

The Other Shore of Offshoring

Current and Future Projects at a Global
Delivery Center

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Abstract

The Other Shore of Offshoring: Improving Current and Future Projects at a Global Delivery Center

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This thesis studies communication and cooperation between an offshore outsourcing center in China, its Swedish counterpart and their common Swedish customer. This is done from the view point of the offshore outsourcing center, with the aim to suggest improvements for current and future projects for the Swedish customer.

The study focuses on two parts: the ability of the offshore outsourcing center to overcome the general challenges in offshoring and the specific difficulties that its teams are facing when performing work for the Swedish customer. The research has been conducted mainly using primary data gathered during interviews, analysis of internal documents and participant observation.

The findings consists of several success factors that contribute to the offshore outsourcing center's ability to overcome the challenges of offshoring, as well as a list of difficulties that it is facing when starting up new projects and running existing ones. Each success factor comes with recommendations on how it can be maintained and each difficulty comes with recommendations on how it can be reduced or removed.

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Populärvetenskaplig beskrivning

Trenden att flytta IT-tjänster till lågkostnadsländer, så kallad offshoring, är en ständigt aktuell fråga för många företag. Sänkta kostnader är lockande, men det finns också många exempel på hur offshoring har gått snett med stora problem som följd. Det finns många undersökningar som beskriver riskerna med offshoring och hur de bör hanteras, men dessa undersökningar tar oftast sin utgångspunkt hos de företag eller länder där man väljer att flytta ut IT-tjänster. Bilden blir ofta vinklad så att förutsättningar i mottagarlandet framstår som problemen i form av annorlunda språk, mentalitet och arbetssätt. Men, en kulturskillnad är just en skillnad och självklart möter även människorna i mottagarlandet problem när de samarbetar med människor från andra länder och kulturer. I det här examensarbetet tar jag deras perspektiv och undersöker offshoring från "den andra stranden".

Undersökningen som jag har gjort har genomförts vid HP Global Delivery China Center i Shanghai, kallat GDCC. Där drivs flera projekt där delar av personalen är från GDCC och delar av personalen är från HP i Sverige. Tillsammans hjälper de sin svenska kund med driften av flera stora datorsystem. Målet med undersökningen har varit att hitta vilka svårigheter som projektgrupperna på GDCC har i sitt samarbete med HP i Sverige och den svenska kunden. Undersökningen beskriver också hur det kommer sig att detta samarbete än så länge inte drabbats av allvarligare problem.

Undersökningens resultat är beskrivningar av de svårigheter som finns i samarbetet och rekommendationer för hur dessa svårigheter kan minskas eller till och med undvikas helt. Det finns också beskrivningar på de faktorer som gjort att inga projekt än så länge har råkat ut för allvarliga problem. Till dessa faktorer har jag även beskrivit de hot som finns mot dem i framtiden och hur de hoten kan undvikas. Undersökningen avslutas med förslag på tre åtgärder som, var för sig, skulle kunna göra samarbetet mellan GDCC, HP i Sverige och den svenska kunden ännu bättre.

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I Introduction

In this chapter I will introduce the research topic and provide a background to the business relationship that I have studied. I will also define the aims of the study and how it is relevant to the involved parties.

The trend for Western companies to offshore¹ IT services is continuing with little slowdown in sight. (Tapper et al., 2007) As one of the major movements in the IT industry, it has received research attention from both a political (Baily & Farrell, 2004) and a business perspective (Gartner Inc., 2004). Its practical aspects have also been researched extensively, with regard to like how it is operated (Edgell, 2003; Dubie, 2007), how knowledge is managed across the long distances involved (Nicholson & Sahay, 2004), and how security concerns can be managed (Hunter, 2003).

Most of this research takes the perspective of the source of the offshored IT services, whether it is a company, a country or the entire Western world. Much less research is available that adopts the view of the offshore organization, the unit that is performing the activities that have been moved to an offshore location.

In this master thesis I have taken such a perspective, conducting my research at the Global Delivery China Center (GDCC) of Hewlett-Packard Development Company, L.P. (HP) in Shanghai. I have studied four teams at the department of Application Management Services that operate in cooperation with HP Sweden to serve the same Swedish customer. By studying the cooperation that takes place in offshoring, from the perspective of “the other shore”, it is my hope that I will be able to provide more nuances to the research on offshore IT services.

