



Xi Xiao

# Lifecycle Management for IT Offshore Outsourcing Service

A Case Study

Helsinki Metropolia University of Applied Sciences  
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## **Acknowledgements**

This study was conducted from November 2011 to May 2011 at Helsinki Metropolia University of Applied Science. The topic of it is the IT offshore outsourcing service lifecycle management, which is well-known but rarely applied by companies.

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<p>Today, many companies attempt to utilize IT offshore outsourcing services to achieve predefined strategic goals, such as lower support cost, faster product release time or better focus on the core business. The case company in this study has also engaged in an offshore outsourcing service for IT application support with a service provider firm located in India. Due to the lack of offshore outsourcing experience, the case company encountered various challenges during the inter-organizational collaboration; and the service quality was reported to have dropped significantly after the support responsibility was transferred to the service provider.</p> <p>The objective of this study is to propose an IT offshore outsourcing service lifecycle model appropriate to the context of the case company. The study reviewed relevant literature area, including topics of outsourcing, offshoring, service transition and cross-cultural communication; and employed qualitative interviews for the purpose of the current state analysis.</p> <p>Soft Systems Methodology was adopted as a primary research method to conduct the study and analyze the data. During the case company interviews, nine main challenges were proposed by the interviewees to address the corresponding possible solutions, which were analyzed and developed into the key findings of the current state analysis. After that, according to the knowledge from literature and the analysis results, a lifecycle model was developed to help the case company improve the problematic situation and manage the service quality.</p> <p>The proposed model defines five sequential phases with a number of internal elements and one governance group that serves the entire service lifetime in order to tackle the challenges faced by the case company. Finally, the developed model is assessed for its reliability and validity by selected experts in the case company.</p>	
Key words	Outsourcing, offshoring, service transition, cross-cultural communication, lifecycle model

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## **Acronyms**

O&O	Offshore & Outsourcing
RD	Root Definition
KT	Knowledge Transfer
SLA	Service Level Agreement
KPI	Key Performance Indicator
GSD	Global Service Desk
ITO	Information Technology Outsourcing
BPO	Business Process Outsourcing
AC	Application Center
SOSM	System of Systems Methodologies
KPI	Key Performance Indicator

## **1 INTRODUCTION**

This study aims to develop a service lifecycle model for IT offshore outsourcing services to address the challenge facing the case company.

### **1.1 Overview of Business Problem**

Today, many companies attempt to utilize IT offshore outsourcing services to achieve predefined strategic goals, such as to lower support cost, to faster product release time or to achieve better focus on the company core business, among other objective. IT offshore outsourcing services seem to be ideal for such purposes.

Information Technology Outsourcing (ITO) means one company outsourcing computer or other network related services to another company. These types of services are used by numerous organizations, some of which achieve expected goals but many more suffer from the provided poor service quality and end up in serious troubles. Clearly, an important point for such companies is to ensure that ITO remains on the right track and will achieve the anticipated results. Failing with controlling the outsourced service would lead to heated disputes, runaway costs, poor reputation and erratic inter-organizational relationships, which would incur even more damage to the service quality. Ultimately, the overall time and effort spend on the service can be futile and the core business can be put into jeopardy, if the companies overlook the importance of planning and modeling the intended IT outsources and offshored services.

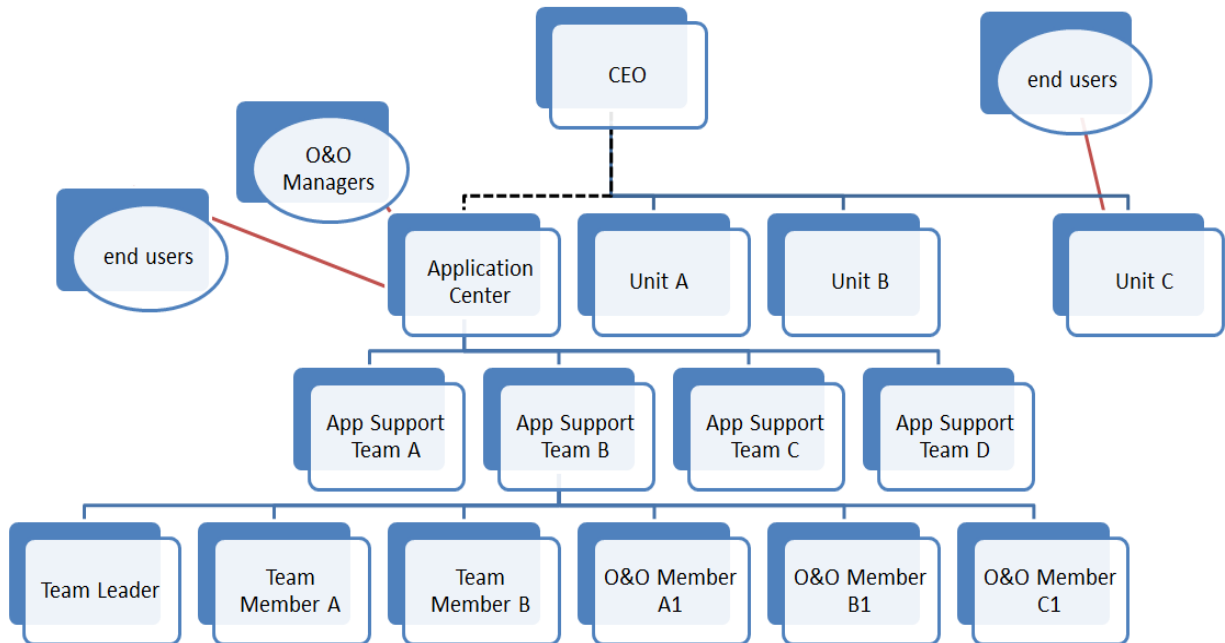
Given this, the study aims to investigate the outsourcing and offshoring models suggested by the research literature, examine the current process and challenges in the case company, and develop a lifecycle model which can be appropriate to the context of the case company. This Thesis takes the form of a single case study and the subsequent paragraphs introduce the case company context.

### **1.2 Case Company Background**



The case company has its core business in the elevator and escalator industry. It provides new equipment business for elevators, escalators and automatic building doors globally, as well as offers modernization and maintenance services. The company operates through more than 1000 offices and has its researched distributors in over 60 countries of the world. The company's headquarters are located in Finland. Like most global organizations, IT applications have become integral tools to facilitate employees' daily work in the case company. For example, web conferencing and audio conferencing tools as collaboration methods allow for real time communication among company personnel; Customer Relationship Management (CRM) systems enable the company to record customers' information, analyze their behavior and understand their needs; intranet websites creates efficient official communication channels from top to bottom.

Today, the case company runs IT application supported through an internal team about 250 employees. In 2009, the company started working a company in India to maintain existing IT applications. The purpose of doing this was to address the increase of resources and to staff growing workload. The idea was that the new provider would maintain the existing applications, and internal people would migrate over to developing the applications to align more with the business needs. It aimed to offload the existing team members, where it make sense, and move them to work closer to the core business processes. The two organizations made an official agreement that the case company requires certain amounts of application support hours from the provider each year. Under this agreement, each application support team could request the Offshore and Outsourcing (O&O) support resources via the O&O program manager in the case company, who subsequently negotiates the details of the supporting contract with the provider. The end users of these IT applications are the case company internal employees; in other words, there is no external customer involved in this service. The structure of the service is depicted in Figure 1.



*Figure 1. Structure of the O&O service in the case company.*

Figure 1 presents the organization structure and roles of the current O&O service. Several O&O managers in AC are responsible for the overall O&O service quality. The application teams are grouped by the supporting area (App Support Team A, B etc.) and the O&O people become the members of the team (O&O member A1, B1 etc.) once the outsourcing service for the supported application has been agreed. The end users can be located in any unit, including AC, inside the case company.

The AC unit of the case company started to use O&O services for its IT application support in 2009. Instead of using its internal employees to support and maintain the existing IT applications, the case company required external assistance from the O&O provider. However, the case company has faced difficulties in managing the O&O service quality due to the lack of O&O experience and the unavailability of any officialized process. For example, some IT applications, supported by O&O service, were developed decades ago by external consultants and have little documentation available. As a result, O&O service does not have a miraculous solution to support them better when the in-house knowledge is very limited. Another example, end users claim that the support quality plummeted and the time to resolve each case also soared after the support was handed over to O&O. Finally, communication between the internal team

member and the O&O team member is difficult and more time consuming than expected.

In order to assist the case company in improving the O&O service quality and achieving its business objectives, this study investigates the current company O&O situation, proposes a lifecycle model aiming at tackling existing problems, and standardizes the case company O&O service process.

### 1.3 Objective and Scope of the Study

In order to achieve the goal of the study, the following research objective is addressed:

***How to develop an IT offshore outsourcing service lifecycle model appropriate to the context of the case company?***

The scope of this study is limited to developing a practical lifecycle model to manage the IT O&O service for the case company. Giving the single case study context, this model may not apply to other organizations without a prior modification. However, most of the O&O knowledge obtained in this study reflects general problems and solutions found in wider O&O contexts, therefore, the findings here are likely to have transferability and could be applicable to similar situations in the wider environment.

### 1.4 Research Design

The research in this study is carried out as illustrated in Figure 2.

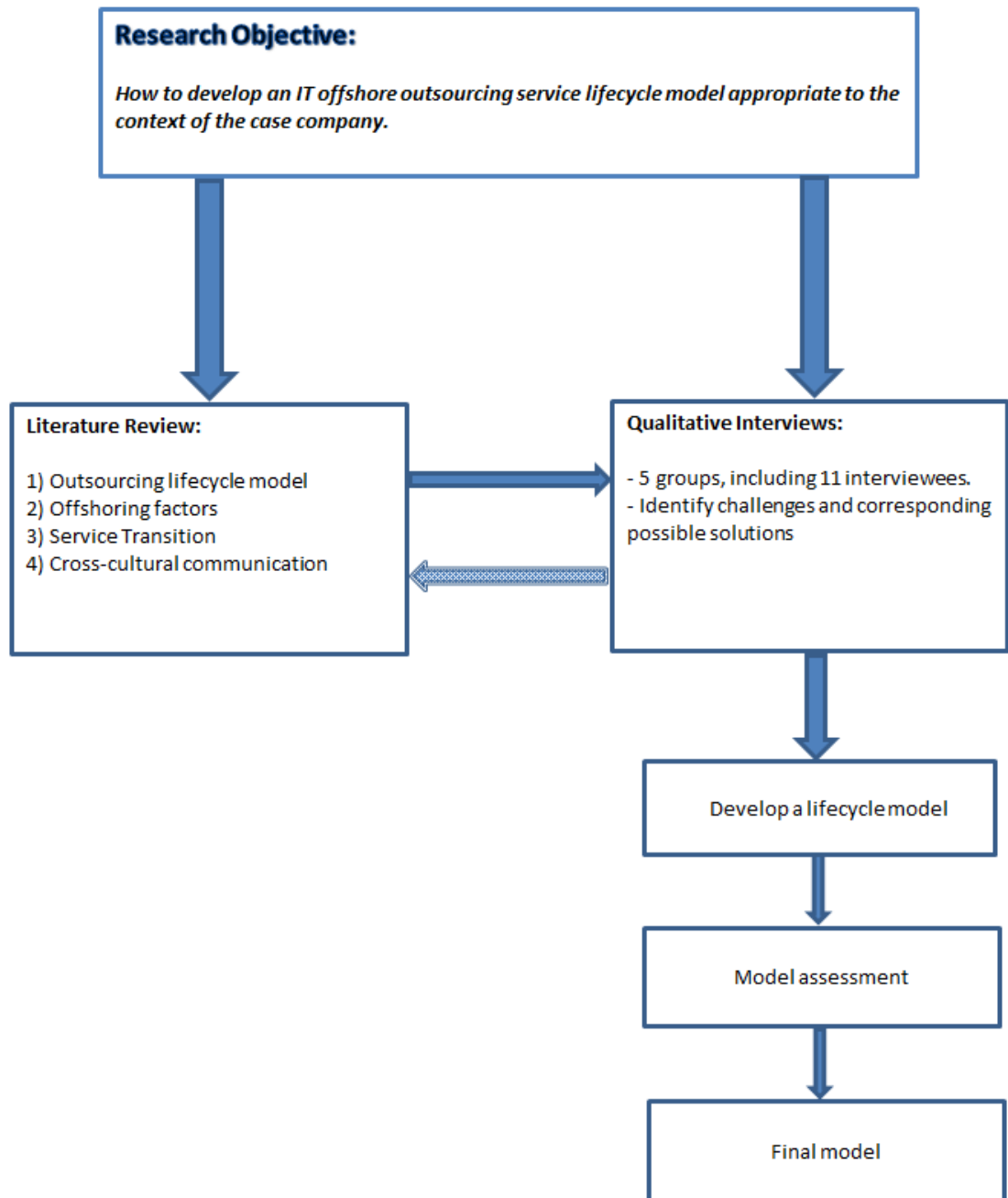


Figure 2. Research Design.

In order to achieve the research objective as stated on the top of Figure 2, an outsourcing and offshoring related literature review is tackled first. The literature review covers four main topics, which guide and reflect the interviewee selection and interview question design in the following qualitative interview step. Then, key findings and proposed possible corresponding solutions from the interviews are presented. This is

followed by a developed lifecycle model and its assessment. Finally, the amended lifecycle management model is produced according to collected feedbacks.

Concerning the structure of the written report, this study is divided into six sections, aligning with the research design sequence in Figure 2. Section 1 provides introductory material and depicts a research design in order to give readers an overall picture of the study. Once the research objective is clear, a thorough literature review is carried out. Section 2 shows relevant literature topics, including outsourcing lifecycle models, offshoring key factors, service transition management and cross cultural communication. Outsourcing and offshoring topics are then focused as key areas in the study as well as the topics identified as important in the conducted interviews. Section 3 introduces research methods adopted in this study after the literature review. Subsequently, Section 4 summarizes the key findings from the qualitative interviews conducted in the case company and discusses the proposed solutions from interviews. The data collected from both Section 2 and Section 4 is used as the foundation of developing a lifecycle model in the next section. Section 5 both presents and evaluates a lifecycle model aiming at producing high quality and sustainable O&O service in the case company. The research objective defined in Section 1 is achieved at this stage. Finally, Section 6 makes the conclusion for the entire study and suggests the further study area.

## **2 LITERATURE REVIEW ON OUTSOURCING AND OFFSHORING**

This section consists of five subsections, covering the literature review in the study. The section begins with defining outsourcing, offshoring and offshore outsourcing, and the history information. Then, it presents details of one outsourcing lifecycle model along with important elements in each phase, as well as, in brief, two similar lifecycle models for comparison. Third, it introduces extra factors that offshoring service should consider. Fourth and fifth, the content is extended with service transition and cross-cultural communication, both of which are identified to be critical and challenging for the case company in subsequent Section 4.

### **2.1 Definitions and History of Outsourcing, Offshoring and Offshore Outsourcing**

Power et al. (2006: 29) define outsourcing as “the act of transferring the work to an external party”. Kobayashi-Hillary (2005: 105) describes outsourcing as a mean “to contract work out from your own organization to another”. Kennedy and Sharma (2009: 62) explain outsourcing as “the contracting out of specific corporate tasks to an external company or person”. Finally, Bahrami (2009: 212) believes that outsourcing is “conducting certain business functions at a different location or contracting those functions out to another firm”. These definitions describe outsourcing in a rather simple and generic manner without reflecting the complexity of the outsourcing relationship in the business life, but the key information, which is assigning tasks to outside, is included.

In contrast, offshoring specifically indicates geographic location. For example, according to Power et al. (2006: 29), off-shoring means “the work is carried out in countries that are at a considerable distance from the client”. In line with this understanding, nearshoring is defined as “the work is carried out in an adjacent country” (Lacity et al. 2008: 25). Besides, offshore outsourcing refers to the procurement of goods or services by being “a business or organization from an outside foreign supplier, typically to gain the benefits of labor arbitrage” (Davies 2004: 17).

In the context of this study, O&O is defined as:

Transfer works to distant external parties in order to achieve certain benefits from the client's perspective.

As discussed above, outsourcing, offshoring and offshore outsourcing have different meanings, though overlapping features also exist. Kennedy and Sharma vision them in Figure 3.

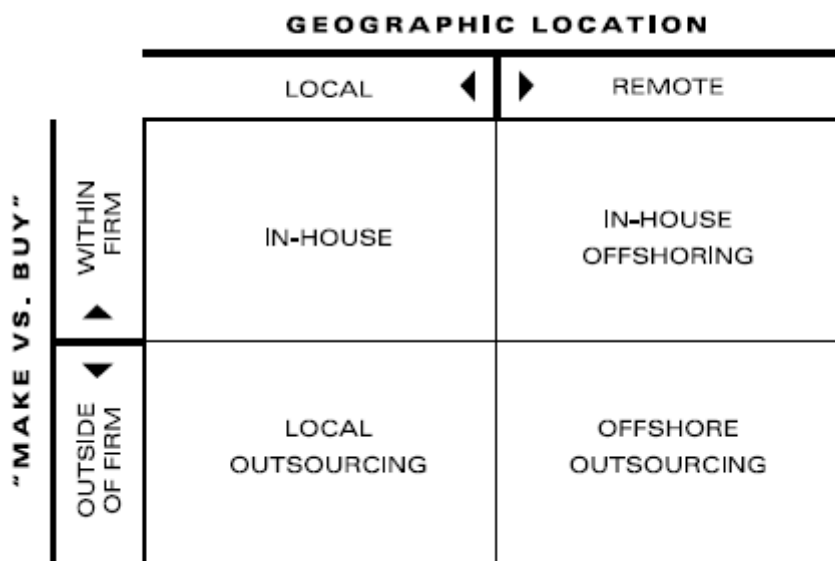


Figure 3. Different sourcing options (Kennedy and Sharma 2009: 60).

Figure 3 illustrates four various sourcing options according to different contexts of the geographic location and the decision of producing or purchasing the service or product. O&O option falls into the bottom-right category, meaning that the actual work is done remotely and operated outside of the firm.

