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Outsourcing Best Practices

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Abstract

Outsourcing of a software project can have many benefits to an organization, but how to implement a successful outsourcing initiative can be very difficult. The decision to outsource a software project can provide many benefits to an organization, yet they may also incur several challenges. These can include items such as the interaction between current employees and the outsourcing service provider, the technological environment needed to successfully create the proper work environment, and total cost considerations. If executed properly, the outsourcing of a specific project can have a substantial gain in company growth and efficiency. Improper implementation can lead to total project failure and the loss of project resources. In spite of the challenges inherent with outsourcing, this strategy is fast becoming a popular solution to implementing corporate projects without endangering the jobs of current employees. This paper will investigate and suggest best practices that may be used to maximize the anticipated outcome of this endeavor while minimizing potential challenges.

Keywords: outsourcing, offshoring, smart sourcing, information technology outsourcing

1. INTRODUCTION

Outsourcing of information technology projects has been used by companies for several decades, since Kodak outsourced their IT function (Applegate and Montealegre, 1991). This trend towards outsourcing began due to the growing budget needed by the IT field in general (Amiti, 2004). With the growing importance of technology and the need for experts in the field, costs were climbing quickly. The need to control costs must be balanced with an understanding of the activities that should remain in-house. King (2005) states that IT executives need to identify IT activities that are best performed within the firm or to create new, innovative ways to enable activities to continue to be performed in the firm.

The topic of outsourcing has been discussed as a negative by many in the United States government, because of the negative impact it has on the United States job market (Amiti, 2004). In fact, many states have introduced legislation that would affect companies looking to offshore, or those already offshoring (Kukumanu and Portanova, 2006). As an example, New Jersey has banned offshore outsourcing of state government work (Pfannenstein and Tsai, 2004).

Even though this argument has merit, outsourcing an IT project can still be beneficial under the right circumstances. Many practitioners and academics now argue for selective or "smart" sourcing (Earl, 1996). Smart sourcing refers to the use of outsourcing

as a means for the project team to grow and fluctuate with the amount of work. This approach makes the most sense for the business, as well as the economy as a whole. The resources needed by a project will approximate the shape of a bell curve, with fewer resources needed when the project starts and gradually increasing as the project is underway. The greatest resource need will occur during the development portion of the project, with resources needs diminishing thereafter. Smart sourcing allows a company to have access to the right resources when needed, without the overhead of maintaining this staff after project completion.

There can be many benefits to outsourcing a project that extend past the monetary benefit. These would include intangible items such as access to resources, knowledge, and organizational flexibility. This will be the subject of the next section.

2. BENEFITS

In many outsourcing situations, the service provider is located offshore. Offshoring can be defined as the relocation of business processes (including production, distribution, and business services, as well as core activities like research and development) to lower-cost locations outside national borders (Erber, 2005). There are many benefits to outsourcing a project within the IT world. Lowering the overall cost of the service to the business allows for re-pricing, re-negotiation, and cost re-structuring. Access to lower cost economies through off-shoring produces "labor arbitrage" generated by the wage gap between industrialized and developing nations.

There are two major types of outsourcing that can be discussed: the move from having a permanent team locally and replacing that with a new outsourced team, and the hiring of an outsourced team in addition to the current local team ("smart" sourcing) (Bardhan, 2003). The latter is an effective way to complete a project that requires more hires, but without the commitment to a full time position. In either situation, there are several similarities and challenges within the implementation process that must be addressed.

"Smart" Sourcing

The idea of "smart" sourcing is an effective and efficient way to maintain a reliable source of developers that are closely tied to projects and the company, while still being able to fluctuate with demand for developers. As enhancement to current applications is needed or new applications are mandated, it is easy to create a larger workforce without the commitment to the employees hired. The benefits of this allow the company to keep a dedicated team of developers on staff at all times to maintain the applications. These developers will also be intimately involved in the company, and thus will have the connections and knowledge of the applications to manage any new projects or answer any type of support questions.