1.1 Overview of the four teams at GDCC

HP employs a blended model of offshore outsourcing, called global delivery. This model implies that the services are outsourced to HP as a company, but may be deployed onsite, onshore offsite, and offshore. The advantage of this model is that HP can manage resources and engagements across multiple locations globally, and can adapt the use of these resources to best meet a customer’s requirements.²

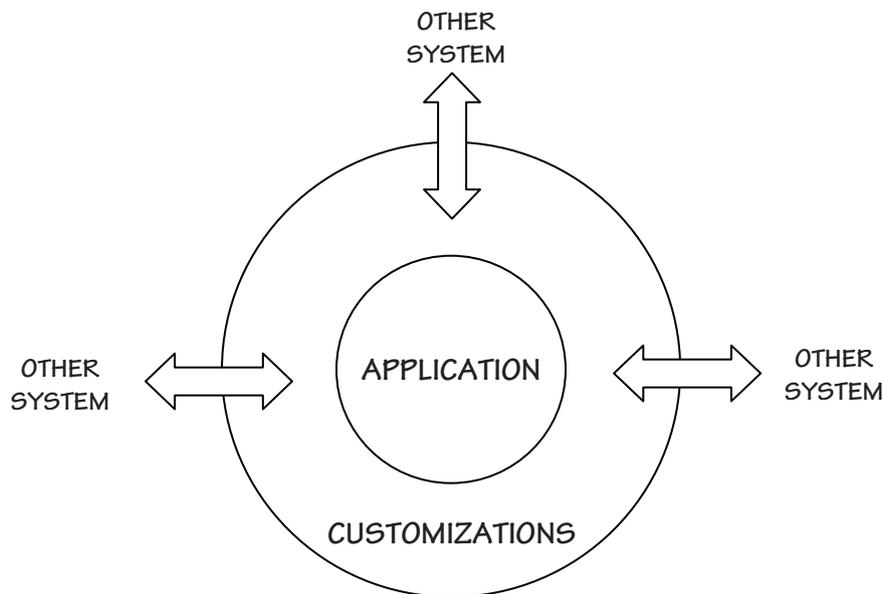
GDCC is HP’s second largest global delivery center and provides application services to HP customers all over the world. Located in the five Chinese cities Shanghai, Dalian, Beijing, Chongqing, and Guangzhou, the delivery center has seen a rapid expansion during the last few years and currently has about 2000 employees. Several of the employees work in projects that provide application services to the Swedish customer (from here simply called “the Customer”). All these projects are managed using the global delivery model with HP Sweden working close to the Customer, managing the relationship and performing tasks onsite, while GDCC teams handle most of the technical support tasks. For the

¹ Offshoring is the relocation of business process from one country to another.

² A description of the Global Delivery outsourcing model is available at www.sterlinghoffman.com/newsletter/articles/article107.html.

Customer's end users, the first line of support is usually one of HP's several global help desks. Difficult issues are then passed on to GDCC which manages what is called level 2 support and level 3 support. GDCC also manages things like system availability and works with different development teams to implement changes to the systems.

Four of the teams that perform work for the Customer at GDCC are located at the department of Application Management Services. The majority of the team members in these teams work at the Shanghai site of GDCC, while the rest work at the site in Chongqing. They support systems at the Customer that I call System A, System B, System C and System D. These computer systems all have the same basic structure with an application making up the core and with adaptors and other customizations built around it to interface with other systems (see Figure 1). While the four projects support computer systems that are located in the Customer's facilities in Sweden, these systems serve the Customer's operations globally. I have selected these four projects to study in this thesis.



*Figure 1 - General structure of a system supported at GDCC.
Source: Author's own creation.*

Support for the first system was launched in the middle of 2005 as a team took responsibility for the management of the Customer's primary document management system, System A. As this was the first application support project for the Customer at GDCC, the System A team was not only charged with learning what was required for the support tasks, but also had to develop a framework for cooperation with both HP Sweden and the Customer. When the System A team began its operation in the fall of 2005, it had serious problems handling all incidents and service calls with the speed that was required by the contract. At the time, the team was very small and was inexperienced in both the System A application and the infrastructure at the Customer. Also, the application was perceived to have been handed over in a quite unstable state. Great effort was put to increase both the quantity and the quality of support, and in the first quarter of

2006 the System A team started to meet the requirements on a continuous basis. Gradually the service that the System A team could offer increased, by providing round the clock support, by formalizing procedures to make the services ITIL³ compliant and by improving relationship-specific activities.