#### *History of Outsourcing, Offshoring and Offshore Outsourcing*

Outsourcing is not a new phenomenon; historically, it has been in demand for thousands of years. But it was not until the Industrial Revolution of the 18th and 19th centuries that the phenomenon grew in popularity in the manufacturing sector due to the availability of rapid transportation and other economic changes (Redmond 2006; Handfield 2006). Starting from the 1970s, the advances in computer and communication technologies triggered the information revolution, which blurred national boundaries

and made the operations and collaborations possible globally. The dramatic decline in the cost of information processing and communication (Garner: 2004), as well as the widespread commoditization of products and services (Tarbouni: 2004) over the past 30 years has enabled a considerable growth of offshore service.

In this context, many companies developed the O&O strategy so that they can focus exclusively on their core businesses and outsource all non-critical parts in order to cut costs and thus increase their competitive advantage. However, O&O service also has some undesirable negative effects. For example, it reduces the number of domestic workplaces, pulls down the standard wages and increases the job hunting difficulty for the less skilled worker (Bahrami: 2009). Nevertheless, the popularity of O&O is ever growing and largely irreversible in the context of globalization (Bahrami: 2009). Those who practice it divide outsourcing into two broad categories, ITO and BPO (Business Process outsourcing). ITO means the outsourcing of computer, software or internet related work. BPO means the outsourcing of certain business functions or processes. Nowadays, there is no clear boundary between ITO and BPO, meaning that the two types of outsourcing are bound together in many cases. (Brown and Wilson 2005: 123-125; Lacity et al. 2008: 13-14)

In this subsection, the differences among outsourcing, offshoring and offshore outsourcing are clarified and the history of each is briefly introduced as well. Because nowadays these three types of services have become important strategic tools to help a substantial number of global companies pursue their predefined business vision, outsourcing lifecycle models have been defined in literature in order to pinpoint the key elements in the service and ensure high service quality. The next subsection introduces three outsourcing lifecycle models that are used as references in this study to develop the model appropriate to the context of the case company.

## 2.2 Outsourcing Lifecycle Models

For decades, outsourcing has been used in different industries for cost saving as a long-term business strategy. However, to develop and manage an O&O service and achieve profitability is a challenging task. Many companies thrive in this area either as a service vendor or client, but many also experienced a failure. Because of the difficul-



ty to succeed in outsourcing and the impossibility to develop a practice that fits all situations (Earl: 1996; Mohammed: 2005), a lot of studies have been undertaken to find insight into outsourcing lifecycle management.

Power et al. (2006), Brown and Wilson (2005) and Beulen et al. (2011) separately introduce three different lifecycle models using the process-driven approach in order to implement successful outsourcing services. There are three main reasons to use the process-driven framework to manage outsourcing. First, it provides us with a systemic look at details of how to plan an outsourcing service at the general level. Second, the components in the process sequentially guarantee an official and healthy outsourcing relationship. Third, although the steps do not change, the effectiveness and efficiency of going through each step in the lifecycle should increase over time (Power et al. 2006: 31).

The knowledge of outsourcing lifecycle model in literature is closely cited when developing the O&O service model in Section 5, therefore it deserves a thorough explanation here. However, because the three lifecycle models contain very similar phases, the one developed by Power et al. is chosen to be elaborated while the other two are only briefed. The knowledge from other relevant articles is inserted along with the lifecycle model phases in order to support and reinforce the opinions from Power et al., as well as give alternative options. Figure 4 illustrates the outsourcing lifecycle model from Power et al., including seven sequential elements.

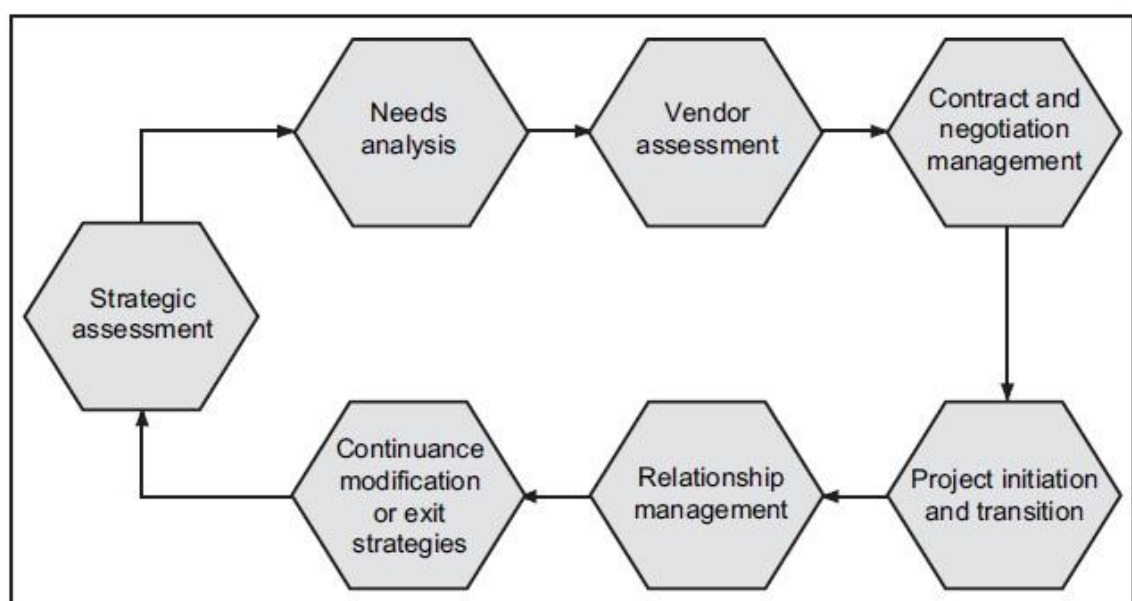


Figure 4. *The Outsourcing lifecycle (Power et al. 2006).*

According to Power et al. (2006), the outsourcing lifecycle comprises seven stages (see Figure 4), starting from *strategic assessment* to *continuance, modification or exit strategies* as a full cycle. In the following paragraphs, each stage is elaborated in turn.

### *Strategic Assessment*

The first step, strategic assessment, evaluates the initiatives in the context of the organization strategy. The organization must clearly identify the benefits of employing outsourcing as a strategy that can increase the competitiveness and performance in the marketplace. In the step of strategic assessment, the failure to determine whether outsourcing fits in or not as a strategy by examining the current and analyzing the long term strategic position will result in futile efforts and miserable outcomes in the upcoming steps. This eventually will cause the organization to bring the outsourced work back and pay enormous costs for their fatal carelessness (Power et al. 2006: 37-40). The strategic assessment phase includes four major sub-elements. They are business-value assessment, operational assessment, financial assessment, and risk assessment as in Figure 5.



Figure 5. *Four elements of strategic assessment (Power et al. 2006: 41).*

The four elements in Figure 5 stand for four different aspects that need to be evaluated in this stage. Business-value assessment focuses on the analysis of the core competencies of the company, ensuring that the service is aligned with the company business strategy. Operational assessment means to determine the operational activities and their measures, and know how mature the firm is to adopt the proposed outsourcing actions. Financial assessment deals with the big drive of outsourcing services, cost efficiency. Outsourcing services involve a large number of hidden costs (Barthelemy: 2001) that should be carefully analyzed prior to the service implementation. Risk assessment identifies the associated risk and creates the risk mitigation plan. By carefully assessing the four sub-elements, the outcome is the outsourcing business case and recommendation.

### *Needs Analysis*

Once the strategic assessment is completed and the organization is confident to move forward in outsourcing their service, the next step is to identify the areas that are suitable for outsourcing. In the needs analysis phase, the focus is placed on building business cases that are specific for one or more outsourcing items and defining the needs of them (Power et al. 2006: 69).

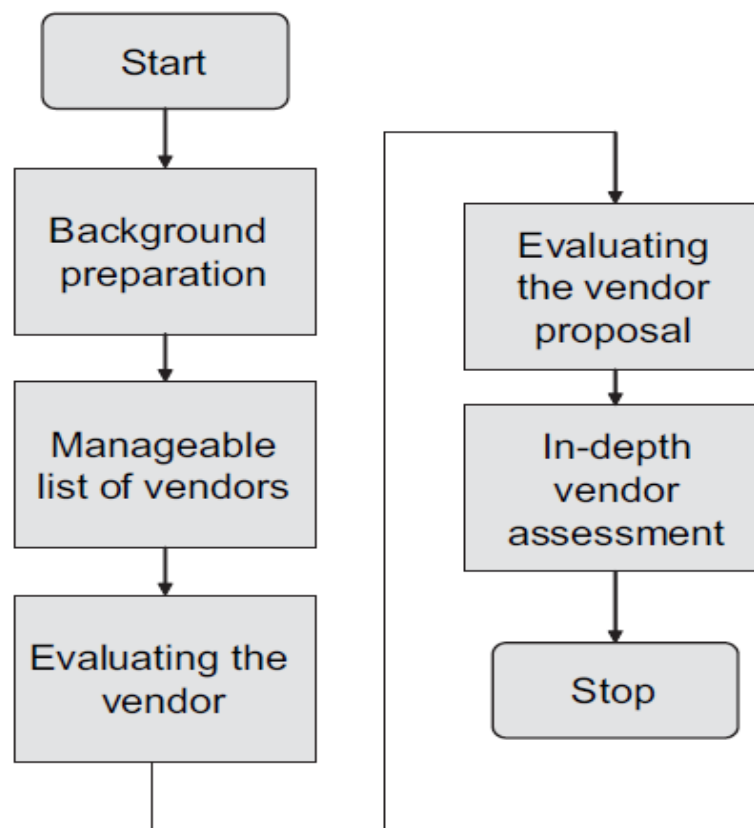
According to Power et al. (2006: 70-81), the needs analysis step leads the outsourcing service client to evaluate the following operational outlines as a prerequisite:

- To outsource or not?
- What to outsource?
- Does it make business sense to outsource the process?
- Can you outsource the process?
- Can you measure the process?

Having answered the questions above, we are ready to define the needs. The main deliverables of this phase are identified as the statement of work (SOW), which must clearly define the work and the boundaries, and the request for proposals (RFP), which contains sourcing requirements and scope, the vendor, process and quality issues, and the client corporate profile (Power et al. 2006: 82).

### *Vendor Assessment*

The third stage of the outsourcing lifecycle model is vendor assessment, meaning how to choose the most suitable vendor among the candidates. Mcfarlan and Nlan (1995) offer their suggestions on how to select outsourcing alliance. By conducting this phase, the organization is in the situation of opening up the business collaboration with an outsource service provider. The strengths and vulnerabilities of the business partner will have remarkable impact on the service quality and success. Many companies have set up vendor management office (VMO) to manage the interaction with vendors (Patton: 2005). The process of the vendor assessment phase can be considered as utilizing methods in turn to filter the vendor candidates and hopefully arrive at a good one to discuss the contract with. The five typical steps in this phase are outlined as in Figure 6. It can be described as a filtering process for vendor candidates.



*Figure 6. The vendor assessment process (Power et al. 2006: 101).*

As shown in Figure 6, the vendor assessment process starts from vendor background preparation and ends with in-depth vendor assessment. Different criteria are applied

from the start with the initial collection of potential vendors to the end with a manageable set of candidates that the service client firm is interested in (Power et al. 2006: chapter 5).

### *Negotiation and Contract Management*

Once a list of the potential service provider companies is identified as the output of the previous stage, contract negotiation and contract management naturally become the following action. Contract negotiation is commonplace for doing business since all companies aim to reach the best deal possible for themselves. Negotiations usually take a finite time period and end up with an agreement or disagreement. In the former case, the two sides will continue to prepare and sign the intended contract – i.e. contract management. Power et al. (2006: 122) suggests that organizations shall negotiate towards a relationship not a contract. Juntunen et al. (2010) reach a similar conclusion that trade-offs do not exist in short-term; however, there could be a propensity to trade-off in long-term. Additionally, quality of service is a more important factor than a tight price competition. Therefore, while it may be tempting to push for low fees in contract negotiation, working toward fair fees is probably more reasonable to establish a stable relationship and achieve win-win situation for both organizations (Amaral et al. 2011: 54).

In the contract management step, five essential points are suggested to compose an adequate outsourcing contract:

- the scope and nature of the engagement;
- roles and responsibilities of the client organization;
- roles and responsibilities of the vendor organization;
- metrics for evaluating the performance of the relationship;
- recourses in case things do not go as expected. (Power et al. 2006: 127)

The first four points out of five focus on contract scope, roles of each side and KPIs in the service, all of which are essential for any given service contract in general. The fifth point defines the exit strategy. It means how the contract can be officially terminated when the service goes wrong or other urgent situation appears. Without an appropriate exit strategy defined inside the contract, companies can be caught in a

trap that they are locked in the current vendor and the relationship becomes sour if the contract continuity suddenly needs an end.

#### *Project Initiation and Project Transition*

Once the service provider is eventually determined, the fifth stage, project initiation and transition, starts immediately after the outsourcing contract is signed. First, the service client will initiate the outsourcing project. Then the transition of the project outset, it is the time period that the client hands over the tasks to the vendor regularly (Power et al. 2006: 137). The project initiation step is where the client organization begins outsourcing the work. This step is bound to contain chaos and frictions. Both sides must acknowledge the chaotic dynamics and be ready to be flexible rather than remain rigid. Project transition represents a critical and complex phase in the lifecycle, involving the delivery of outsourcing activities from service client company to service provider company and initiates a new way of operating (Power et al. 2006: chapter 7). Carmel and Tjia (2005) also argue that transition is the most critical phase for overall success of an outsourcing relationship. In addition to the importance, the cultural difference makes Off-shore IT outsourcing highly risky during the transition period (Carmel 1999; Beulen et al. 2011).

Since this stage has been identified as a most imperative phase by both literature knowledge and the interview data of the case company, it is separated as one individual topic to be elaborated after outsourcing and offshoring in this section.

#### *Managing the relationship*

Managing the relationship with the service provider firm is placed as the sixth stage in the model. The relationship between service client and service provider, after the project initiation and transition, has reached normality. In this stage, direct human intervention or supervision has reduced noticeably comparing the former step with chaotic dynamics. Relationship management means to continuously monitor the service engagement to ensure that the predefined operation level are met, dangerous signals are unveiled and severe problems are avoided early enough.

#### *Continuing, Modifying or Terminating the Arrangement*

This is the final stage in the outsourcing lifecycle model from Power et al. (2006). Firstly, the arguments which organizations must consider when deciding whether the outsourcing agreement should continue or not are defined. Secondly, sample common events, which will trigger the service evaluation and discussion on whether to modify or exit the service, are enumerated. Finally, the common errors that the service client could make when faced with the decision in this phase are listed (Power et al. 2006: chapter 9). In the following paragraphs, two additional outsourcing lifecycle models are briefly introduced and the focus is placed on analyzing the similarity and distinction among the three models.

Besides the model created by Power et al. above, Brown and Wilson and Beulen et al. also introduced models with similar phases. Figure 7 depicts the model from Brown and Wilson.

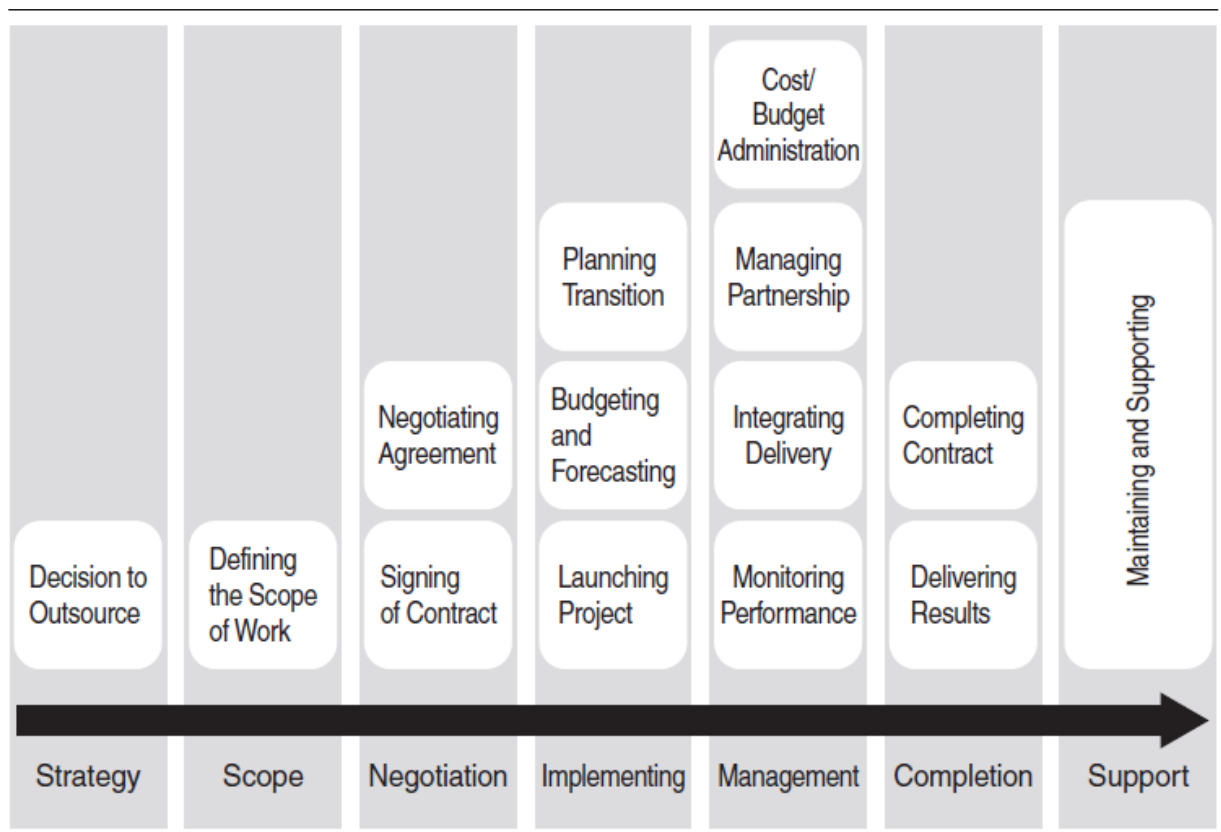


Figure 7. *Black Book Model of Successful Outsourcing* (Brown and Wilson 2005: 26).

The model in Figure 7, developed by Brown and Wilson, contains seven stages from strategy evaluation to service support. Brown and Wilson share the same opinion with

Power et al. that massive efforts should be placed before the support actions take place by the service provider. From a different angle but with similar insights, Beulen et al. divide the outsourcing lifecycle into three periods: pre-execution, execution and post-execution (see Figure 8).