Not only does this help support the local economy, it also provides a backup in the case that an outsourcing endeavor does not work out the way it was planned. In the case where an entire team is replaced by an outsourced initiative, if the contract becomes unreasonable or the relationship grows sour, it can be extremely difficult to capture and transfer all the information that was maintained or "owned" by the outsourced service provider. This is another example where "smart" sourcing is an effective solution, or at the very least a backup in worst case scenarios.

The quality of a project can also be affected in a positive manner with the use of "smart" sourcing. By having a dedicated individual or team always available, the quality of training and information will also increase. This in turn will allow the outsourcing service provider to have better initial training and a stronger source of direction when the project's architecture is questioned. By having this permanent wealth of knowledge, a consistent architecture and direction can be realized.

Besides the obvious advantages of using "smart" sourcing, there are several other benefits to the general topic of outsourcing that should be mentioned.

Benefits

By focusing on core business resources, for example - investment, people, and infrastructure - organizations are able to outsource their IT support to specialized IT services companies (Sako, 2005). By doing this,

an organization is able to achieve an increased level of quality through contracting out that service with a new service level agreement. Along with the increase in quality, another benefit of outsourcing a team or a project is knowledge. Many times, by outsourcing to a specialized company, a company is granted access to intellectual property and a much higher level of experience and knowledge.

Another benefit is the contract itself. The services specified in the contract will be provided to a legally binding contract with financial penalties and legal redress (Erber, 2005). This is not the case with internal services. This means that if a mistake is made that was the responsibility of the outsourcing service provider; they are the ones that must take responsibility, legally, for the mistake. Having access to a team which already has the skills and experience necessary for the project can provide a higher quality product with less investment. To create an in-house team like this would be too difficult or time consuming.

Companies increasingly use external knowledge service providers to supplement limited in-house capacity for product innovation. The acceleration of the development or production of a product through the additional capability brought by the supplier can be very noticeable. Finally, many countries offer tax incentives to move manufacturing operations to counter high corporate taxes within another country and the outsourced company will usually be prepared to manage a temporary or permanent increase or decrease in production.

In addition to the benefits accrued from outsourcing or offshoring software development, there are several challenges that must be considered before undertaking this endeavor. Awareness of issues that may develop, or weaknesses that may be inherent in the relationship, will help balance the benefits and determine whether outsourcing will be the right approach for a project.

3. TAKING A CLOSER LOOK

Although there are many benefits to outsourcing a project or even an entire functional team, there are many hidden costs and difficulties that will be encountered along the way. The expected benefits of outsourcing have failed to materialize and approximately half of offshore outsourcing initiatives fail or do not meet stated performance objectives (Nakatsu and Iacovou, 2009).

We will now discuss the problems that are most regularly encountered, and how to deal with them if they do occur. Many of these issues are related to the problems caused by people and their emotions. Other problems include not training or managing the outsourcing service provider's team adequately. All of these topics are covered in detail in section four.

Section five discusses the hurdles involved in setting up the service provider with adequate resources, accounts, documentation, and development environments.

Before continuing, it important to remember the possibility of restructuring the current resources available instead of outsourcing them. If cost or quality problems are due to inadequate economies of scale, outsourcing can make sense (Earl, 1996). If outsourcing is the direction chosen to pursue, it is important to have strong management in place to reduce initial risks; a company must be capable of managing the IT service first. Nakatsu and Iacovou (2009) note that middle management resistance will often result in project failure.

An argument for outsourcing is that specialist IT companies are likely to have better IT specialists than the client company currently has. This may be, and often is, true, but the differences in every program and project can sometimes place the existing employees in a better position to complete the project in a timely manner (Erber, 2005).

When moving to an outsourcing solution, the skills and technology of the service provider are important to analyze. When outsourcing an entire team, it is difficult to change direction quickly, thus it is imperative to have a solid future direction in place. In conjunction with this, determining if the technical skills of the service provider chosen fit in with the company's future goals can have a huge impact on whether or not those goals are reachable (Earl, 1996).