In the beginning of 2007, support for System B was launched. The application is used to manage sign-off of key controls at the Customer. The project team was formed within the original System A team, where the team members would specialize on the System B, but would also take part in supporting the much larger System A system. Because the team was essentially integrated into the old System A team, they could use the knowledge of the System A team from the beginning. By utilizing the System A framework of operational documents, as well as the experience that had been gathered running System A, the System B team was able to provide, within three months, the same service that it had taken the System A team a year and a half to achieve.

During the second half of 2007 a third system, System C, was added. The System C team was assigned supporting of this identity manager, an important part of the Customer's new infrastructure for access management. The team was started as HP took over operation of the system from IBM, which had implemented the system and had done the management of it so far. This time the project team was formed as an independent team, but several team members were transferred from the System A team and most of the operational framework had documents from System A as templates. Like the System B team, the System C team was able to provide full support after a startup period of three months.

Support for the fourth system, another part of the access management infrastructure that I call System D, was started only a few months after System C. System D was originally a project that HP Sweden had placed at HP Global Delivery India Center. However, because of difficulties, with complaints from the Customer about team performance at the site in India, the project was moved to a new team located in GDCC. The System D team was formed in a similar way to the System C team, with several team members drafted from the existing projects for the Customer and an operational framework was also adapted from the previous teams. The System D team was, like the teams of System B and System C, able to provide full support after three months.

1.2 Aim of this study

The aim of this thesis is to suggest improvements for current and future projects for the Customer at GDCC. The focal areas are communication and cooperation, which I will study both during startup and during ongoing support. There are two parts to the study. The first part looks at the general challenges that an off-shore site is facing, and how these are countered at GDCC. I pay special interest to the fact that the three latest teams did not have as many problems as the first

³ Information Technology Infrastructure Library (ITIL) is a framework for managing IT infrastructure, development and operations. The parts of it that are relevant to this thesis are explained later.

one had. I will try to explain why this is and how the favorable conditions can be maintained and enhanced. The second part aims to identify specific difficulties that the teams at GDCC have in communication and cooperation. I will also provide recommendations on how these difficulties can be made smaller, or even be avoided.

The main audience of the thesis is composed of both GDCC and HP Sweden. GDCC should benefit from learning about difficulties that have been present in the projects so far and how these difficulties can be prevented. It may also benefit GDCC to learn about its key strengths and how to develop them. HP Sweden will, of course, benefit from any improvement at GDCC as this can affect both the quality and the cost of the services provided to the Customer in a positive way. As many of the issues are about communication and cooperation, HP Sweden may also benefit from suggestions about how that can be improved. Finally, learning about why the projects at GDCC have been successful should be valuable information for decisions on where to place future projects.

1.3 A note on sources

Most of the HP documents used in this study have restricted access. Their access is limited to at most HP employees, and is sometimes much narrower. All information in this thesis has been screened by HP Legal before publication, and independent access to any of the internal resources would simply not be possible. Because of this, no references are given to internal documents. For similar reasons, no references are given to individual interviews with HP employees.

I would also like to mention that many ideas for improvements have in fact been suggested to me by others during the interviews. I do not take credit for these ideas, but for the sake of this thesis all conclusions and recommendations are to be regarded as my own.

2 Research Design

In this chapter I will describe the considerations I have made in designing the research method. This includes a description of the theory I have used, of results from other studies that form part of this study's foundation, as well as their operationalization. I conclude with a description of the research tools I have used and a discussion of their validity.

Both parts of this study, identifying difficulties and identifying success factors, require that I first identify the areas that should be studied in detail, and then perform this detailed study. I rely mostly on primary data for this, gathered using qualitative methods. I use three tools, Participant Observation, Document Analysis and Conducting Interviews, to both identify the interesting areas and then study them. The three tools have been used simultaneously, which means that an area that I find with one tool can then be refined using the two other tools, and later be studied using all three tools. The three tools are defined in detail in section 2.3.