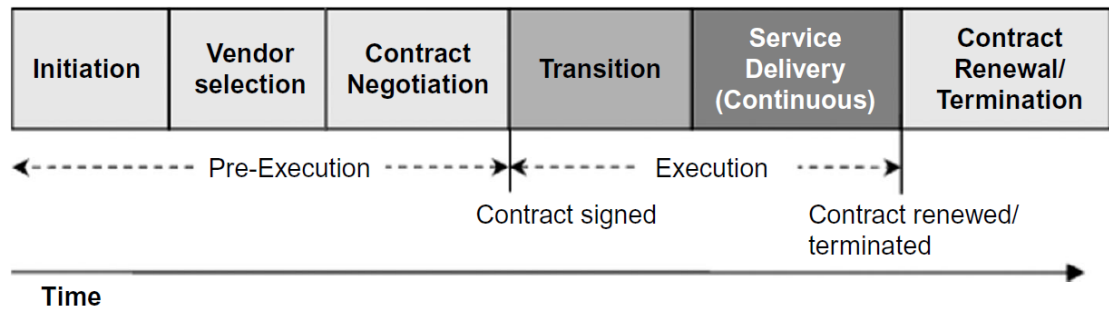


Figure 8. Outsourcing lifecycle (Beulen et al. 2011: 204).

As shown in Figure 8, although the whole time period for outsourcing service is split into different stages with different labels, the key internal sub-elements draw the analogies with above two models.

Summing up, three outsourcing lifecycle models are introduced in this subsection. The process-driven approach and the insights of these three models have significant impact on the O&O model established in Section 5. Apart from outsourcing topic, offshoring is subsequently discussed in the next subsection.

### 2.3 Offshoring

The previous subsection discussed the lifecycle management models for the outsourcing service, while this subsection will focus on the aspects that companies must pay attention to in the offshoring service. These aspects include the consideration of offshoring strategy, offshoring destination and suggestions on how to conquer the inevitable challenge of distance and time appearing in the service.

Offshoring strategy assessment is the first phase in the outsourcing lifecycle management model, and it applies to offshoring too. Evaluating carefully and thoroughly whether the upcoming offshoring service is aligned closely with the company's current



and future strategic goals should always be the first action for both outsourcing and offshoring services (Carmel and Tjia 2005: 10). The consequence of failing to do so is that the established service may contribute little to the company's long term vision and disperse from the company strategies thus need to be revised or terminated with expensive solutions later.

In addition to the cost-reduction reason that has driven offshoring primarily, there are other important strategic goals, such as the items introduced by Carmel and Tjia (2005: 96). First, offshoring service can offer better speed, agility and flexibility. For example, the country that the service provider is located in usually has a massive number of professionals in the relevant field, therefore the provider is able to recruit required resources from its large labor supply to build the team and start working with a high speed. Second, the offshoring pool will have a large potential to cultivate more talents. Similar to Silicon Valley in US, the O&O locations attract global organizations to invest; the talents come because of good opportunities to work with these big companies. Therefore, a virtuous cycle appears, the more companies the more talent. Third, it is deeper localization.

Some companies utilize the offshoring service, for example in India and China, to gain a better chance to enter the local market and become acquainted with the other culture. Overall, there exists more than one strategic goal according to the situation of each company, bearing in mind that the lower cost usually is not the only reason to launch an offshoring service. Although there are close to 100 nations that are now exporting IT service and software products (Carmel and Tjia 2005: 69), the most attractive offshore location in year 2004 are listed in Figure 9.

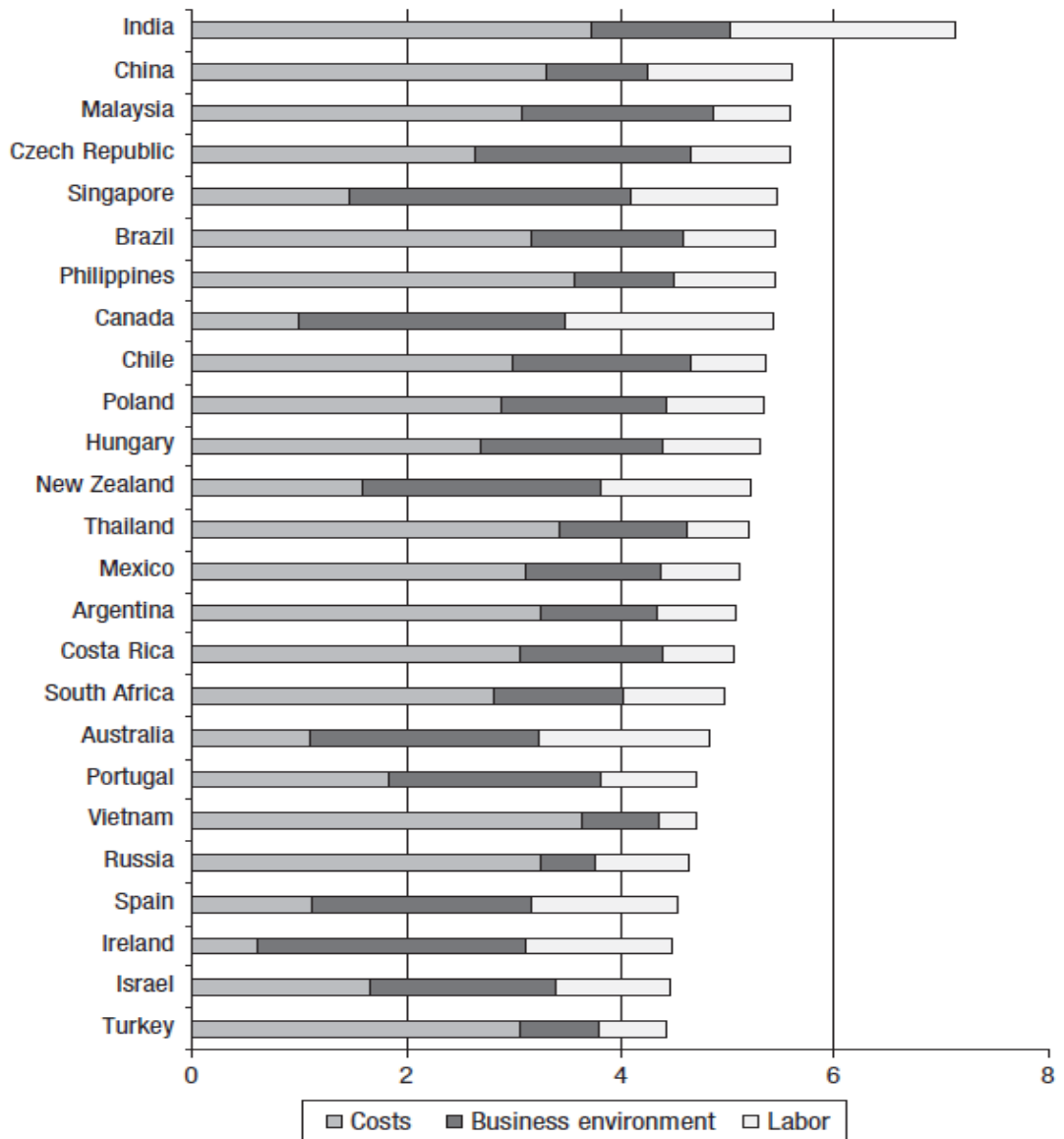


Figure 9. Offshore Location Attractive Index (Kearney 2004).

Being listed in Figure 9, India, China and Russia are the so called Big Three Nations which are usually considered as the best offshoring destinations. The following paragraphs list the advantages and the to-be-improved aspects for each nation.

*India* ranks the first in Index 2004 with little surprise because its triumph in IT offshore exporting service has been so extraordinary that books from various researchers have been published to coach readers how to offshore IT to India. In particular, for example, studies by Davies (2004) and Kobayashi-Hillary (2005) can be considered. India's remarkable success is driven by multiple factors. First and most important is the big

population that is well educated and English speaking (Carmel and Tjia 2005: 80). Second, India generates several successful large companies offering offshore IT services. By 2004, there are five Indian companies with more than 10,000 employees (Carmel and Tjia 2005: 80). Third, the positive attitude and incentives from Government also encourage the O&O service client organizations being attracted by India (Kobayash-Hillary 2005: 26-28).

*China*, with its impressive human capital, had a growth spurt in its IT industry within recent years. According to Carmel and Tjia (2005: 81), universities in China produce about 300,000 engineering graduates per year and 160,000 Chinese have returned back to China with a foreign education background. There are three distinct differences between the Chinese and Indian offshoring industries. First, China does a lot of domestic work, while India does little. Second, the strength of China has specifically been in embedded software and computer hardware manufacturing, where India is adroit at software programming. Third, and also very important, comparing to India, China still lacks the English language skills although there has been a significant improvement.

In *Russia*, the software industry is the smallest of the Big Three Nations. The strength in Russia is its well-educated workforce in math, science and engineering, with a large proportion of advanced degrees. Although the number of Russian software exports are roughly 350 million USD in 2004 (Carmel and Tjia 2005: 82), the software export industry is growing steadily following the steps of India and China.

Therefore, the main destinations for the large global companies will likely remain within the Big Three Nations, which can offer a tremendous amount of workforce in diversified industries. For small and agile companies, the demand for the number of support people is usually not high, thus other nations in the destination list should also be considered and can be even more beneficial to build relationships with.

Speaking of offshoring services, the geographic distance and the time zone difference are two primary factors that will come to mind instantly. Thanks to new technologies, it is as easy as a few keystrokes to communicate with people at the other end of the world. However, this does not indicate that the distance is dead. Kiesler and Cummings (2002) argue, by gathering the results of decades of group psychology research, that

technological remedies for the absence and distance in distributed work group are often problematic. Carmel and Tjia (2005: 151-154) categorize five categories that cause issues across distance and time. The five categories are communication breakdown, coordination breakdown, control breakdown, cohesion barriers and culture clash. They are elaborated in the next paragraph.

In spite of the fact that new methods of communicating and the substantial increase in geographically distributed collaboration, we humans are still prone to close proximity. When people are close by, the communication is conveyed via diversified channels, like tone of voice, pauses in the talking, body language and other more than only flat text (Monserrat: 2011). However, when people are in distance, the number of communication channels declines inevitably and part of the communication is lost, thus communication breakdown occurs. In the offshoring service, especially for IT, quick and frequent coordination is required, such as a question, a new idea to be shared or a puzzle to be clarified. All these small actions can help identify problems in an early phase, but unfortunately they are difficult in distributed collaboration thus usually result in delayed and expensive solutions.

Besides the communication and coordination challenges discussed above, controlling the offshoring people and resources many kilometers away can be also a problem. When team leaders or managers in the service client cannot stay close to the offshoring team, they have to deliver commands by emails or phone calls and judge the performance of the team by collecting remote information, such as their working time-sheets. Therefore, as the remote controlling is less effective than face-to-face, distributed collaboration requires much more effort to discover the potential issues in time.

The fourth category is the cohesion barriers. Creating the cohesion inside a team goes as a virtuous three-step-action. First, team members start to know and help each other. Second, they step further and work more with each other. Third, they begin to work together seamlessly, the trust and synergy emerge. Unsurprisingly, it is not easy to foster cohesion with above three-step-action in distributed team, unless they have worked previously in the same location. The last category is about the impact of cultural difference, which will be discussed in details as one individual topic later in this section.

In order to mitigate the five categories discussed above, Carmel and Tjia (2005: 154-160) also introduce organizational and technological solutions. First, they advise that both formalism and informalism should be applied to eliminate side effects from distance. By formalizing, it means that the informal work behaviors should be formalized to reduce trial-and-error. By informalizing, it means to create social relationships between distant co-workers. Allen (1977: 207) also argues that the communication between two individuals who have already established social contacts is much more often than those who have not. Second, a couple of asynchronous, synchronous and awareness tactics are elaborated as a remedy for time differences which are listed in Table 1.

*Table 1. Tactics to overcome time differences (Carmel and Tjia 2005: 161).*

Category	Tactic
Asynchronous (non-overlap)	<ul style="list-style-type: none"> <li>● Structure and formalize into workflow tools.</li> <li>● Plan the work day: bunch-and-batch; plan dialogue for overlap window.</li> </ul>
Synchronous (overlap)	<ul style="list-style-type: none"> <li>● Enlarge overlap window by working longer.</li> <li>● Enlarge overlap window by shifting work hours.</li> <li>● Enlarge overlap window by always being available.</li> <li>● Enlarge overlap window by creating a 2nd shift in the low-cost offshore destination.</li> <li>● Create individual liaison roles who adjust/enlarge their own hours rather than the entire team's.</li> <li>● Create fixed daily, or once-a-week, overlap periods between sites.</li> <li>● Synchronize individuals who are working closely together (in paired tasks).</li> <li>● Break the e-mail chain.</li> </ul>
Awareness	<ul style="list-style-type: none"> <li>● Reminders and coaching.</li> <li>● Easy access to current time, calendar, and holiday schedule of distant individuals.</li> </ul>

Asynchronous category in Table 1 indicates that effective offshoring team knows what to work in non-overlapping time when there is no interruption of meetings or phone calls, what to communicate for the next overlap window, and how to structure and formalize the communication into certain workflow tools. All these will allow the information to be conveyed in a more effective and official way, which indirectly reduces the need for frequent clarifications. In the synchronous category, five methods are first recommended to enlarge the overlap window. For instance, members in Europe could

start working earlier so as to have larger overlap with their Asian counterparts. In addition, emails chain phenomenon should be broken before too many times of asynchronous communication or clarification for one single case. Instead, synchronous method, such as a phone call, should be used to clarify the message. The tactics in the awareness category, shown at the bottom of Table 1, are targeted to less experienced or new team members, who are not yet used to distributed work style. For example, they may not recall that the country of their counterparts is at night when they are working in the office.

Besides these tactics that can help overcome distance and time challenges, various types of asynchronous and synchronous technologies can enable effective distributed collaboration too (see Table 2).

*Table 2. Types of collaborative technology (Carmel and Tjia 2005: 164).*

Asynchronous technologies	Synchronous technologies
E-mail	Voice telephony/Internet telephony
Voice mail/video mail	Audio-conferencing
Online discussion groups	Video-conferencing (meeting room)
Calendaring	Video-conferencing (desktop/web-based)
Collaborative authoring and commenting	Web-audio hybrid meetings
Project Management	IM (Instant Messaging)
Production tools and repositories such as configuration management systems, issue tracking systems, workflow tools, knowledge management	Whiteboard/Screen Sharing

Establishing a rich mix of collaborative methods, for example instant messaging, audio-conferencing, video conferencing, desktop sharing application and others in Table 2, can significantly reduce the negative impact of long distance and different time-zone. However, technologies are only enablers. It is too often that offshoring teams tend to use emails too much and the inefficient email chains are repeating. Therefore, team members should be trained by collaborative technology experts to use these tools on best occasions.

On top of outsourcing and offshoring topics, service transition and culture clash have been pointed out as important points for successful O&O business (Brown and Wilson

2005; Carmel and Tjia 2005) and also found as key elements when developing lifecycle models in Section 5. Therefore, there is a clear need to explore service transition management and how to deal with culture differences in subsequent paragraphs.

## 2.4 Service Transition

Service transition means the process of handing over predefined tasks to the offshore destination, involving the delivery of outsourced activities from the service client to the service provider and initiates a new way of operating. It represents a lengthy, subtle and complex process that requires close managerial attention. Carmel and Tjia (2005) argue that project transition is the most important phase for overall success of an outsourcing relationship.

Power et al. (2006: 142) emphasize seven critical aspects to pay attention to during the service transition phase in the formerly introduced lifecycle management model. Beulen et al. (2011) also present a framework to manage the overall transition performance. This framework is shown in Figure 10.

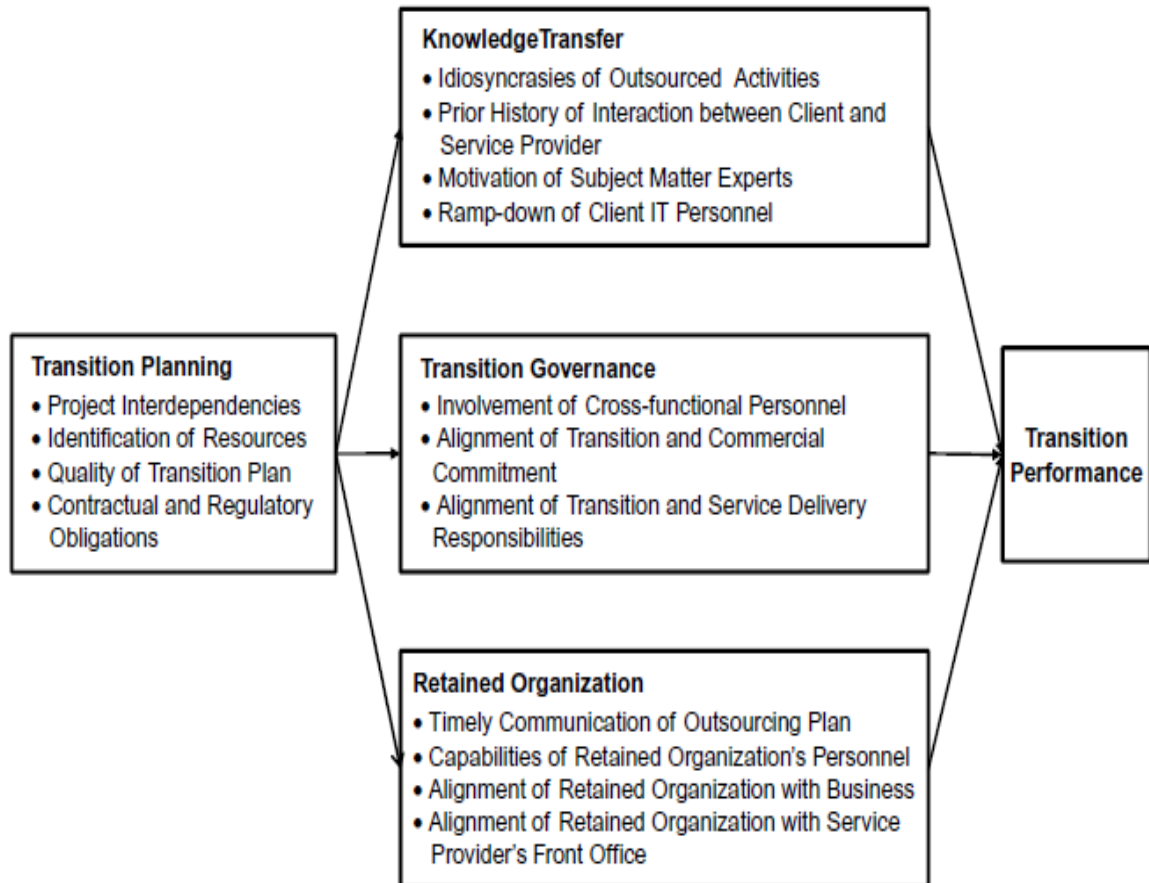


Figure 10. Theoretical framework of transition performance (Beulen et al. 2011: 207).