It is also important to note the hidden costs of training the service provider and the length of the contract (Ngwenyama, 1999). Williams (2011) finds that client-vendor knowledge transfer is positively associated with formal training and client embedment. Investment in these areas will provide returns, although this

needs to be considered in the context of each individual project. If the length of contract is short, a large portion of the money spent will be on training. It is necessary to calculate the percentage of time that will be spent on training and preparation to determine whether or not outsourcing a project will be worth the capital spent. Overby (2003) places transition cost estimates - based upon interviews with executives - at 15% - 57% of the cost of the project. Rottman and Lacity (2006) also support this finding as their research uncovered transaction costs for offshore projects of 50% of contract value. Williams (2011) concurs in that over large geographic, cultural and institutional distances, effective knowledge transfer is difficult to achieve and while placement of vendor personnel at onshore client locations will assist with knowledge transfer, it will often be cost prohibitive. This is an important consideration as Remus and Ulrich (2009) identify the importance of knowledge transfer as a key factor in establishing a true strategic partnership between the client and service provider. Given the significant investment companies will make in project transition, these costs need to be considered in total project cost calculations. Yu (2006) also concurs that although there are often lower-cost offshoring alternatives to a company's current situation, the transaction costs of choosing offshoring are often greater than any cost advantages.

Although the trend of outsourcing projects is becoming a common practice, there are additional problems that can occur with the people involved.

4. THE PEOPLE PROBLEM

The implementation of outsourcing a project can at times be very difficult, even for those organizations that have been through the process several times before. The initial implementation of the service provider is the most crucial aspect of a successful outsourcing experience. Typically, an "outsourcing implementation" is defined as the first 6-18 months in which a change occurs in a relationship with an outsourcing service provider (McCray, 2008). A change can be a new contract, change in an existing contract, or a change in project direction or scope. In most cases, the overall experience with an outsourcing endeavor is determined by the implementation.

Typically, required planning should already be defined in order to properly train and set-up the service provider. This also includes having all contract negotiations and preparations by the client and service provider complete. Having a process which moves the work from a planning stage on the client side, to an execution stage on the service provider's side, is the other piece to the puzzle of a successful outsourcing implementation.

To successfully implement an outsourced project there are several areas that cause problems. The most commonly experienced problem in outsourcing implementations is a lack of understanding of post-contract processes and decision rights (McCray, 2008). This means that the client and service provider are not operationally prepared to work together following the signing of a contract. The result of this leads to both sides becoming increasingly frustrated with the other, as well as the expectation for completing the project according to the previously detailed schedule, to be delayed. Alami et al. (2008) state that setting clear goals is beneficial for providers as they are trying to avoid unrealistic expectations.

The problem can be addressed by having all processes and decision rights properly documented and socialized. Although every project and organization has its own processes, it is important to document what they are so the service provider has a place to determine the proper action to be taken. This document should also include who should be contacted in the various situations that are possible to arise during the course of the relationship.

Another pitfall that often occurs is that of poor understanding of the contract from either participant (McCray, 2008). Following the initial signing of the contract, the client and service provider both have individuals working on a successful initial implementation. There are many dynamics that vary upon the situation, but in some situations the client could have employees who are emotionally upset about the decision to outsource a portion of the work. In nearly all situations though, the client employees have multiple views of what the service provider should or should not be responsible for. With so many new people and significant speed of implementation, responsibilities and social dynamics can often become confused and stressful.

In many outsourcing projects, the client often assumes that there is no need to keep any local team, or there is underestimation of how many individuals are still needed to properly run the outsourcing endeavor (McCray, 2008). Willliams (2011) mentions that codified knowledge dissemination through formal training is beneficial for an offshore engineer's understanding of their client. While knowledge transfer to the offshore team is crucial to success of their efforts, many on the local team are still required for effective transition and continuing support. If training and transfer of knowledge is improperly managed, it can cause issues in implementation because there is no one guiding the service provider, especially if the project is complex.