The reason taking a qualitative approach to gather primary data is simple: what I want to do is to identify difficulties and success factors which are not known to me from the start. A quantitative study would only have been able to confirm or reject a hypothesis I already have, while a qualitative study has the potential of finding things that I have not anticipated. With that said, there are parts of the data that is gathered using a semi-quantitative approach. In order to get data that can be used to make proper comparisons between the four teams, a large part of the questions is put to one or two representatives from each team. This enables me to make a better assessment of similarities and differences between the teams that I study.

Secondary data is used in those cases where I want to compare parts of what I have studied with the general situation in the offshore IT business. Most of the data are from independent research firms, but some have also been gathered from journals, articles and other sources. Wherever possible, I try to verify the validity of the data from one source using at least one other source.

2.1 Descriptions of Challenges Facing the Offshore Site

Transferring IT services to other countries is definitely not without challenges. There are many expectations that have to be met, and several dangers that each can make such endeavors fail. For the offshore site, there are numerous expectations that they have to live up to.

First, and usually most important, the offshore site is expected to offer a significant cost reduction. This reduction is expected to be achieved through lower cost of labor. (Farrell, 2006, p. 87) However, there are several costs associated with offshoring that might very well offset much of the cost advantages that the lower salaries give. A widely cited study by Gartner concludes that hidden expenses for communication, travel and infrastructure might remove much of the wage differ-

ential. In addition, high start-up costs will make the savings emerge slowly. (ComputerWorld, 2005)

Another crucial success factor is having employees with a high enough skill level. Even though the universities in many potential offshore locations output a huge amount of engineers every year, only a fraction of these are suitable for work in international companies. This creates a competition between companies for the best employees. (Farrell, 2006, p. 86-87). The competition has not only led to rising salaries, but also to high turnover as lucrative offers from competing companies make employees move quickly from company to company in order to reach higher salaries. (McCarthy 2007, p. 2; Dubie, 2007)

The Gartner study also concludes that cultural differences in the form of communication styles and attitudes toward authority vary from region to region and could cause problems. (ComputerWorld, 2005) For countries like China where English has only recently been given priority in schools, a lack of proficiency in English, especially conversation skills, may also be a big problem in communication. (Farrell & Grant, 2005, pp. 6, 12-13)

2.1.1 Identifying What Success Factors Help Overcoming the Challenges of Offshoring

A successful offshore site will have characteristics that prevent the challenges I have described from having any major impact on the performance of the teams at that site. I call these characteristics the success factors of an offshore site. Each challenge is associated with some negative effects, and if these effects do not exist I expect some success factors to be present that counters the challenge. I can use much of the material gathered during the second part of the study to identify the success factors, but I will also ask specific questions about costs, recruitment and attitude towards working at GDCC. Whenever possible I will ask employees of both GDCC and HP Sweden to get as broad a view as possible. Finally, I also look at some of the risks that threaten to work against the success factors and suggest ways to counter those risks.

2.2 Identifying Difficulties Facing Offshore Teams

While the challenges are general and applicable to any offshore site, the second part of the study concerns difficulties that are specific to the cooperation between GDCC, HP Sweden and the Customer. Identifying difficulties is a tricky business, as they never exist by themselves. Instead, they only exist as obstacles that prevent some desired action from being performed smoothly. This means that an attempt to identify a difficulty cannot really be made before the desired actions are known. An organization like GDCC obviously has a multitude of desired actions on several levels, and I have narrowed the research to cover only communication and cooperation between the four teams at HP Sweden, the Customer and related support teams. Further, a difficulty is only considered if it is regarded as solvable. For example, the geographical distance between China and Sweden is a difficulty for efficient communication. But as it is neither solvable (making the distance shorter) nor dissolvable (moving either office closer to the

other), it is not considered in this study. It should be noted, however, that the related problem of lack of face-to-face communication is solvable, and therefore considered.

The identifications of the areas in communication and cooperation that would be studied were done using a combination of several tools: participant observation, document analysis and interviews. These tools are described in detail in section 2.3. The general areas have mostly been identified using my own experience during participant observation and by reading documented project history. These areas have then been studied more closely using interviews and closer document analysis with an approach open to finding entirely new areas that also needed closer study. Whenever such areas were found, they were then examined using the same tools.

I do not presume to have identified all areas that are important to communication and cooperation, and neither do I presume to have found all difficulties in the areas I have studied. This is important to remember when considering what results a similar study could reveal. Even if such a study used the same research design, it might end up selecting other areas for further study or it might find a different set of difficulties. I do not regard this as a problem of validity, nor a problem of reliability, but rather a necessary attribute of a complex research topic that no single study can cover fully.