According to Beulen et al. (2011), this closer monitoring framework, illustrated in Figure 10, or a similar one can be used in the transition phase to rectify any potential gaps, reduce the risk profile and avoid surprises towards the end. The following paragraphs elaborate each factor of the framework in turn.

The first factor to be discussed is *transition planning*. Service transition in outsourcing or offshoring is analogous to a typical project which has clear start and end points as well as a well-orchestrated output. It is well known that even reasonably simple projects require time to plan the upcoming phases and prepare the resources in order to reduce the failing risks and achieve the defined deliverables. As illustrated in Figure 10, four elements related to transition planning are identified as important factors. The first element is *Project interdependencies*. No project exists in a vacuum environment, nor does outsourcing or offshoring. It is important to understand the contextual information and to keep other relative projects in consideration (Beulen et al. 2011: 207). If



these were not dealt with carefully during transition planning, these project interdependencies can cause surprises and adverse impacts in later phases. The second element is *Identification of resources*. Besides obtaining the interdependency information, the key materials and capable personnel from both client and provider shall be identified prior to transition action. This is to ensure that the relevant resources are booked for the project and the next knowledge transfer phase can take place smoothly. The third element is *Quality of transition plan*. The transition plan, with details of action points in each phase and the final deliverables, needs to be agreed upon by both client and provider in order to guarantee the quality and mitigate potential conflicts. And the last element is *Contractual and regulatory obligations*. Naturally, contractual agreement between client and provider companies is an integral element in the service. Effort needs to be spent on detecting any conflicts in transition planning phase to eliminate potential severe impact that may damage the entire service relationship in later stages.

*Knowledge transfer*, as the second factor in the framework, means the service provider personnel receive the knowledge for supporting tasks from the service client personnel during intensive knowledge transfer sessions. Knowledge transfer phase is considered as one of the decisive activities during the service transition period (Cullen and Willcocks: 2003; Beulen et al. 2011; Carmel and Tjia: 2005). Four factors related to knowledge transfer are listed and elaborated as below. The first one is called *Idiosyncrasies of outsourced activities*. The service provider personnel are specialists or experts on particular industry standard technical areas related to the outsourced work or systems. However, they undoubtedly lack the experience for the deliberate customization in the client's environment or systems. The more idiosyncrasies in the outsourced activities are present, the more effort is needed during the knowledge transfer stage. The second one is called *Prior history of interaction between client and service provider*. The previous experience, the interactions, the perceptions and the established trust or mistrust between two companies influence the knowledge transfer planning and execution. The third is *Motivation of subject matter experts*. The knowledge transfer sessions are inevitably non-productive if the service client experts feel insecure (such as they might be replaced by the service provider personnel). It is essential to provide incentives to ensure a successful knowledge transfer. And the fourth is *Ramp-down of client IT personnel*. The implementation of an outsourcing service results in a declining

strength of the same area in the client organization. This can lead to knowledge loss which neither companies can easily fill in.

*Transition Governance* is listed as the third factor in the framework. Amaral et al. (2011) define this as speedy and inexpensive procedures for dealing with the most likely issues to prevent and resolve disputes and handle changes. Besides the formal contracts, a governance mechanism is essential to alleviate uncertainties in inter-organizational boundaries (Beulen et al. 2011). Four important elements are identified within transition governance. The first one is *to involve cross-functional personnel*. Service transition is the start of the service relationship after the signing of contracts, it becomes important to involve cross-functional personnel from both companies to provide a holistic view to resolve problems during transition. The second one is *to align transition responsibility and commercial commitment* between the provider and the client. The service provider organization may decide to reduce the cost of service transition (such as by dictating the budgeted number of man-days) to increase the possibility to win the offer during the contract negotiation period. However, the transition manager or the project manager needs a specific number of man-days in order to complete the transition with high quality. Challenges appear in this situation, and may influence the transition. The third one is *to align transition responsibility and service delivery responsibility* between the provider and client companies. Once the service transition is accomplished, the service provider starts to take on the service delivery responsibility as agreed in the contracts. It is important to involve and update the service delivery manager and keep both transition manager and service delivery manager aligned throughout the entire transition period.

*Retained Organization* is the last factor introduced. It is important to define one of the transition goals as ensuring the stability and continuity of the business in the service client company. Brown and Wilson (2005) also emphasize the importance of proper change management and communications during the transition stage in order to maintain a capable organization at the client firm. Beulen et al. (2011) identified four important elements regarding the retained organization part. The first one is about outsourcing plan communication. Either outsourcing or offshoring service will cause changes across the service client firm. Appropriate communication through the service transition assists the client's employees by reducing the insecure feelings and other

negative emotions. The second one is to ensure the remaining employees after the change have the capabilities to continue their work. The retained personnel in the client company need to be capable of adapting to the post-outsourcing or post-offshoring scenario quickly and smoothly. Cosack et al. (2010) propose a two-step approach to identify candidates for the retained organization. The first step is to identify the normal but critical employees (called hidden gems by the researcher). The second step is to evaluate and classify the identified employees in the first step. The third one is to ensure the alignment of the retained organization with business in order to keep the business continuity after the transition period. Besides, the last one is to ensure the retained organization with the service provider's front office can guarantee engagement-specific purposes to ensure smoother service transition.

In summary, the four factors in the theoretic framework influence substantially the service transition performance in any given offshore outsourcing engagement. The internal elements of each factor demand a large collaboration effort between service provider and client companies and thus can cause tremendous implementation challenges in this phase. Therefore, in order to achieve anticipated service transition performance, a holistic planning and the corresponding implementation similar to the introduced framework are the keys.

## 2.5 Cross-cultural Communication

Cross-cultural communication is another key factor to the success of the O&O service, which is defined by the interviews. With more and more offshoring services being established in distributed teams across continents, the increasing attention is given to the impact of cultural distinctions on the service performance (Carmel 1999; Beulen et al. 2011). This subsection emphasizes cross-cultural communication issues that appear in offshoring or O&O services.

According to Geert Hofstede (1991), culture "is the collective programming of the mind which distinguishes the members of one group or category of people from another." Based on the study in 72 different countries, Hofstede (1991) identified five dimensions where the culture differs one from another. The first one is power distance (also named power orientation), which indicates how subordinates interact with power and

researcherity. People from high power distance cultures are less likely to express disagreement with their superiors and they tend to be more comfortable with an autocratic management style, while people from low power distance cultures lean towards egalitarianism and believe that liberal democracies are the norm. The second is collectivism versus individualism. Collectivism versus individualism (also named relationship orientation) implies how people see themselves as an individual or as part of the group or community. In individualistic countries, people have a high demand to seek personal freedom and privacy. In collectivistic countries, people are more loyal to the group or society during their lifetime. The third is femininity versus masculinity. Hofstede (1991) found out that people, from countries where feminine values are more important, tend to cooperate well with others and achieve a good relationship with their managers. Conversely, people from countries where the masculine index is high tend to actively seek the opportunity for higher earnings and to be recognized by the society. The fourth is uncertainty avoidance. In high uncertainty-avoidance countries, people dislike risks and obey pre-defined regulations. For example, no matter how much people hate their jobs, they are less likely to quit before they have a clear new offer. The last one is long-term versus short-term orientation. Hofstede (1991) identifies that East Asia, such as China and South Korea, has a strong future orientation. People from this area tend to have a well-orchestrated future plan for savings and persistence. In contrast, in short-term orientation culture, people more likely focus on their current and immediate satisfaction rather than on the distant future.

The above five dimensions are to be focused on the trainings in the interorganizational collaboration preparation phase of the developed lifecycle model in Section 5. They help people to avoid corresponding pitfalls of communications when interacting with people of different cultures. This is often due to our own lack of exposure to cultures meaning we do not realize why someone from another culture would misunderstand something. It is important that distributed teams can learn to understand the differences of the five dimensions across cultures and create trust with each other. There is plenty of literature about this topic. Because the service provider for the case company is located in India, three selected examples for Indian culture are enumerated below to emphasize the importance of fostering cross-cultural awareness in the offshoring service.

First example, Indians are reluctant to say *no* (Carmel and Tjia 2005: 181). This is simply because they are not willing to give negative news, they would prefer to lie and figure it out later. For example, they might answer *yes* to your question - *do you know how this application works?* And then they will work very hard later on to find the solution. Second, jokes are best avoided, unless you are sure that the other side understands the meaning precisely and is not offended by it (Kobayashi-hillary 2005: 250). For example, cow-related jokes might not be suitable in India since the cow is a pampered and worshiped animal in their culture. Third, Indians tend to be too optimistic and are usually unable to give precise estimation. If an Indian is questioned about how much time is needed for a task, the answer probably does not consider any risks that may delay the task (Carmel and Tjia 2005: 181). Nevertheless, there is no shame in making mistakes when working across cultures and barely anyone can fully understand a new culture within a very short period of time. In order to achieve cultural comfort, it is vital that we appreciate and respect other cultures.

To sum up, three outsourcing lifecycle models with similar internal phases are first introduced in this section. Apart from the model researchers' own insights, many key points of these phases are supported and reinforced by opinions from researchers of other articles. These three models lay the foundation for the model created for the case company in Section 5. Besides, the main factors that affect offshoring service are also elaborated, including offshoring strategy, offshoring destination and distance and time challenges. In addition to above two topics, service transition management and cross-cultural communication emerge as critical factors for O&O service from the qualitative interview data and thus are discussed in details too in this section. Aligning with the research design chart, the next section aims at defining the research method for the study.

### **3 METHOD AND MATERIAL**

This section outlines the research process, which is mainly based on Soft Systems Methodology (SSM) (Checkland 1981). The structure of this section goes as follows. First, systems basic information and the reason of selecting SSM among other systems are introduced. Second, SSM basic information is presented. Third, the SSM four-step method is followed demonstrating how and where the SSM can be used. And last, the reliability and validity of this study is discussed.

#### **3.1 Systems Thinking**

The more the issues in the real-world are studied, the more it is recognized that they are not isolated but interconnected and interdependent (Capra: 1996). This phenomenon applies to large organizations too. Managers realize that problems inside organizations with complex, diverse and purposeful human interactions can rarely be solved by simple solutions. The systems thinking has been proven to be more suitable in tackling real-life management issues than any other disciplines (Jackson 2003: 13).

According to Jackson (2003), a system is defined as "a complex whole the functioning of which depends on its parts and the interactions between those parts". Systems approach in Systems Methodologies (SOSM), presented in Figure 11, illustrates that different systems can be utilized in different problem contexts.

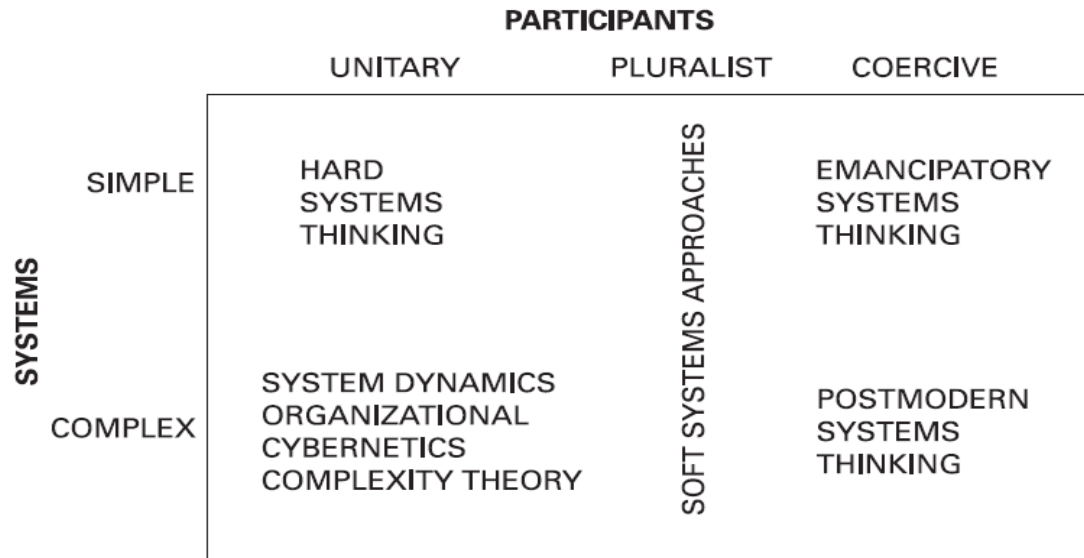


Figure 11. Systems approaches related to problem contexts in the SOSM (Jackson 2003: 24).

In Figure 11, the vertical axis divides the system types into two. One is the *simple* type. It can be considered as having only a few subsystems and a limited number of interactions underneath. The other is the *complex* type, with a large number of subsystems and concerning with many interactions. The horizontal axis categorizes the participant's relationship according to the problem context. The unitary type means the involved participants have similar values and interests, share a common objective. The pluralist type means that debates, disputes and even conflicts can take place due to the fact of different values and objectives among the participants. However, accommodations and compromises, perhaps temporarily, can still be made in order to proceed forward for all participants. The last type, coercive, means there are few values and interests in common. Accommodations and compromises are not viable; decisions are simply made by the participant who has the biggest power.

According to the SOSM principle, Soft Systems Methodology (SSM), belonging to the Pluralist type, fits best the problem context in this study. This paper aims to investigate the O&O service with a large number of interorganizational interactions across two companies. The boundaries, such as culture, industry and geography, mean that the personnel from one company share little long-term value and interest with the other. However, accommodations and compromises exist by employing careful spanning

mechanisms (Amaral et al. 2011) in order to achieve the common goal – good O&O service quality. Therefore, SSM is selected as the main research method.

### 3.2 Soft Systems Methodology

According to Peter Checkland (1981), SSM is an action-oriented process aiming to investigate problematical situations in the real world. Unlike other methodologies, SSM attempts to tackle and intervene in the problem situation in order to take actions to change them towards the anticipated direction. When interacting with real life situations, people make judgments based on their viewpoints. Therefore, the concept of worldview is most important in understanding the social situation and the nature of SSM (Checkland and Poulter 2006: 5-6).

A social situation that requires intervention is usually perceived as the situation in which something needs to be done; however, it may not present as a well-defined solution. To investigate problem situations, SSM can be applied as a method representing qualitative research methodology. The SSM Process forms a cycle which starts from finding out about a problem situation and end with either defining or taking actions to improve it, depending on the purpose of the study. Taking action as the last step of the cycle will change the situation into a new situation, and then the cycle could be triggered again. The SSM cycle contains four basic steps (Checkland and Poulter 2006: 13), namely, defining the initial problem situation, building a model to question this situation based on a particular worldview, questioning and examining the problem situation in order to find a solution, and defining or taking actions to improve the situation.

The complexity of the SSM research process is shown in Figure 12.



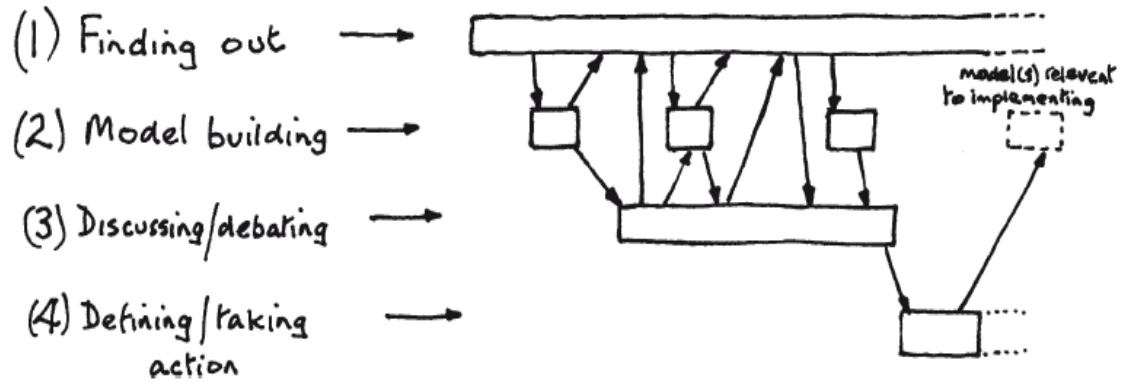


Figure 12. A pattern of activity during an SSM investigation (Checkland and Poulter 2006: 14).

These four steps in Figure 12 are integrated into a learning cycle and are fundamental to SSM. However, the SSM cycle does not necessarily contain a compulsory sequence of four steps. Although all investigations start from identifying the problem situation, other research activities are likely to start simultaneously in more than one of the steps (Checkland and Poulter, 2006: 12-15). In the following paragraphs, various recommended methods in the four phases are introduced.

First, at Stage One, four methods of finding out about a problem can be used. They are known as 'making Rich Pictures' and 'making Analyses One, Two and Three' techniques. Making a Rich Picture is a good visual way of showing the multiple interacting relationships in the complexity of human situations, often more useful than describing a situation through verbal sentences. The aim of Rich Picture is to perceive the main stakeholders, their viewpoints and relationships in the situation. In Analysis One technique, the key roles of the client, practitioner and issue owner are identified in the situation context. Analysis Two, in its turn, evaluates the model of linked roles, norms and values (Checkland and Poulter 2006: 34-35). Analyses One and Two are subsequently complemented with Analysis Three which defines the disposition of power in the situation and the processes related to it. Altogether, Analyses One, Two and Three ask the question of how the power is distributed in the situation.

Second, at Stage Two, the investigator builds a model of purposeful activity in order to ask questions and examine the problem situation. Subsequently, at Stage 3, the inves-

tigator conducts a structured discussion about the current situation and how to improve it. In practice, there are various methods of questioning the situation. One of the most formal and also the most frequently used approach is to create a matrix, as shown in Figure 13.