Additionally, there is an inadequate team left in place to manage the outsourcing service provider. This team is often referred to as the governance team. Data gathered by Technology Partners International's (TPI) Governance Benchmark database states that 60 percent of staff assigned to the team which managed an outsourced project had no prior experience with dealing with an outsourcing endeavor (McCray, 2008). It was also found that 40 percent of clients in the benchmark did not provide any initial training for the governance team assigned to manage the agreement and only 20 percent of the clients felt that they provided enough ongoing training for their governance team.

Training of the outsourcing service provider can also lead to several problems. The first notable issue with outsourcing is the loss of pivotal knowledge and talent. This is almost an inevitable outcome of replacing a currently local team with an outsourcing endeavor. Within IT there are many small pieces of knowledge that only one member of a team may know. Additionally, this one member may only have to perform the task once in a great while.

The possibility of losing members of your team before the outsourcing implementation has been completed can lead to the need for backfilling the positions or a reduction of service quality (McCray, 2008). A similar issue can occur even if no talent is lost, this happens due to the regular employees spending their time training the outsourcing service provider instead of maintaining their normal responsibilities.

An often overlooked problem within outsourcing is when the culture of the two companies does not mix well together (Grossman, 2002). This is actually a very important aspect that many companies tend to ignore. It is always important to be able to work comfortably and efficiently with a client or service provider. A clashing of culture can many times affect the overall outcome of a project. Depending on where the service provider or client is located, there can be several cultural differences that should be kept in mind for both. Some of these include language, religion, holidays, and work hours. Although this list is not extensive, it should be used as a starting point when determining if the culture of an outsourcing service provider will mesh well with a team.

5. BEST PRACTICES

There are several pitfalls that can cause an outsourcing implementation to fail, many of which have been noted above. In most cases though, there are simple ways to achieve success during the implementation of an outsourcing project. It may have been noticeable in the previous section that nearly every common people problem faced during an outsourcing implementation results from a lack of sponsorship and commitment of 'Change Management'.

Change Management

Change Management refers to a team, individual, or process that acts as the guiding hand throughout the entire experience. The amount of people, ideas, and change that occurs during an implementation requires this guide to achieve a smooth implementation (McCray, 2008).

To effectively implement a Change Management process, it is important to make sure everyone understands their roles and goals. According to TPI (McCray, 2008), there are several key concepts to include in a Change Management strategy.

- Leadership Vision and Commitment: client and service provider leaders must be clear about the future state and drive the changes required to get there through words, actions and commitment of appropriate resources.
- Staff Effectiveness: client and service provider staff responsible for negotiating, implementing, performing and managing outsourcing services must have the necessary skills, knowledge and capacity.

- Organizational and Procedural Alignment: client policies, programs and other operating model components are aligned to support and enable the change.
- Governance Readiness: the outsourcing governance model is in place with a shared understanding of responsibility, decision-making authority and how services are managed.
- Change Acceptance and Adoption: client groups and individual stakeholders who are involved understand, accept, and are committed to operate according to the new model.

As can be seen above, the role that Change Management fulfills can be critical to the success of an outsourcing implementation. By providing this role, the emotional, contractual, and business relationships between the service provider and client can move in a positive direction throughout the entire process.

Raisinghani (2008) notes that by implementing a true strategic partnership between the provider and client, the preparations and governance become seamless. A big part of the strategic partnership endeavor will involve both parties moving to a common understanding of what needs to be done for successful implementation. The above mentioned items need to be managed as they could involve significant change and development on the part of both parties to bring goals into alignment.

Technical Concerns

Along with the relationship oriented issues described above, there are several technical considerations that need to be addressed before any work can begin. Nakatsu and Iacovou (2009) identify lack of required technical capabilities and inadequate vendor staffing as important issues. Other issues range from configuring user accounts to setting up a development environment, which can be compounded when you are working with an offshore organization due to the language, distance, and time barriers (Lacity, 1995). Although setting up a development environment can take only moments, the process can take an extended period of time for the outsourcing team.