The following sections are descriptions of the areas of communication and cooperation that I have selected for further study, with short descriptions of why they were selected. The areas have been divided into four categories with regard to when and how they are relevant. The areas, and in what phases they are relevant to a team at GDCC, is illustrated in Figure 2. The full operationalization of each area can be found in Appendix A.

	Startup Phase	Ongoing Support
Knowledge Transfer		
Training		
Operations		
Ongoing Communication		

Figure 2 - The areas where I will search for difficulties.

Source: Author's own creation.

2.2.1 Conditions for Effective Knowledge Transfer

Successful knowledge transfer has been a prerequisite for each of the projects from the beginning. Without getting enough knowledge as they started, the teams would not have known how their supported system was designed and they would not have known how it should be operated. Without a continuous knowledge transfer they would not have been able to follow what new functionality and new requirements were added. This makes knowledge transfer a vital activity

for the projects and an important area to study in this thesis. The knowledge transfer and any difficulties therein are, however, very hard to observe directly. This is because knowledge transfer is not just the ability to transmit a message from one person to another, but also about the quality and quantity of communication between entire groups. As no individual has an overview of the entire communication that is taking place at any given time, I find it unlikely that I would be able to cover this important area by reading about it or simply asking people if their knowledge transfer was successful. Instead, I have used a theoretical approach.

Anil K. Gupta and Vijay Govindarajan have studied knowledge transfer from both a theoretical perspective (Gupta & Govindarajan, 1991) and through quantitative research (Gupta & Govindarajan, 2000). Their study of knowledge transfer mainly concerns the knowledge flow from one node to another within a multinational organization, which is quite suitable for this thesis. I have to extend the grasp of the theory a little, as the network of units supporting the Customer's IT infrastructure belongs not only to HP but also to the Customer itself and other companies. However, they are all bound by contracts with the Customer to cooperate in the support work. A manager at HP has even stated that it is often easier to cooperate with units from other companies than those from HP because of this fact. As all units are able to cooperate in the way Gupta & Govindarajan describe for a multinational company, I consider the theory to be applicable to the studied situation.

Gupta & Govindarajan regard the transmission of knowledge as the outflow from one unit and the inflow to the other. They have empirically shown that the knowledge outflow is positively associated with the value of the source unit's knowledge stock and the richness of transmission channels. Theoretically they have also concluded that the knowledge outflow is positively associated with the motivational disposition of the source unit, even though this has not been proven empirically. The knowledge inflow is positively associated with the richness of transmission channels, the motivational disposition to acquire knowledge, and the capacity to absorb incoming knowledge. An illustration of the components that are affecting knowledge transfer is illustrated in Figure 3.

Gupta & Govindarajan (2000) define the value of the source unit's knowledge stock as the existence of non-duplicative knowledge that is of value to other units. I operationalize this as what role the unit has with regard to the system that the GDCC project team is supporting. The closer the role has worked with the specific system, the more valuable the knowledge stock. For technical knowledge, this means that the vendor of the core application in the system will have a more highly valued knowledge stock than a network support team, but a less highly valued knowledge stock than the system architects that designed the specific system, as the latter know how the application has been integrated into the Customer's environment. For knowledge of operational requirements, the people involved in the contractual negotiations will have the most highly valued knowledge stock.

The motivational disposition of the source unit is dependent on their need to use this knowledge to retain relative power within the organization, as well as on whether they are rewarded based on the performance of the network of support units rather than on their own performance (Gupta & Govindarajan, 2000). I choose to look at this mostly through what their contractual requirements are. The motivational disposition of the target unit is mostly associated with whether the “Not-Invented-Here” syndrome exists or not. (Gupta & Govindarajan, 2000, pp. 476-477) As the existence of this syndrome requires that the target unit has some knowledge of their own and that they regard their own knowledge as equal to, or better, than the possible knowledge inflow from the source unit, I operationalize the motivational disposition of the target unit as the current skill level.