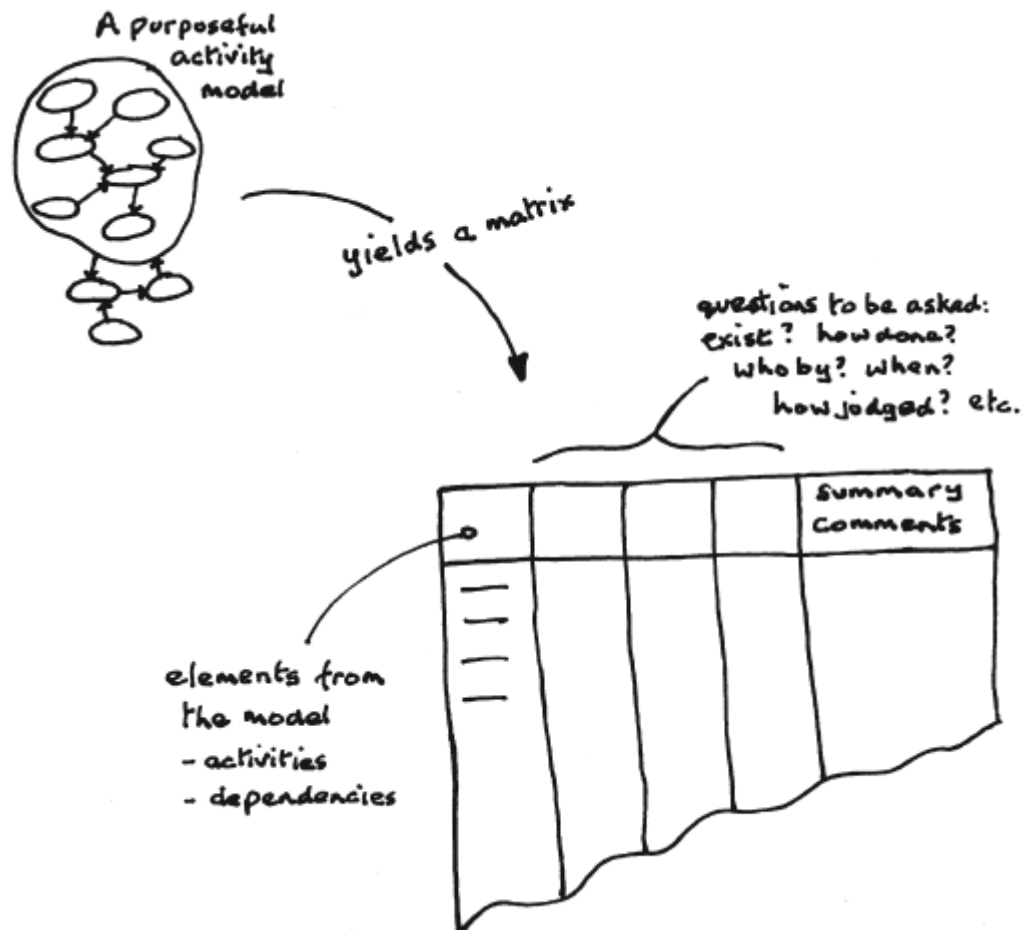


Figure 13. Questioning the problem situation (Checkland and Poulter, 2006: 52).

The matrix in Figure 13 is created based on the elements of the corresponding purposeful activity model. The matrix first displays the elements in rows, and then questions, such as how the activity was done, by whom and when, are asked in order to gain insights of the problematic situation.

Then, at the last stage - Stage Four, the investigator defines the actions required to improve the problem situation. The change that occurred from the initial situation to the improved situation is achieved through asking a list of questions aimed at defining the changes.

In this subsection, the basic information of SSM research cycle and the associated methods for each step are introduced. The next subsection will focus on describing how the qualitative interview sessions are conducted by the guidance of SSM.

### 3.3 Research Approach

The overall research approach chosen for this study follows a case study research principle, which is built into the SSM four-step cycle, explained in the previous subsection. The first three steps, including finding out, model building and discussing/debating, are repeated multiple times during the qualitative interviews with eleven selected informants in order to gain a holistic view of the problematic situation. The defined action step to improve the problematic situation, as the fourth step in the SSM cycle, is to employ the developed lifecycle model presented in Section 5. Since it is unrealistic to implement the model in the case company due to limited time, the model is introduced to selected informants who gave written feedback afterwards to help assess its reliability and validity.

In this study, semi-structured interviews and the developed lifecycle model assessment by the company experts constitute the data gathering actions from the case company. In line with the SSM learning cycle, the interviews aim at locating the main challenges in the O&O service and discover the potential solutions. The lifecycle model assessment embodied two parts: 1) presenting the developed lifecycle model to the informants, and 2) collecting their written feedback to improve the model. The following paragraphs give details of the interviews and written feedback of the developed model assessment.

As shown in Table 3, five groups, including eleven interviewees holding the positions of O&O manager, support team leader, support team member, application end user and reference team leader, were selected as the interviewees. The reason to categorize these participants into five groups is that they represent the main roles involved in the O&O process.

Table 3 present the participants to the interviews in this study.

Table 3. Interview group information.

Interviewee	Position	Date	Interview Theme	Duration	Method
Group 1: A	Head of AC	12.10.2011	O&O service management, general	30mins	Face-to-face, note taking
Group 1: B	O&O Program Manager	10.01.2012		90mins	Telephone, audio record
Group 1: C	Vendor Relationship Manager	20.01.2012		60mins	Telephone, note taking
Group 2: A	BI Team Leader	20.01.2012	O&O individual app support management, general	60mins	Telephone, note taking
Group 2: B	Web Team Leader	12.01.2012		60mins	Telephone, note taking
Group 3: A	Web Team Member	11.01.2012	O&O operations, transition, general	90mins	Telephone, audio recording
Group 3: B	Web Team O&O member	25.01.2012		60mins	Telephone, note taking
Group 3: C	E-business Team member	13.01.2012		60mins	Face-to-face, note taking
Group 3: D	E-business Team member	13.01.2012		60mins	Face-to-face, note taking
Group 4: A	Web app end user	15.02.2012	O&O Service usefulness, quality, general	60mins	Face-to-face, note taking
Group 5: A	Proximity Team Leader	13.10.2011	Near-shore, off-shore from other vendors	30mins	Face-to-face, note taking

Table 3 shows the selected interviews, their positions, data and durations of the interviews, as well as presents the main topics and methods of documenting the results. As can be seen from Table 3, all interview sessions were undertaken face-to-face or over the phone, depending on the geographic distance, or audio recorded (if approved). In all the cases, the interview field notes were taken.

The details of the interviewee backgrounds are presented as follows.

**Group 1: O&O Manager.** The three interviewees in this group represent the overall O&O service management. The first person, Group 1: A, is the head of AC, who is aware of the high level picture and steers the direction of the O&O service in the case company. The second person, Group 1: B, is the O&O program manager who owns the overall O&O service. He is responsible for initiating O&O support for new applications, signing the contract with service provider and monitoring the service quality. Group1: C is the vendor relationship manager in the case company. Strictly speaking, he is not dedicated to the O&O service but holds valuable experience in the vendor relationship management area in general.

**Group 2: Team Leader.** This group consists of two team leaders. Group 2: A was advised by Group 1: A and B to be a good interview candidate because the BI team led by him is the most successful team in terms of O&O area. Group 2: B leads Web Team which is recognized as having challenges in managing O&O service.

**Group 3: Team Member.** In this group, one internal member and one O&O member from the Web Team and two internal members from the E-business Team are selected. The O&O member is the one who carries out the request and provides the solution to the end users, and the internal member is the one who supervises and monitors the support cases.

**Group 4: Application End User.** Interviewee Group 4: A is a key user of the web application O&O service. He owns this web application service from the business point of view, and closely collaborates with and seeks technical help from the Web Team.

**Group 5: Reference Team Leader.** Group 5: A was suggested by Group 1: A as an interviewee who can offer useful insight of nearshore and offshore services. He has many years of outsourcing and offshoring experience in the IT application area with various vendors.

### 3.4 Reliability and Validity

In a qualitative research, reliability relies on whether the research is carried out systematically; while validity refers to truthfulness and accuracy (Denscombe 2000: 241). Regarding the reliability of this study, all interview sessions were conducted either by telephone or face-to-face in the English language. Some of the interviews were recorded and some were note taken according to the interviewees' approval. The purpose of the interview and short agenda were sent to the interviewees in advance by email so that all interviewees would have enough time to prepare the contents and answers to the questions. Additionally, a list of general questions was used during all interviews reflecting to the literature knowledge; and the probing questions were suggested to strengthen the understanding of the discussed challenges and possible solutions.

During each interview session, SSM four-step-cycle with various recommended methods was utilized to collect and analyze data in a consistent manner, for example Rich Picture, purposeful activity model, and matrix. The intermediate data in each interview session is gathered in appendix II to guarantee the interview content reliability. Importantly, the collected raw data from interviews were not immediately sent back; instead, the data was analyzed and condensed before delivering back to each interviewee for validation.

Regarding the validity of this study, the developed lifecycle model is based on literature review and the data gathered from the interviews. This model is based on three outsourcing models referenced from literature, the main challenges and the proposed solutions uncovered in the interviews, which together were taken into consideration and mapped in different phases of the model. Once the model was generated, it was sent back to the selected experts (including all the interviewees and several other professionals in the field) in order to assess the accuracy and the relevancy of the proposed solutions to the case company. The subsequent assessment was used to determine whether the study measured what it was intended to measure, and whether it reached the research objective defined at beginning of the study. The informants involved in this study are not named due to confidentiality reasons. The researcher in this study has worked in the O&O service area for two years, meaning that the researcher has his own view on how the service can be improved. However, special efforts were taken to

remain neutral and avoid possible researcher bias, especially during the data collection and data analysis phases.

In summary of this section, the research objective of this Thesis is to develop an IT offshore outsourcing service lifecycle model appropriate to the context of the case company, as stated in section 1.3. In order to achieve this objective, both the literature is reviewed and the case company current state is analyzed to collect data for the model development. The key findings from this analysis are discussed in the following section.

## 4 FINDINGS

This section presents the key findings in this study, including the challenges associated with the current O&O process and the possible ways to overcome these challenges proposed by the interviewees. These findings are reflected in the lifecycle model developed in the next section. The interview process is based on the SSM four-step-cycle and the details are placed in Appendix 2. During the interview sessions, not only were a number of challenges in the O&O area revealed, but also the possible solutions were proposed by different informants in the probing conversation.

Table 4 presents the main challenges found from the interviews and listed as nine rows associated with eleven interviewees.

*Table 4. Main challenges in the current O&O service.*

<b>Challenges</b>	<b>1:A</b>	<b>1:B</b>	<b>1:C</b>	<b>2:A</b>	<b>2:B</b>	<b>3:A</b>	<b>3:B</b>	<b>3:C</b>	<b>3:D</b>	<b>4:A</b>	<b>5:A</b>
Contract type	Y	Y									
Applications to be outsourced		Y				Y					Y
Cultural differences		Y		Y	Y	Y		Y	Y	Y	Y
Vendor relationship management			Y								Y
Communication among stakeholders		Y				Y				Y	
Knowledge Retention		Y		Y	Y	Y		Y	Y		Y
support competence					Y					Y	
Service monitoring						Y					
Support procedure										Y	

As shown in Table 4, the challenges are displayed in the first column and associated with the interviewee(s) who brought them up. The meanings of interviewees' labels (like A1, A2) can be found in Table 3 of the previous section. However, please note



that one challenge with a large number of associated informants does not necessarily indicate that it outweighs others with lesser numbers. By structure the reporting the way as in Table 4, the essential data collected from eleven interviews are condensed and visualized in a manner that is easier for readers to perceive. Additionally, by probing questions, not only the challenges but also the corresponding possible solutions were proposed by interviews.

Table 5 presents the solutions proposed by the interviewees.

*Table 5. Proposed solution for the revealed problems from the interviewees.*

<b>Problems</b>	<b>Proposed solution</b>	<b>By whom</b>
Contract type	Instead of the time & material contract, using the managed service contract with fixed cost.	1:A, 1:B
Applications to be outsourced	Heavily customized or very old apps should not be outsourced, only industry standard ones should.	1:B, 5:A
Cultural differences	Cultural training.	3:A
Vendor relationship management	More effort to focus on this area.	1:C; 5:A
Communication among stakeholders	Establish a regular communication channel. More synchronous communication methods.	4:A
Knowledge Retention	Team with 6-10 people is the best size to maintain knowledge.	1:B, 5:A
support competence	N/A	N/A
Service monitoring	Pay attention to the delivered service quality.	4:A
Support procedure	N/A	N/A

The solutions in Table 5 are derived from the interview sessions and interpreted during the data analysis period afterwards. Please note that challenges of *support competence* and *support procedure* had no clear solution proposal, thus they are marked as N/A.

The combination of Table 4 and Table 5 depicts clearly what challenges exist in the current O&O service process and how various interviewees see they can be solved. These outputs of interviews together with the knowledge of literature review lay the concrete foundation of the new lifecycle model for the case company in Section 5. The following paragraphs give the details of the nine challenges.

### *Challenge 1. Contract Type*

The first challenge listed in Table 4 is contract type. Two manager-role interviewees (1:A, 1:B) pointed out that make the decision about what contract type for each application support is seen as imperative because it affects the service output from the out-set. They both agreed that instead of a time & material contract type, that the case company previously used, a managed service contract with fixed price can create more value with less effort for long term support cases in the case company. In the managed service contract type, the service provider maintains the application while the case company defines the service measures.

For example, 1:B expressed as follows:

Time & material contract type is usually useful for short term engagement, ideally for high level consultant...How many people you (service provider) put, it is up to you. We pay you the money which we negotiated...When we work directly with them (the O&O support people), the person does not necessarily feel that he is part of the team...we manage an onsite manager (from the service provider) only...the managed service takes out the human management aspect from us as a client.

In addition, even though the interview session with 1:C did not cover this challenge, both 1:A and 1:B explicitly appraised that 1:C is the person who introduced the managed service contract type into the case company.

### *Challenge 2. Applications to Be Outsourced*

The second challenge is to determining whether an application should be outsourced or not. This was reported by three interviewees (1:B, 3:A and 5:A). Interviewee 1:B said:

When we have a system which is highly customized or developed 15 years earlier... we cannot transfer the knowledge to the O&O in one month, we cannot really share the knowledge.

According to Interviewee 3:A, issues might occur in the service supporting stage if very complex applications that the O&O firm cannot handle have been outsourced. 5:A who has years of nearshore and offshore experience drew a similar conclusion - if the product maintenance service is an industrial standardized or common shared knowledge, it could work; however, if the product is heavily customized by another company, who has all of the knowledge, offshoring or outsourcing won't work.

### *Challenge 3. Cultural differences*

The third challenge is the cultural differences between the two organizations. In the interviews, most interviewees (eight out of eleven) expressed that the cultural difference between Europe and India poses risks during the interorganizational collaboration, especially in the communication part. For example, 1:B said:

You have to consider the culture, the country culture and the company culture both...The service provider company would like to please the customer...even if they have doubts...we have to be smart and realize that where we can use them where we should not

3:A proposed a solution for this challenge as giving some training sessions about the Indian culture before the O&O service begins.

On the other hand, 4:A stated that the O&O personnel also need to understand the way of working in Europe – instead of only stating the issue (usually end users could not care less about this intermediate stage), they need to learn to propose a smart solution to solve the issue. If business has a problem, the solution is what they need rather than merely the issue perception from the support person.

### *Challenge 4. Vendor Relationship Management*

The fourth challenge is called vendor relationship management. Both interviewees 1:C and 5:A presented that managing vendor relationship is crucial for the service success. 1:C discussed that we (the case company) need to know who we deal with, set clear

expectation and manage the relationship from the outset. He also shared one opinion that if our vendor complains, it is our fault in most of cases. We need to regularly discuss about what we can improve internally. 5:A shared his opinion:

Offshore is dealing with human beings, treat other side as human rather than “working machine”, share them the common target, tell them what is important, why we are doing this etc.. Additionally, ask them “what can we help you do better work”.

#### *Challenge 5. Communication Among Stakeholders*

The fifth challenge is about the communication among stakeholders, which actually contains two aspects. First, stakeholders involved in the service need to communicate more to exchange feedback to eliminate potential misunderstandings. During the interview, 1:B shared a case to emphasize that the end users (the business side) should be aware of the service key measures before the service establishment. The case company engaged one application support service with the O&O firm. After several months, the business side started complaining that most of the requests were not handled in time. By spending time and effort upon investigation, 1:B found out that the business demands any request to be solved in two days instead of the thirty days that the O&O service contract codified. Here is another example. 5:A, as a key end user, also expressed that the end users’ voices should reach the support team and O&O service managers regularly. More important, solution should come in time via an efficient communication channel. Second, the communication in the O&O service consumes much more time and effort because of the geographic distance and cultural difference. Interviewee 3:A commented that it is not easy to understand the Indian English accent over the phone call. Interviewee 4:A shared his opinion that the asynchronous methods, such as email, take too much time to explain a request. Therefore, more synchronous methods, like audio-conferencing, should be used between end users and the O&O support people.

#### *Challenge 6. Knowledge Retention*

The sixth challenge is to retain the knowledge inside the support team to keep the business running and to remain the service continuity. It has been seen as one of the main challenges in the O&O service by various interviewees. Three sub-elements, in-

cluding O&O job rotation rate, support team size and knowledge transfer (KT), fall into this large category. They are elaborated subsequently.

*Job rotation rate* is the first element that affects the knowledge retention. Interviewees 3:C and 3:D both mentioned that the personnel from the service provider have a high turnover. On average most O&O support people will resign after six months to move to a new team or a new company. The case company also has no power to intervene. Interviewee 3:A also added that such a high job rotation rate in the O&O service provider company significantly affects the motivation of knowledge sharing because the O&O partner will probably leave the team in a very short period of time. In addition, 1:B mentioned that

In India, the average rotation in IT industry is around 12% to 14% ... if the service provider has higher than this rate, something is wrong

The second element is *support team size*. Four interviewees (1:B, 2:A, 2:B and 5:A) talked about the support team size problem. 1:B explicitly said:

One of the challenges I saw in web area is the team is relatively small...Typically, the best team size is 6 to 10 people. If smaller than 6 people, you have difficulties to maintain the knowledge...The average rotation rate in India is 14%. You will lose person sooner or later. If you have only one person or two, you are losing either complete knowledge or 50%

In contrast to the web team, the BI team led by 2:A consists of 3 personnel from the case company and 11 O&O members from the service provider company as explained by 2:A in the interview. 2:A said that the turnover in BI team is also high but they can afford the change due to the well-cultivated knowledge sharing atmosphere and the reasonable team size.