For larger organizations, there can be many user specific criteria that need to be configured before any work can be completed. Many company networks are completely locked down and require a Virtual Private Network (VPN) to be accessed externally. In many of these organizations, a "token" is required to access these networks. A "token" is a small electronic device that can be attached to a key chain which displays a number that changes every thirty seconds or so. These "tokens" can take time to get to a local employee let alone shipping it to another country. It is important to plan ahead to get these and other similar devices to the service provider in a timely manner.

Examples of other user accounts and roles that may need to be created include: wikis, issue tracking, version control, company ID, and email. It is sometimes surprising how many user roles a new employee needs, and in the case of outsourcing, these individuals will need nearly all the same roles as a new employee. The most unforeseen hurdle to this is the elaborate and involved processes for having these accounts created. This can require many emails to several different individuals and multiple days of waiting for the requests to be fulfilled.

Other considerations include the technology chosen for the developers to work on. Many organizations choose to use a terminal server instead of each developer using their own computer due to security concerns and ease of environment management. This solution can provide many benefits, the greatest being that the client company can set up a user account and environment for each user before they ever sign in themselves. This set-up allows for the client company to easily control what the service provider is able to see and access. This can keep the client organization's code base and any documentation safe.

Because every project is unique, it is imperative to have good documentation of the application requirements and caveats. Well documented set-up procedures are also imperative for the outsourcing initiative to be a success. A great tool to use for documenting any training sessions are tools like GoToMeeting, created by Citrix Online. Tools like these allow for the sharing and recording of the instructor or student desktop. Paired with the recording of the actions taken on the desktop is an audio description of what is being shown. These tools allow the service provider to look back at a detailed training session to recall how or why a certain step was taken.

To properly prepare for an outsourcing project, having a plan in place *before* the project begins is ideal. This plan should include:

1. All user accounts necessary and how to have them created.
2. A list of tools that will be used for the different situations including how to use them (including more user accounts) and where to find them.
3. A detailed description of the project and what expectations there are in the deliverables.
4. Training documents and a plan of execution.
5. Requirements documents for the application or project.
6. Any use cases available to help guide the project in the desired direction.

By having this plan created prior to the implementation of an outsourcing project, the ease and speed with which the service provider can be trained and start with actual development will be noticeably smoother and faster. The obvious goal of outsourcing is to have some amount of work completed. Thus putting an early investment in a solid plan will be worth the quality of the product in the end.

6. CONCLUSION

The choice to outsource a project, or a whole team, can appear to be simple on the surface. This is far from the truth and the decision to outsource any part of a company should be reviewed and analyzed for the benefits as well as the possible detriment it could bring. Remus and Wiener (2009) suggest that project success requires a strategy, consideration of risks, cultural and language issues, and management factors.

There are very few instances where outsourcing can be implemented without any difficulties, and the majority of the time those issues are in relation to the people in both companies. Whether it is a cultural misunderstanding or a difficulty accepting the new company direction, there can be several emotional human difficulties that appear.

Although the emotional problems can be the most difficult to find solutions to, there are several other areas to keep in mind when implementing an outsourcing endeavor. Having the right people in the right positions to guide and support the growing pains that come with outsourcing is one of the keys to making sure it is a success. The change management position is the center of this support team and should always be one of the first positions filled when an outsourcing project first begins.

Finally, the technology used to provide not only a development environment, but also the training documentation, communication, and troubleshooting, is the final stumbling block that can make an outsourcing implementation difficult. Having a plan in place as well as documentation detailing how all user accounts are set-up is the first step in providing a smooth start-up.

Having a plan before the start of an outsourcing project is crucial and should be the first order of business. Outsourcing is not an easy endeavor and thought should be put into whether or not it is the right option for the project at hand. Outsourcing can be a strong addition to a company toolkit, but if handled incorrectly can bring even the largest of corporations to its knees.

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