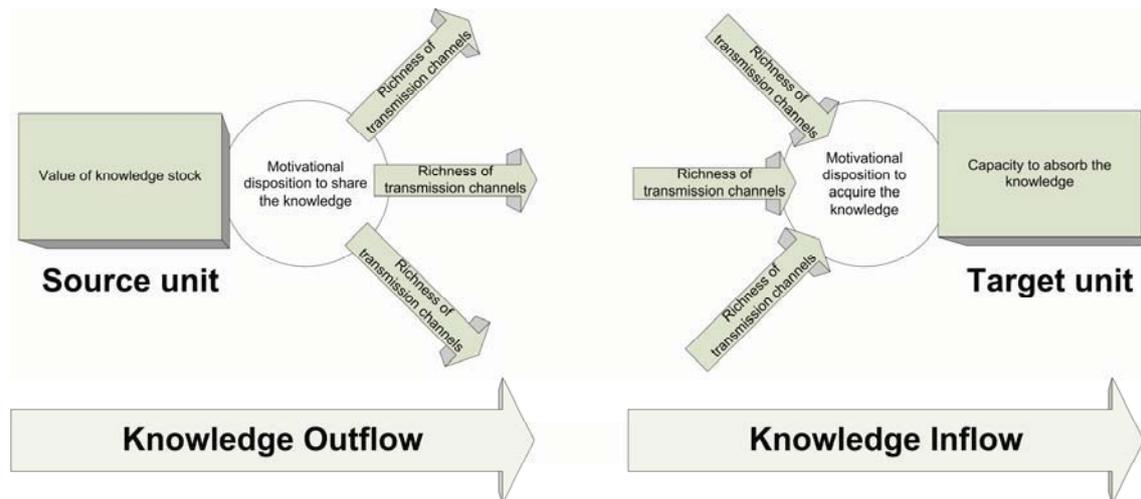


Figure 3 - The structure of knowledge transfer.
Source: Author's own impression of Gupta & Govindarajan.

The absorptive capacity is defined by Gupta & Govindarajan (2000) as the prior knowledge in the target unit and the likeness of the communicating units. Both of these are hard to study directly, but by operationalizing them as the quality and quantity of specific training given, and as the amount of previous experience of each other that the communicating units have, I believe that I capture their implications in this case.

The richness of transmission channels is defined by Gupta & Govindarajan (1991) as the frequency, informality, openness and density of the communication. I will look at these elements for three different forms of communication: e-mail, phone, and face-to-face. The *frequency* means regular communication using phone, e-mail and face-to-face conversation. *Density* means the number of people involved in the communication. *Informality* is operationalized as the number of opportunities given to engage in discussions that are work related, but that do not occur during formal work sessions. *Openness* is operationalized as the ability to freely voice ideas and concerns during communication.

2.2.2 Initial and Ongoing Training

While the previous category was about the conditions for gaining knowledge during the startup phase, this second category consists of four areas concerned with

the more practical aspects of increasing the team member's skills. The first area is *Training During Startup*, which is about the way in which the training was given and whether it was performed at a suitable time with regard to the other events that occur during a project's startup period. The second area is about *Ongoing Training*, which is the training that is done when the startup period is complete. Both of these areas have obvious importance since the team needs a thorough understanding of the products they are supporting, and a lack of training in any relevant area is a difficulty.

I have also searched for difficulties in the creation and usage of *Guidelines*, as well as the availability of *Product Documentation* and *Source Code*. However, as I found no significant difficulties in these areas I have excluded them in the presentation of analysis and results.

2.2.3 Operations

This category contains five areas that are important for the teams when they perform their support tasks after the startup phase is complete. The first is *Service Level Management*⁴. This defines how the Service Level Agreement between HP Sweden and the Customer is handled. The Service Level Agreement defines the quantity and quality of each service provided by stipulating the maximum time that is allowed to pass before a reported problem must be solved. Not meeting the Service Level Agreement is, from a business perspective, a difficulty in itself. However, it will also serve as an indicator of difficulties that are the real causes of not meeting the Service Level Agreement.

The second area is the *Processes*⁵. Formally, a process is a high level description of how a task is to be accomplished. In practice, however, the processes serve as a guarantee that all services will be performed in a reliable and transparent fashion. This is emphasized by the fact that the processes are often reviewed and approved by the Customer. Similarly to Service Level Management, if a process is not followed properly, this is itself a problem but might also indicate other difficulties.

The third area is about *Contacts with Other Teams*. In each project, there are several other teams involved, both major and minor. It is very important that they can be found and that good communication can be established with them. Difficulties in the cooperation with other teams can be very troublesome for the team as their work often requires the involvement of these teams to perform tasks that the project team at GDCC does not have the right skills or the right security clearances to do themselves.