The third element, *Knowledge transfer (KT)*, comprises two scenarios in the O&O service. One is the interorganizational KT that usually happens during the service transition phase. The other one takes place inside the service provider firm when a new person comes to replace the current one. Speaking of the first scenario, 3:A acknowledges

that the support documentation usually is not well prepared and not enough attention was paid to the KT. He mentioned that

It would be good if we have at least the common documentation or common support cases that could give them (O&O members) some ideas how to solve some typical issue.

3:B from the O&O service provider firm also mentioned that good documentation with a standard template can facilitate the KT session. In terms of the second scenario, 3:A also shared his opinion that the KT inside the service provider was sometimes not done properly, hence the successor is not capable enough to start working immediately.

When we got a completely new guy (O&O member) during the spring timeframe last year, then we really suffered. As such, from the service provider point of view, according to them all the knowledge has been transferred and there shouldn't be any gap, so business should continue as usual. But from our point of view, I saw nothing but major gaps even with just basic understanding of infrastructure what we had in place...the new guy officially had received information (knowledge), but unofficially he even told me directly that he really don't know anything about that

In addition, 3:A also expressed that the case company should monitor the KT process.

Maybe the big issue there really is from our side we just assume that whenever the service provider says there are new guys coming they will know the same and they will do a perfect knowledge transfer...we don't pay any more attention (on their knowledge transfer). If we see things don't go so fast or so good with the new guy, then we start to yell and wonder what happened. But it is kind of useless at that point. The service provider firm just says – 'well, knowledge was transferred' and maybe they take some records and check the documentation. That's it. But if we were more active in the knowledge transfer while it failed, we would really be able to see or understand much better and control much better what exactly they are doing and how they are doing and when did the new guy start working

### *Challenge 7. Support Competence*

The seventh challenge is about the competence of the O&O support people. In addition to a well-planned KT session, the O&O personnel's original skill level and experience on the support field also significantly determines the service quality. 4:A, during the interviewee, stated that the O&O support personnel are capable of supporting well-documented routine tasks, like creating a new user in the system. However, the development related tasks need investigation, with solution selection and implementation it is not feasible to obtain a satisfactory answer from them. 2:B presented that it is almost impossible to evaluate the competence by only reviewing the CV in advance without working together. 3:A also commented that

sometimes I do get frustrated. They address a very specific way for certain problem, but they forget the big picture and something else is already failing. They do not consider at all, this is very very frustrating.

#### *Challenge 8. Service Monitoring*

The eighth challenge is to monitor the service performance. During the interview with 3:A, it was unveiled that the case company needed to monitor the delivered service quality from the O&O member to the end users, in order to increase the service satisfaction rate. In addition, this also helps the support team itself in the long term. 3:A mentioned

We are happy that the ticket is solved, then we didn't pay too much attention how it was resolved. Whether it's a good job, clever solution or not...with many tickets, the pure emphasis is just to deliver it or close the tickets or follow the SLA. That is simply not enough but the quality is much more important. If we just constantly do just quick fixes, long term we might have a nightmare there and getting bigger volume of tickets.

we (can) understand a little bit better of their thinking and also their requirements or how we really should address them. For the time being, we just hand over to them and 'do this, do that' and we really never understand how THEY are working and if they have any special requirement...we have some guys from them to support, we don't care who or from where we just give them documentation or the information, then assume it will start rolling...we should have very close collaboration.

### *Challenge 9. Support Procedure*

The last challenge is for the support procedure adopted in the service. The case company employs a ticket system to implement the application support procedures, meaning that each request from the end users is officially recorded in the ticket system with a reference number and is routed to the correct support team. 4:A stated that the whole process is inflexible for certain situations, including two examples. One is that the ticket is always required for any single request. Sometimes, he needs a quick and short discussion in advance in order to decide whether a corresponding request should arise or not. Another example is that for most of the tickets the expiring date is 30 days, which is too long to wait for a few requests with a strong business demand.

Summing up, this section focuses on elaborating the findings from interview sessions in the case company. It uncovers the O&O service challenges reported from the interview sessions as well as introducing interviewee-proposed potential solutions. This is followed by the next section which suggests a service lifecycle model to tackle these challenges in relevant phases in order to ultimately maximize the service value for the case company. The nine main challenges revealed from interviews are listed below:

- Contract type
- Applications to be outsourced
- Cultural differences
- Vendor relationship management
- Communication among stakeholders
- Knowledge retention
- Support competence
- Service monitoring
- Support procedure



## **5 O&O LIFECYCLE MODEL**

The content in this section consists of two parts. The first part introduces a developed O&O service lifecycle model based on the knowledge obtained from the literature, aiming at tackling main challenges discovered in the previous section. The second part deals with reliability and validity evaluation of the lifecycle model according to the feedback received from selected informants.

### **5.1 Developed Lifecycle Model**

According to the literature study and key findings in the case company, an O&O service lifecycle model is introduced in order to tackle challenges, establish guidelines and offer insight into the O&O service. This model is inspired and based on three outsourcing models developed by Brown and Wilson (2005), Power et al. (2006) and Beulen et al. (2011) with consideration of offshoring factors and exposed challenges from the interviews. Figure 14 illustrates the model content.

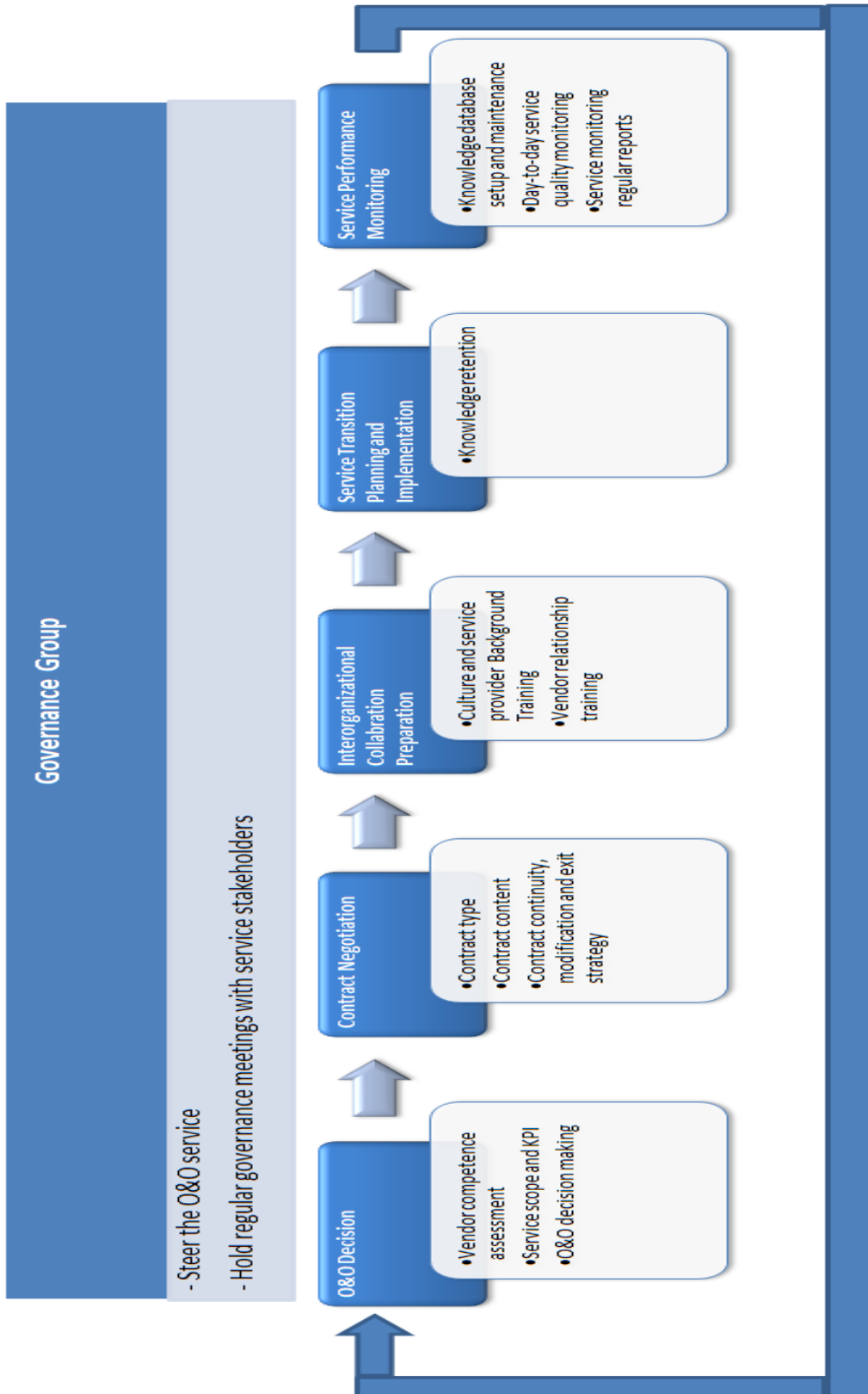


Figure 14. Developed Lifecycle Model.

The model in Figure 14 is made up of five phases in sequence – *O&O decision, contract negotiation, interorganizational collaboration preparation, service transition planning and implementation* and *service performance monitoring*. Along with the cyclical model, *a governance group*, which steers the service, lasts for the entire service period.

The five-phase-concept in this model is extended from pre-execution, execution and post-execution concept from Beulen et al. (2011). The first two phases with their internal elements are directly borrowed from two models of Power et al. (2006) and Brown and Wilson (2005), except that strategic assessment element is excluded and contract type element is added. The third phase and governance group in the model are created and emphasized by the researcher according to proposed solutions in the interviews. The label and internal elements of service transition and service performance phases from Power et al. are used in this developed model as fourth and fifth phases, but they are further reinforced by input from interview data.

This lifecycle model attempts to solve the challenges reported from the previous section by adopting relevant literature knowledge and considering the proposed solution from interviewees in various phases. The details are shown as in Table 6.

*Table 6.* Lifecycle model phases and the mapping challenges.

<b>Phases</b>	<b>Challenges</b>
Governance group	<ul style="list-style-type: none"> <li>● Communication among stakeholders</li> <li>● Support procedure</li> </ul>
O&O decision	<ul style="list-style-type: none"> <li>● Applications to be outsourced</li> <li>● Support competence</li> </ul>
Contract negotiation	<ul style="list-style-type: none"> <li>● Contract type</li> </ul>
Interorganizational collaboration preparation	<ul style="list-style-type: none"> <li>● Cultural differences</li> <li>● Vendor relationship management</li> </ul>
Service transition planning and implementation	<ul style="list-style-type: none"> <li>● Knowledge retention</li> </ul>
Service performance monitoring	<ul style="list-style-type: none"> <li>● Service monitoring</li> <li>● Support competence</li> <li>● Knowledge retention</li> </ul>

	● Communication among stakeholders
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Table 6 presents the information that what challenge(s) are mapped and tackled in each phase. Note: 1) governance group is not a phase but it also deals with challenges, thus listed in the table as the same way as other phases 2) one challenge is allowed to be tackled in more than one phase in the model. For example, the challenge of knowledge retention appears in service transition planning, implementation phase and service performance monitoring phase.

Before going through the details of each item in the lifecycle model, three important points need to be clarified. First, the lifecycle model is cyclical. It means that the end of service performance monitoring phase from the prior cycle will trigger a start of next cycle from O&O decision, and this can repeat multiple times until service termination. Second, skipping one phase and directly moving towards its next is not recommended. This lifecycle model is deliberately designed to tackle the main challenges presented by the service stakeholders in different phases. The ignorance of one phase could cause resolved issues to reappear, and further damage the overall service quality. Third, this model illustrates the process and sequence of actions that the stakeholders can rely on to approach the anticipated result. However, it by no means guarantees a service success alone. There always exist extra unpredictable or subtle problems to be dealt with in practical situation. The model should evolve by time and by practice.

In the following paragraphs, the six elements, including the governance group and five phases, are elaborated in turn. Each element starts with a recap of associated challenge(s), then the literature knowledge points and finally the details of the element in the developed model.

#### *Governance Group*

Communication among stakeholders and support procedure are identified as two challenges in the previous section and to be tackled by governance group proposed in the developed model. Three interviewees expressed the same opinion that regular communication should take place among the stakeholders during the entire service lifetime, and one interviewee stated that the official support process sometimes is not flexible enough to meet the requirement from business, and the voice of business side is also hard to be heard by the application support team.

Although none of the three referenced lifecycle models emphasizes the importance of a governance group, Amaral et al. (2011: 57) explicitly point out that establishing governance model before the joint operations can eliminate many potential issues in distributed product development. A governance group is able to establish efficient communication channels, prevent or resolve disagreements and handle possible changes with a speedy and inexpensive manner.

The researcher of this study perceives that it is important to build a governance group from day one of the service. In the developed lifecycle model in Figure 14, governance group is highlighted on the top of the diagram and its functioning lasts for the entire life time of the service. Although the service officially starts only after the contract signing, a governance group could have been established before joint operations to ensure correct decisions on the O&O decision and contract negotiation phases. The governance group should consist of representatives of relevant stakeholders in this service, for example including roles of service manager, application support person and end user. The group is usually led by a person who is in charge of the service's overall scope, like the service manager. As the name implies, one function of the group is to govern and steer the service to the right direction. Another function, which supplements the previous one, is to set up regular governance meetings in order to deal with the emerging issues, prevent or resolve disputes and allow participants to present opinions. Besides the two functions mentioned above, the governance group also has other functions specifically associated with phases of the model. They are elaborated in the following paragraphs.

#### *Phase 1. O&O Decision*

O&O decision is employed as the first phase in the model to deal with *application to be outsourced* and *support competence* challenges in order to make the go or no-go decision. There are three interviewees who discussed application to be outsourced challenge. For example, 5:A shared his experience that the more customization the application has the more difficult to outsource it. On the other hand, the service provider firm should offer people with relevant support competence. Two interviewees encountered the problem that the support people assigned from the service provider do not meet the required skill level.

In the three referenced models, the outsourcing decision should consider company's strategic objectives. However, in the developed model, the strategy evaluation is skipped. The case company has already established an agreement (master contract) with the service provider that a certain amount of supporting hours will be consumed each year. It means that the strategic evaluation has already been completed in the master contract stage.

The first phase, O&O decision, in the lifecycle immediately drives the case company to address the three questions below. In this phase, the governance group is responsible for finding the answers.

- Is it viable to outsource this application support or not?
- What is the scope of the outsourcing service?
- What are the measures of the outsourcing service?

For the first question, it is important to assess the service provider's competence on the relevant service area. Due to the cultural fact that Indians are reluctant to say 'no' and the service provider is usually trying to please the customer to obtain the offer, the governance group should make the decision independently without influences from the provider firm.

Once the outsourcing decision is made, the next two tasks for the governance group are to define the service scope and the service measures (so called Key Performance Indicators (KPIs)). For the service scope, the current service support personnel are recommended to help define it because they are the people who are most familiar with service details and boundaries. For the service measures, it is important to involve the service end users in order to create a holistic measuring plan including all important KPIs. Without procuring end users' commitment at this stage, the measures are unlikely to guarantee the best value from the users' perspective.

### *Phase 2. Contract Negotiation*

As suggested by 1:A and 1:B, to determine the right contract type for each O&O service is crucial in this phase. There are two typical contract types used in the case com-

pany, one is time & material based, the other is managed service with fixed price. According to 1:B, when the service is a long term support and the scope is well understood upfront, the managed service contract with fixed price can mitigate potential runaway costs from unpredictable risks. When the service is a relative short time period and the work effort fluctuates less, the time & material based contract is better.

All three referenced models have individual phase to navigate and negotiate service contract. The important factors for the service, such as contract type, contract scope, service level, pricing model and key measures, are codified into contract in this phase. Contract content negotiation is a common action in all business area and the knowledge can be borrowed from the three referenced models.

When entering the contract negotiation phase for the first time, the focus is to determine the contract type and negotiate the contract content. From the second time onwards when entering this phase, the focus is altered to determine whether the service should be continued, modified or exited. The decision should be made by the governance group according to the service monitoring report and based on the case company's current situation.

### *Phase 3. Interorganizational collaboration preparation*

According to the data collected from interviews, many interviewees shared the opinion that the case company lacks the understanding of the service provider company. Several interviewees stated that training for key factors surrounding the O&O service collaboration, like cultural difference and the service provider company basic information, is not planned for employees in the case company before the service initiation. Therefore, unsurprisingly, issues from this area can occur during the service transition or operation period. As a possible solution, 3:A mentioned that cultural training should be arranged to deal with cultural difference challenge. In addition, 1:C and 5:A recommended that more effort should be spent on coaching vendor relationship management skills.

In order to mitigate the negative impact of cultural difference and vendor relationship management challenges before the service transaction, interorganizational collaboration preparation as one individual phase is utilized to prepare for the upcoming collabo-

ration actions across companies. As a starting point, it is suggested in this study to schedule repeated online training sessions for relevant topics around the year, as well as creating online forums to encourage employees to post encountered issues and best solutions in this area inside the case company. Needless to say, the gap in this area cannot be filled in one day in any given company. However, it is wise, at an early time, to coach employees how to deal with people from the service provider firm and foster such common insights that vendors are our partners and stable relationship between the two are important.

#### *Phase 4. Service transition planning and implementation*

Service transition means to hand over the officially agreed tasks to the service provider firm in order to achieve predefined outsourcing goals. It is the process of changing from the previous state to the new O&O service model. Service transition phase poses a significant number of risks and is vital for the triumph of the overall service (Carmel and Tjia 2005). 3:A raised up the issue that service transition period is not emphasized in many cases of the O&O service. According to Interviewee 1:B and 5:A, in order to retain the knowledge inside any given team, the best size for the team is from 6 to 10 team members. 1:B also shared the information that the teams with less than 6 members will be combined with other relevant teams to achieve the best size. The service transition planning and implementation phase in the model is to make sure the application knowledge along with the service is successfully transferred to the service provider side.

