and time zones if you can avoid it—communication and travel problems grow exponentially.

Gartner's 30 Leading Locations for Offshore Services, 2010-2011:

Americas	Asia/Pacific	EMEA
Argentina	Bangladesh	Bulgaria
Brazil	China	Czech Republic
Chile	India	Egypt
Colombia	Indonesia	Hungary
Costa Rica	Malaysia	Mauritius
Mexico	Philippines	Morocco
Panama	Sri Lanka	Poland
Peru	Thailand	Romania
	Vietnam	Russia
		Slovakia
		South Africa
		Turkey
		Ukraine

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- Implement a strong project management discipline and culture. Stay on top of all tasks and projects. This is obviously helpful for all engineering companies, but it's especially critical for projects using offshore resources.
- Create an infrastructure that is truly robust for international and multi-site access. This includes your computer network and communication, as well as the tools that you are using in your engineering process. (For example, we used Cisco for our internal global phone system and to get an office in India I simply had to dial a 5 digit extension. This was huge for us.)
- Get on a plane. Face-to-face meeting early in the project/process will eliminate a lot of issues going forward. Shows the offshore team the same level of respect and commitment you show your onshore staff and make them feel part of the team.
- Choose your offshore partners wisely and demand execution. Ask to have a dedicated project manager and have him/her visit your site early on and then regularly thereafter. Communicate constantly with the entire contracting team. Spend time with your account management folks to ensure they are your internal advocates to the engineering group. Multiple access points within the contracting organization are absolutely critical.

Using offshore teams can be difficult, but also very rewarding and successful. And extremely cost effective. But you need to take the time to manage the engagement in order to achieve this success. If you can do it, you can reap tremendous rewards.

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