The fourth area is *Accounts*. There are a multitude of accounts required to access all parts of the systems in Sweden. If these accounts are not available on time during the project startup, this will decrease the team's ability to familiarize itself

⁴ A term defined in the Information Technology Infrastructure Library (ITIL). For more information, see Wikipedia: "Information Technology Infrastructure Library".

⁵ Ibid.

with the target systems before assuming full support. If accounts are not provided in enough quantity it might force a breach in security policy as team members share accounts with each other.

The fifth area is *Access and Network*. Because all applications that the four projects are supporting are located at the Customer's sites in Sweden, it is important that there is a reliable network which can be used to access them. Even if the network is reliable, its speed might be a difficulty if it is not fast enough. There might also be other difficulties when accessing different parts of the system at the Customer's site.

2.2.4 Ongoing communication

The final category is about communication issues. The focus is on the communication between GDCC and HP Sweden, but most of it applies to communication between GDCC and all its Swedish counterparts. The first area in this category is *Phone Conversations*. As the long distance between China and Sweden only allows very infrequent face-to-face meetings, phone meetings are widely used to discuss important issues, deliver trainings, and report progress. However, there are several possible difficulties with this form of conversation, like language skills and different customs in how to act in discussions, both of which are harder to overcome when communicating over a distance.

The second area concerns *E-mail Conversations*. E-mails are used very frequently, as they are the preferred method to share complicated messages like technical descriptions, and because they can easily be distributed to a large group. They also have the advantage of not demanding both sides to be occupied with an issue at the same time like phone conversations do. This is a definite advantage in a business where the cooperating teams are located in different time zones. However, there are difficulties with e-mail conversations as well, like English writing skills, the lack of instant feedback and the risk of e-mail overload.

The third area is about *Time Difference* and how it affects communication. As the time difference is six or seven hours, depending on whether Sweden has daylight saving time or not, there are only a few hours of common working time.

2.3 Tools Employed to Gather Data

As I have previously described, the three tools I employed to gather data have been used in a coordinated way to get as many approaches to my questions as possible. When I discovered a difficulty or success factor using one tool, I could use one or both of the other tools to verify my finding. The use of three different tools also allowed me to get a broader coverage of each area, as each tool has its strengths and weaknesses. Both of these advantages have increased the reliability of the study.

Another advantage of using three different tools has been to help me draw conclusions about the importance of the difficulties I found. For example, a difficulty that was mentioned often during interviews, that appeared frequently in formal

documents and that I have experienced myself, is more likely to have great impact on many than a difficulty that only one person tells about.

2.3.1 Participant Observation

The first tool is Participant Observation⁶. During my research for this thesis I have participated in one of the projects, the System C project, as a team member. During the daily work I have been able to make direct observations by attending meetings, participating in informal discussions, reading the group's e-mail correspondence and performing some of the support tasks that the group did. The strength of Participant Observation is that it has allowed me to make my own observations and not just rely on others'. Whether written or verbal, other people's observations constitute a filter on what is judged as relevant, and what they consider relevant might not be what I consider relevant myself. Participant Observation removes this filter. It also gives me an understanding of the team members' views that would otherwise have been hard, or impossible, to achieve. The use of Participant Observation has also helped me when gathering data using the other tools, as I already had an understanding of the context in which documents were written and in which answers to my questions were given.

A general criticism of Participant Observation is that the researcher himself is taking part in the creation of the data. This can both cause a lack of objectivity of the observer and a risk of affecting the purity of the collected data. However, as I am not aiming to give a full ethnological account of the team work but rather look to identify specific aspects of it, I do not regard this as having any large effect on the validity of the collected data. Moreover, as I can compare the data collected with this tool with that from the others, I can further ensure that my findings are valid.

2.3.2 Document Analysis

The second tool is analysis of documents produced during the life-span of the projects. These documents include contracts, progress and performance reports, training documents, minutes of meetings, process descriptions and guidelines. I have also studied other project-related documents, like descriptions of the products and their use by the Customer, as well as frameworks for these kinds of projects, most notably ITIL. The information gathered by Document Analysis has helped me in several ways. One is to get an understanding of the projects' history, scope and requirements. Another is to enable me to study similarities and differences between the documents of the four projects, thereby telling me in what ways their respective operation has been influenced by the other projects. Finally, Document Analysis has helped me to identifying areas for further study using other methods.