In addition to the best team size factor pointed out by interviewees, the framework presented by Beulen et al. (2011) in Section 2 recommended to manage the transition performance to rectify potential gaps, reduce risk profiles and avoids surprises. However, other similar service transition models, such as ITIL Service Transition (OGC 2007b), can be adopted in this phase as well.

#### *Phase 5. Service performance monitoring*

Once the service transition phase is completed, the service provider becomes responsible for the outsourced work and starts the daily service operations. In this phase, three challenges, including service monitoring, support competence and knowledge retention, are addressed.



According to interviewee 3:A, it is important to monitor the delivered service quality regularly to correct or avoid issues at an early stage and ensure that the service is running as expected from the case company's perspective. It is also wise to be customer-focused and to pay attention to the service quality instead of just the ticket closure. The PKIs defined in the first phase also significantly affect the focus of the service monitoring report that is generated in this phase and to be delivered to governance group. Since O&O service typically has high job rotation rate (in average 14%, according to 1:B), the case company should also monitoring support competence and knowledge retention in the O&O support team. The high turnover in the service provider firm can cause significant knowledge loss and the service support operation cannot be continued as normal due to this reason. In this phase, the service performance monitoring reports regarding the three challenges should be submitted to the governance group and the associated issues should be addressed to the governance meetings.

In summary, the developed lifecycle model is introduced in this subsection. Because it is not feasible to implement the model in the case company within the study time, the usefulness and feasibility of the model in the context of the case company is assessed by collecting feedback from selected informants in the next subsection.

## 5.2 Lifecycle Model Assessment

In order to assess the developed lifecycle model, informants including all eleven interviewees and the leader of the Delivery Team are asked to give written feedback. The procedures of gathering feedback have three steps. Step one, the researcher attempted to schedule a thirty minute phone call or face-to-face meeting with all informants to introduce the study progress and the details of the developed model. The request of assessing the model was also presented during the meeting. Step two, each informant received an email with the summary of the meeting content and the latest version of the study paper. Step three, the informants returned their feedback. Table 7 gives the information for step one and two.

*Table 7. Lifecycle model assessment information for step one and two.*

<b>Informants/Materials</b>	<b>Date</b>	<b>Model introduction method</b>
1:A	18.04.2012	Phone call + email
1:B	23.04.2012	Phone call + email
2:A	23.04.2012	Phone call + email
2:B	17.04.2012	Phone call + email
3:A	17.04.2012	Phone call + email
3:D	23.04.2012	Face-to-face + email
4:A	23.04.2012	Face-to-face + email
Delivery Team leader	24.04.2012	Messenger + email
Supplier management materials	04.05.2012	Internal materials

As shown in Table 7, seven interviewees out of eleven had the time to attend the meeting with the researcher to discuss the study progress and the new lifecycle model. In addition to the interviewees, Delivery Team leader and the supplier management materials also contributed valuable information. The Delivery Team in AC just started to use the O&O service and recruited several support people from the service provider. Therefore, the team leader was also asked by the researcher to evaluate the study progress and the model. 1:A recommended the researcher to take a look at the materials for supplier management that the sourcing department is currently working on. The following paragraphs present the received feedback and the comprehension from supplier management materials.

#### *Feedback from 1:A*

I must say it's a pretty good Thesis paper. Your conclusions also are fairly sound. I have no major updates on the content. Comparing the supplier management model that the company is currently building with the model in this paper, they both use cyclical phases and emphasize the importance of governance group.

#### *Feedback from 3:A*

the Asynchronous vs. synchronous collaboration knowledge in Section 2 – can this be used to address communication issues in the model as well?

*Feedback from 4:A*

I have read the section 4 and 5 of your Thesis paper and I think it's really good. The examples of challenges you selected are absolutely valid and the model you proposed is addressing those well.

*Feedback from Delivery Team leader*

I read through the sections 1, 2, 4 and 5 of your Thesis, and I really liked it. Definitely it helps. It is much easier to understand a complex thing when there is well-structured model to explain it. It contains a lot of stuff which helps us to understand better how the offshore outsourcing model works, and to work more smoothly with our O&O colleagues. And I'm keen to see the final version, when it is ready.

*Content from supplier management materials*

The case company is officializing the IT supplier management process at the moment that the researcher is assessing the model. The objective of the IT supplier management process is to give generic guidance about how to establish, manage and monitor IT suppliers, which includes the O&O service provider. The researcher has been granted permission to view the content of the draft version. The next paragraph presents the information relevant to this study.

The O&O service provider company has been defined as a strategic supplier that the case company wants to build long-term relationship with, typically more than five years. For all strategic suppliers, a governance model is structured based on operational, quarterly held management meetings as well as executive level meetings. The aiming of the governance model is to create more value for the case company and achieve mutually agreed goals with the suppliers. In addition to the governance model, contract management, KPI monitoring, supplier quality management and audit are also defined as must points for strategic suppliers. Comparing with the lifecycle model established in this study, there are several points that should be mentioned. First, the

governance model and contract management are recognized as imperative for the O&O service from both. The difference of the governance part is that the supplier governance model utilizes a three-tier meeting to manage services from different organizational level, which implicitly builds an escalation path when critical things go wrong. Second, the service monitoring action is not only handled by the internal subject experts but also dedicated quality managers in the supplier management process. Third, Audit is applied for the service and the subject expert will help the team on auditing actions.

Because the time period of the model assessment was very close to end of the study, the researcher was only able to collect feedback from the above four respondents. Other informants promised to deliver their comments in the upcoming weeks, though they are not attached into the content of this study. According to the data collected, the lifecycle model is finalized as in Figure 15.

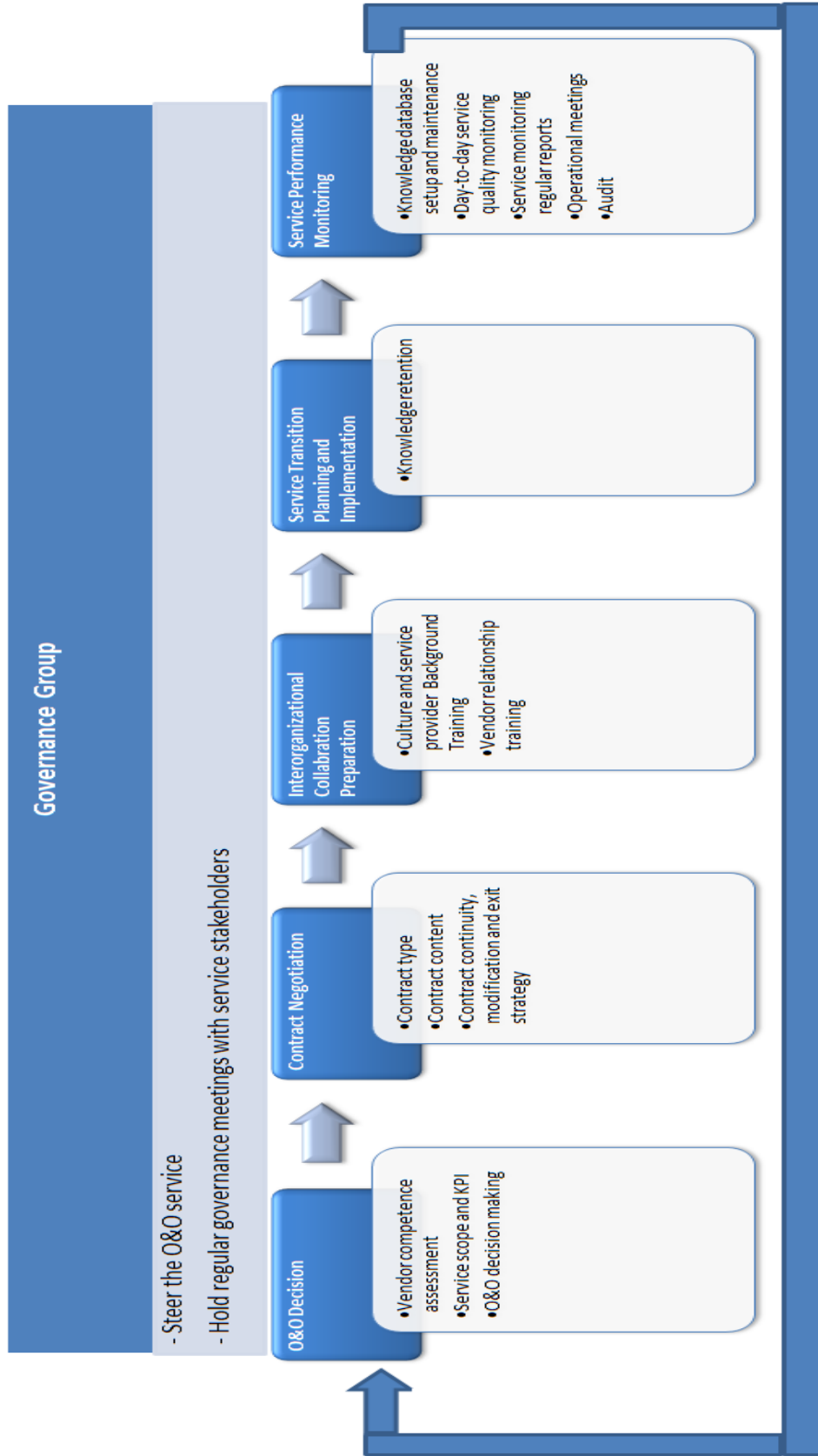


Figure 15. Final lifecycle model.

As can be seen from Figure 15, in the final lifecycle model, two extra elements, *operational meetings* and *audit*, are added under the service performance monitoring phase. The two elements are borrowed from the supplier management process.

First, regular meetings should be arranged for operational support people from both companies. This reserves fixed timeslots to bring operational team members onto the same table and discuss topics synchronously. Any issues or disputes that cannot be agreed in operational meetings should be escalated to governance group and discussed in the governance meeting. The problems can be further brought to executive level meetings if needed. However, executive level meetings go already beyond the scope of this study, therefore are excluded in this model.

Second, the case company decides to audit strategic suppliers. Audit action can help the team generate the financial aspect of the service monitoring regular reports and thus assist governance group to make wise decision. In addition to the visible changes in the model, the question from 3:A in his feedback pointed out that the synchronous and asynchronous technologies from literature review can be used in service performance monitoring phase to tackle communication barriers, which is a very valid opinion and absorbed in the model.

In summary, this section has first introduced an O&O service lifecycle model to improve the current situation in the case company. The model is based on literature knowledge and key findings from conducted interviews. Second, the model is assessed by selected informants and feedback is collected. Last, a final version of the lifecycle model is defined and the corresponding changes in comparison to the previous version are explained. Until here, the research objective of this study has been reached and the next section is to make conclusions.

## 6 CONCLUSIONS

The final section of the study covers a summary of the Thesis and its result. This section first repeats the research objective and summarizes the process of this study. Second, reliability, validity and limitations of the study are stated in brief. Third, recommendations for future research are provided.

### 6.1 Summary

The research objective in this study was to develop an IT offshore outsourcing service lifecycle model appropriate to the context of the case company. In order to achieve the above defined research objective, the following research process was employed.

This study started with specifying the business problem and defining the research objective, which were followed by an outsourcing and offshoring literature study. The literature study focused on outsourcing and offshoring service lifecycle models, which subsequently implied service transition and cross cultural communication as being critical aspects of the service. After literature study, qualitative interviews were conducted with a total of 11 interviewees, who fall into five groups: 1) O&O manager, 2) team leader, 3) team member, 4) application end user, and 5) reference team leader.

Soft Systems Methodology was adopted as a primary research method to conduct the study and analyze the data. Based on SSM four-step-cycle procedures, the interviews revealed 9 main challenges appearing in the O&O service and the corresponding possible solutions from the interviewees' perspective. These challenges included: 1) contract type, 2) applications to be outsourced, 3) cultural differences, 4) vendor relationship management, 5) communication among stakeholders, 6) knowledge Retention, 7) support competence, 8) service monitoring, 9) support procedure.

Based on the literature study and the results of the interviews, a service lifecycle model was proposed which defined five sequential phases, with a number of internal elements and one governance group that serves the entire service lifetime in order to tackle the O&O challenges in the case company context. These five phases comprised:

1) O&O decision, 2) contract negotiation, 3) interorganizational collaboration preparation, 4) service transition planning and implementation, 5) service performance monitoring.

Finally, the developed model was validated and assessed for its reliability and validity by a group of selected experts in the case company during the feedback session.

## 6.2 Reliability, Validity and Limitations

This study has shown the benefit of using SSM as the preliminary method to analyze the current state in the case company. It demonstrates how SSM can reveal fundamental causes in the pluralist context, which may not be easily achieved by using other methods.

While the research objective has been achieved and significant improvement to the O&O service has been suggested, this study is not exempted from constraints. Firstly, the interviewee list is limited. The revealed key findings and the suggested lifecycle model will be more informative if the interviewee list could have contained more people from other application support area. However, although only eleven interviewees contributed in the qualitative interview sessions, they were carefully selected by the researcher and the list has already covered all key roles along the whole service process.

Secondly, there is only one operational person from the service provider firm was interviewed. The more representatives from the service provider firm participate the interview sessions the more holistic view the researcher can gain for the current service situation, which subsequently will also improve the reliability and validity of the developed model. For example, interviewee 1:B stated that the service provider firm also needs to learn European culture and the case company background better. Thirdly, as the purpose of the developed model is to assist the case company to improve the O&O service, the model should pilot in the real environment to collect more pragmatic feedback. Fourthly, there are only a few respondents who gave feedback on the developed model by the end of the study.



### 6.3 Further Research

The result of this study indicates that the proposed O&O service lifecycle model is a valid and useful tool for the case company to improve the service quality. Implementing the proposed model will be a remarkable stride and a positive change from the current mindset, though its outcome cannot be clearly predicted. In practice, the service stakeholders should start to implement the model gradually, monitor the output closely and steer the service tightly.

Hopefully, both the key findings and proposed lifecycle model create values and provide a clear idea of how to establish and manage O&O services. Because a typical O&O service involves two sides, service client and service provider, the challenges in the service provider should also be investigated. In this case, an improved service lifecycle model can be created once both sides are studied thoroughly.

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## **Appendix 1.**

### **Semi-structured Interview Baseline Questions**

(Introduce the interview purpose and share the Rich Picture latest version at the beginning of the interviews)

- Could you check the Rich Picture information and comment if there is anything incorrect or missing from your perspective?
- Could you explain how you are involved in the O&O process and what role you have?
- Based on your experience and involvement, what areas work well in the O&O service and what areas need to be improved in the case company?
- Do you know the main reason(s) that the case company uses O&O and do you think the case company reaches the initial goal(s)?
- Do you think the current O&O service works well or not? Do we need to improve? If yes, where?
- The output of this study will give suggestions and create a model to improve current O&O situation in the case company, could you participate in the workshop to evaluate the usability and feasibility of the new model in the later phase?
- At last, who else or what other role in the O&O service do you recommend to be the next interview candidate?

Note.

These questions are used to open up the interview sessions. According to the oral feedback and the practical situation in the meeting, other questions out of this list are likely used to gain deeper understanding on focused fields. Appendix 2 contains details of data collected from interviews following SSM methods.

**Appendix 2.****Email Template for Collecting Written Feedback**

Hello,

If possible, I would expect you to take a look at section 4 and 5 and give me feedbacks either by mail or we can have face2face.

Because the paper I delivered to you is not the final version, especially the logic is not straightforward yet, I would like to use below words to give you a brief outlines.

The paper logic:

- a. Section 2 - examine existing theoretic outsourcing& offshoring lifecycle models in literature (and relevant important factors)
- b. Section 4 - by comparing with models in the previous step, the case company current state is analyzed (interviews data collection and analysis).
- c. Section 5 - coming up with an appropriate/adapted lifecycle model that can tackle challenges proposed in the previous step and is supposed to be useful for the case company (KONE).
- d. Check reliability and validity of the adapted model

Now, I am in "step d" above. I would like to collect feedbacks from you for "reliability and validity" of the model. For example, typical questions from my side are:

1. Would you think whether the adapted model can help manage the offshoring service with Wipro in the case company or not?
2. Do you see pitfalls in the model? What are they?
3. Any important elements or best practice are missing?

I am truly open to any feedbacks, comments or criticisms.

Warm greetings,

Xi Xiao



### **Appendix 3.**

#### **Interview Data**

The data collected from interviews are categorized by the 5 groups defined in Section 3. The content of each group contains the main points from interviewees, the RD and CATWOE Mnemonic, and the purposeful activity model drawing that is used to find the possible solution to tackle the challenges.

#### *O&O Manager*

##### Main Points

The O&O objectives for the case company are: cost reduction for application support area, larger knowledge fields for application support and flexible support people allocation. In addition, entering Indian market for the company products is not the purpose since the case company is already in the market.

The case company shall retain using O&O service. This is the trend in the global market. Many big companies are doing the same.

The case company is learning on the way to manage O&O and make changes on the current process if needed. For instance, the long term application support was proven improperly with time & material based contract, instead of which the managed service contract that has fixed price is to be used in near future. Managed service contract can create buy-in feelings for the O&O support people.

The current O&O supplier is not a heavy-process-oriented company, which has both advantage and disadvantage. The advantage is that the supplier can adapt itself based on the customers' needs. The supplier is based on India with the culture – never say 'no' and delight the customer with all efforts. The disadvantage is that the supplier is less organized so that the customer (the case company) has to create good enough documents, establish escalation path and agree on the service goal mutually in advance.

Other O&O service providers in the market compete all the time in order to win the offer. The case company does not blindly bid to just one.

Dealing with the vendors, including O&O supplier, are all about relationship management.

#### RD and CATWOE Mnemonic

*Using O&O service, by receiving support resources from the O&O supplier, in order to achieve cost reduction, better support application knowledge and more flexible support resources.*

C – Application support people and the application end users

A – Stakeholders involved in the O&O service from both supplier and client sides

T – Need for O&O -> the need meets

W – The O&O service from the supplier is feasible and needed in the case company

O – Senior managers, involved in O&O, in application center unit

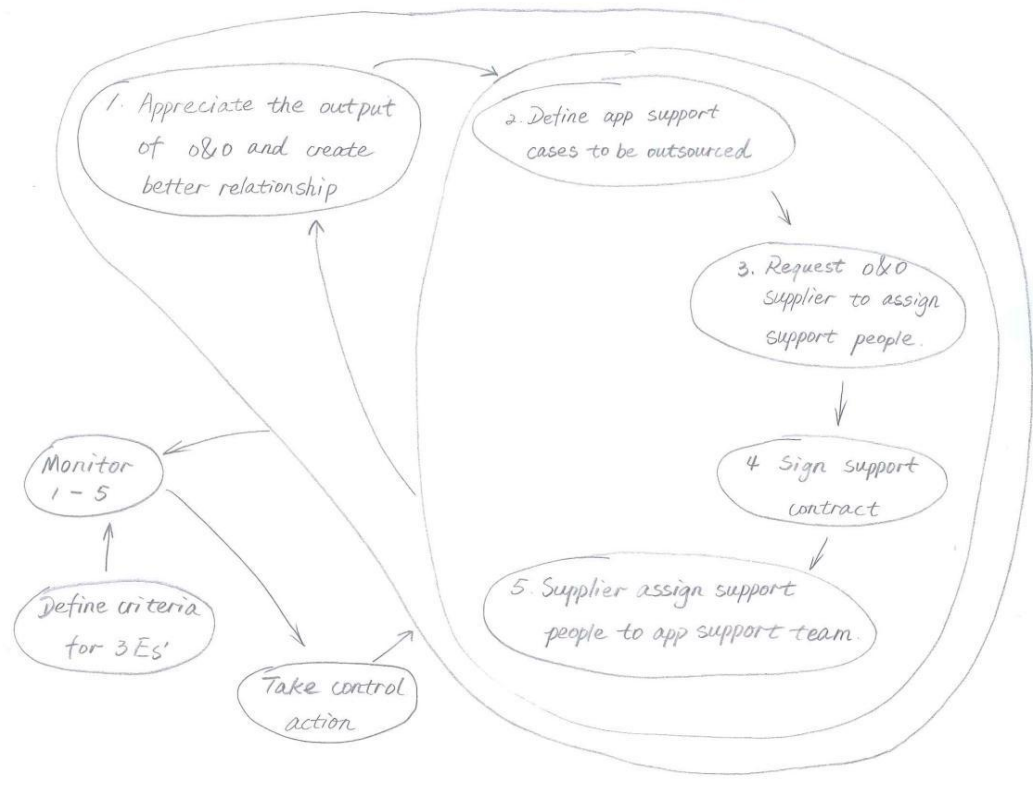
E – Company culture, boundaries and relationship.

Efficacy – application support cases are appropriately handled by O&O support people

Efficiency – minimum original and O&O support people are used

Effectiveness – original support people are released from app support tasks

#### Purposeful Activity Model



### Team Leader

#### Main points from team A leader:

Our team (team A) does BI application support. We have 3 internal people and 11 O&O support people to support 19 application at the moment. Our team size is medium that we can always have backups when one is away.

For each application support, we create a technical document in our team website and insert all problem & solution tickets. In addition, we deliver the problem&solution to the end user for each support case. This allows the users to understand what is the root cause of the issue and how it is solved by our team.

I do not directly manage each O&O support person in our team. Instead, an onsite coordinator from the service provider sits together with us every day in the office, he or she is responsible to manage and monitor the O&O people located in India. Of course, this coordinator is a senior support who understands most of (if not all) the app support areas.

We will have new support application – BI dataload soon and we plan to use onsite coordinator to manage this new case too.

All support cases are recorded in a ticket system. we have over 1000 tickets in average per year. Thus it is critical to make sure that most of the tickets meet the SLA. One internal person in the team is dedicated to monitor the tickets assigned to our team.

It might be easier to communicate with O&O support people for me as I am also an Indian. However, this is not the main reason that our team handles O&O so well.

#### Main points from team B leader:

Our team is web application support team. We support over 20 applications.

The skill set required in our team is different from other teams. There are applications built by very old technology, applications heavily customized and applications that involves complex enterprise features. We need the support people having both good knowledge and clear understanding on the supported applications, which can be learned by working in the team only.

We are a small team. Therefore, hard to occupy backups when one is away.

The support people assigned by the O&O service provider is a problem. Firstly, it is hard to get skilled people from provider in this area. Secondly, there is a high rate of turnover, i.e. the support people are leaving the team in several months. We need to teach the new comer again.

In my opinion, we should have a good method to decide which application moves to O&O and which remains internally. The service provider also shall say 'no' frankly if they do not have the knowledge capacity.

The turnover rate for the O&O support people in the team is quite high, and the KT made to the successor is not good in most of cases.

#### RD and CATWOE Mnemonic

*Using O&O service, by receiving support resources from the O&O supplier, in order to achieve cost reduction, better support application knowledge, more flexible support resources and release internal resources.*

C – Application support people and the application end users

A – Both internal and O&O application support people

T – Need for additional support resources -> the need meets by receiving O&O support resources

W – The O&O support resources are received with little possibility to negotiate

O – O&O program manager

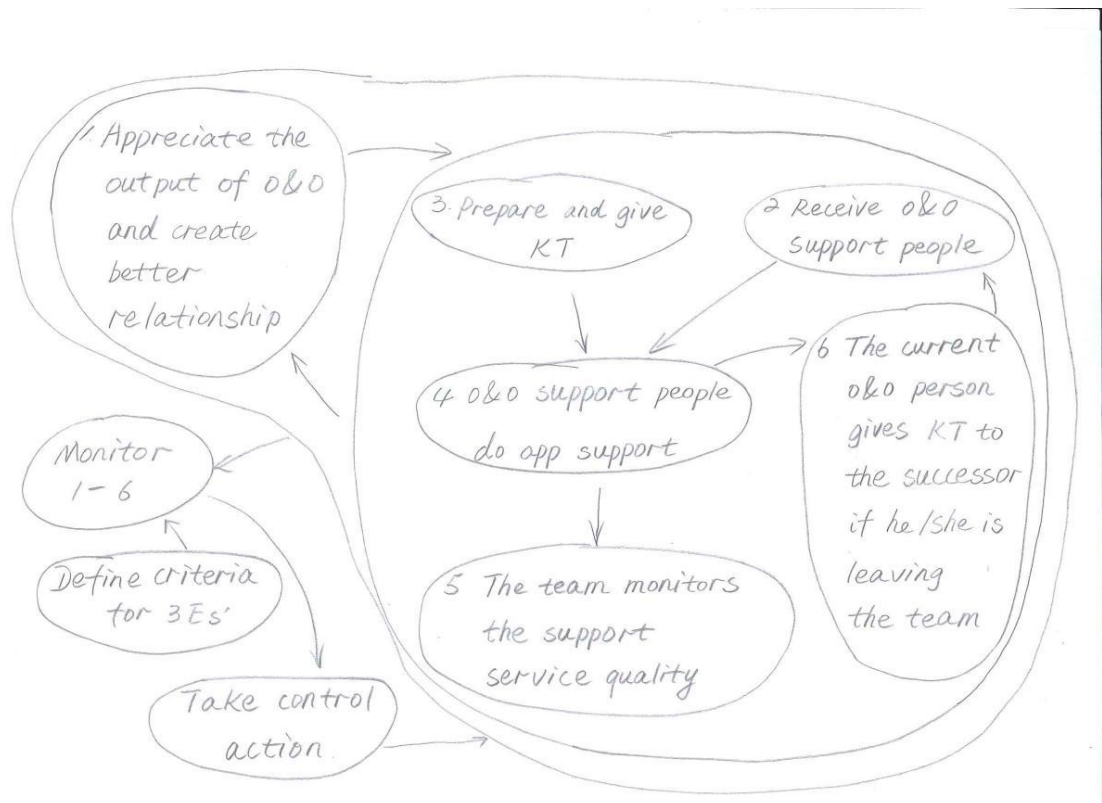
E – Support contract type

Efficacy – application support cases are appropriately handled by O&O support people

Efficiency – minimum original and O&O support people are used

Effectiveness – original support people are released from app support tasks

#### Purposeful Activity Model



### Team Member

### Main points

We used time & material based contract for app support. It has quality issue: we accept whenever and whatever is delivered to us. There is no clear rule if things go wrong.

However, managed service type of contract is not silver bullet. If I is the same O&O people doing the support, it does not change anything.

The frequent rotation for one application support made us hurt. The previous support people claimed that the KT is done successfully and no gaps existing for the support. But we see nothing but gaps from the successor. KT is not monitored at all by the case company.

'common knowledge base' document is good to keep knowledge points in the team.

The O&O supplier complains that the documents in the case company is not good enough. We were not good at documenting and need to improve in this area.

We have weekly follow-up to monitor the service quality from O&O support, but we still work in a passive model – because lack of time or interests. We shall not underestimate the effort and time that we need to use in O&O.

We do not communicate to O&O people the same amount as what we do internally. We shall not treat them as external.

The O&O support can start with routine ticket support that requires less skill and experience.

We measure the O&O service by meeting ticket SLA, rather than satisfying customers.

I would like to see onsite support and I am also happy to stay in O&O office in India for months to catch up the culture difference.

Many O&O support people only give the business side the statement of the problem, not the solution of the problem. We need to let them understand that 'give the solution' is their task. Sometimes, I handle the ticket directly because they do not provide solution but only statement of the problem.

They also have problems to convert the technical language to business language.

If the support is a routine task, such as create new user account, O&O support people are good. However, if we ask for a suggestion that requires some insight and experience, normally we do not receive happy answers.

The O&O support rotation is too high that damages the motivation to transfer knowledge to them.

As an internal app support in the case company, I need more time to work closely with O&O support people daily. The time-zone difference, the rotation rate and my current workload does not allow this happening.

I insist that we all need to treat O&O support people as human beings, who also have good or bad days, who also make mistakes the same as we do. We need to know them more than just narrowly about work. A better personate relationship should be established.

If we had a good working time with certain O&O support people, we need to have the power to keep these people in the team. We need to avoid unnecessary job rotation in O&O.

O&O people notify us they are leaving with 1-2 weeks in advance, it is not enough time to allow us to validate the capability of successor and the quality of KT activity.

the way of working in India and in Europe is different. We shall allow O&O people understand us more.

RD and CATWOE Mnemonic

*Using O&O service, by receiving support resources from the O&O supplier, in order to release internal resources.*

C –the application end users

A – Both internal and O&O application support people

T – Hand over the support area to O&O people -> completed

W – Extra people to support the app, while original support people are released

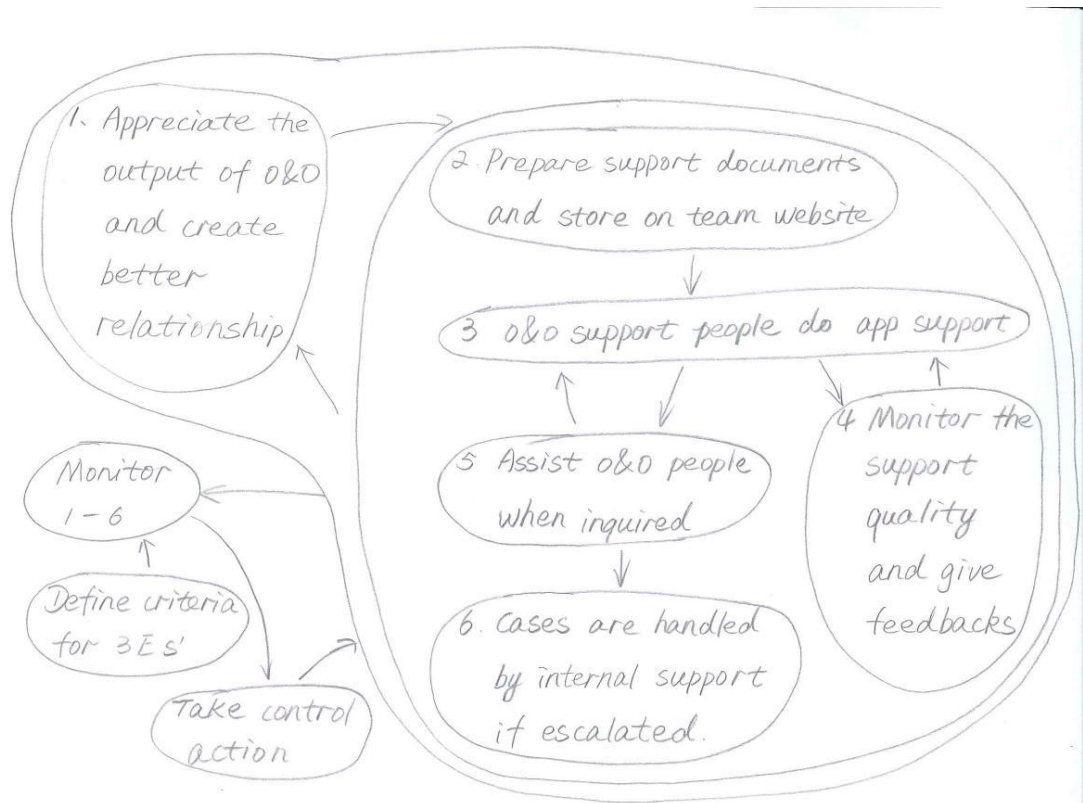
O – The app support team

E – Country culture, company culture and boundary



(3Es are exactly the same as for group 2)

### Purposeful Activity Model



### Application End User

#### Main points

As the application end user, any type of request is recorded in the ticket system and assigned to the relative support team. This is the official process.

The ticket system is not flexible. Even the most simple requests or questions need to go via Global Service Helpdesk (GSD) and wait up to 30 days to receive answers or solutions!

The routine tasks are handled well by O&O, but more complex tasks NO. Our business can survive for the time being, but a better support quality is certainly needed.

Because of the bad support quality from O&O, we use other expensive external consultants more.

We should encourage O&O support to call the requestors more. The email communication is slow and inefficient in most cases.

As a key user, we expect faster method to talk directly with the support people. The ticket system and SLA is too slow and tedious.

We expect O&O support people to change their way of working, i.e. not only just follow what we say, but also propose alternatives.

As the app (key) end users, our feedback does not gain enough attention from O&O managers.

End users expect a feasible solution from the support at the end. If support people need more information, make sure we, non-technical people, can understand what they ask/express.

The oral language sometimes is a problem.

#### RD and CATWOE Mnemonic

*Using O&O service, by receiving support resources from the O&O supplier, in order to achieve cost reduction and reasonable good support quality.*

C – The application end users

A –The application end users and O&O support people

T – Need for a way to reduce the cost and remain good support quality -> the need meets by receiving O&O support resources

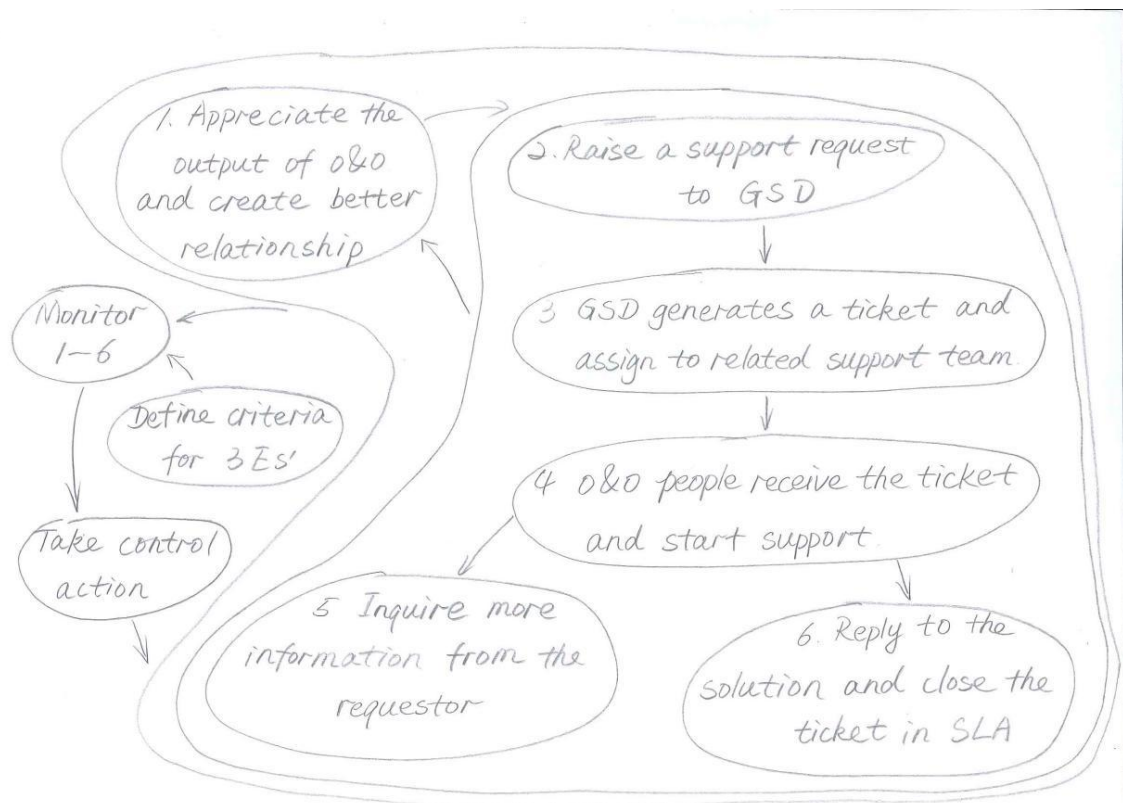
W – Alternative is proposed

O – O&O program manager

E – Competitive global business environment

(3Es are exactly the same as for group 2)

### Purposeful Activity Model



### Reference Team Leader

As a reference group outside of O&O scope, this section does not use SSM method to analyze the data.

### Main points

If the product support service is an industrial standardized - common shared knowledge, it could work; however, if the product is heavily customized by

another company, only which has the knowledge, off-shore or near-shore hardly works.

Our team uses 3 level of support: shared service center, key users and technical support.

Company culture impacts offshore a lot, for instance the frequent rotation for the current O&O service provider.

It is better to have a big team to keep internal knowledge in offshore; small team would loss the knowledge easily in position rotation.

Offshore is dealing with human beings, treat other side as human rather than "working machine", share them the common target, tell them what is important, why we are doing this etc. additionally, ask them "what can we help you do better work".

Both sides (service provider and client) need good managers to control offshore interface. This involves with organization chart, how efficiently and effectively the support team can work.

Offshore support people want to go with role generalist while O&O client (the case company) expects them to be a specialist in the area they support.

The advantage of near-shore over off-shore is the similarity of culture and the way of working, the disadvantage is the cost.