The main drawback of Document Analysis is that it is only able to reveal those things that someone has made a written record of. For example, communication difficulties are unlikely to appear as they might be considered too embarrassing to document. If they are indeed documented, it is likely to be with much of the in-

⁶ For more information, see Wikipedia: "Participant observation".

formation filtered out. A situation where Document Analysis is even less effective is when nobody has even recognized the existence of a difficulty. Even though Document Analysis might indicate that such difficulty has indeed existed, other methods will have to be used to understand the suspected difficulty better.

2.3.3 Conducting Interviews

The third tool is Conducting Interviews with HP employees. I have conducted interviews with a total of 15 people, twelve onsite at GDCC and three with employees at HP Sweden using phone and e-mail. Almost all questions were asked to at least two people in order for them to verify each other. The questions that were specifically used to cover the areas where I had decided to search for difficulties were asked to at least one person from each team. Questions about communication were asked to two people per team to get a view that was as balanced as possible.

The onsite interviews were done with the team leads and the technical leads of each of the four projects as well as their two managers. The decision to use only leads and managers was done because they have the longest experience and the best overview of all areas I wanted to cover. The interviews were conducted as semi-structured interviews in order to allow the interviewee to elaborate on the answer, while still having a structure that ensured that all areas would be covered. Another reason why semi-structured interviews were suitable was to avoid language difficulties. Even though all people interviewed at GDCC understand and speak English, some of them have a hard time comprehending and expressing more complicated sentences. Semi-structured interviews gave me more options than a structured interview to make sure that I understood the answer. I also avoided the risk that the longer answers of an unstructured interview would be cut short because of the effort needed to produce them. Another effort I made to avoid that language difficulties would affect the answers was to make sure that all questions were clear and phrased in simple English.

The phone interview was done with a manager at HP Sweden, responsible for the delivery of two of the projects at GDCC. This interview was done quite early in my research and I designed it as an unstructured interview with few questions and open answers. The two e-mail interviews were conducted with another manager and a development lead at HP Sweden. All three at HP Sweden were selected for their direct involvement with the teams that I studied. The questions in these interviews were quite open, but as e-mail interviews do not allow for interaction during the interviews, the answers were naturally much shorter than the ones from the phone interview. All three interviews were done in Swedish, which removed the need for extra attention to language use and wording.

3 Success Factors That Help Overcoming the Challenges of Offshoring

This chapter describes the success factors that have enabled GDCC to successfully implement the four teams that I have studied. It also describes risks that threaten the success factors and how they can be avoided.

3.1 Costs

Cost reductions in offshore projects are usually reached by lowering the cost of salaries. However, as described in section 2.1, the cost advantage of an offshore site may be slow to realize, or may not be realized at all, if there are startup problems. With this in mind, it is easy to conclude that placing new project startups at sites with a track record of successful projects is a sound policy. This reduces the risk of failed projects that would end up costing a lot while giving little or no revenue. According to HP Sweden, the projects studied have been implemented within the projected time and cost. This reduces the risk of runaway costs for any new project at GDCC and is an advantage compared to any unproven site. Reasons for why the projects have been implemented so smoothly and how this edge can be maintained in the future are explained throughout the rest of this chapter.

HP Sweden has declared that the cooperation with GDCC has led to large cost reductions. The general level of salaries has obviously been an important factor in selecting a center for global delivery like GDCC. As described in 2.1, the most popular locations for offshore outsourcing, especially India, have seen a rapid increase in salary levels as more and more international companies compete for the most skilled employees. In the Shanghai area salaries have also started to increase. The situation is slightly different than the one in India, as much of the increase is caused by the rising ability of domestic companies to compete with international companies for the best employees. This has turned salaries at GDCC from being some of the most competitive in Shanghai's IT industry to being quite average.

A way to combat rising labor costs has been to deploy a new site in Chongqing, far into the Chinese mainland where salaries are generally much lower than in Shanghai. As the first international software company in Chongqing, HP has been able to benefit from both government subsidies and from the large pool of graduates in computer science that are produced by the universities in that area.

While this latest move to combat rising costs seems to have been successful so far, it is important that the hunt for lower labor costs does not go too far. If GDCC were to lose some of its best employees to its competitors because of noncompetitive salaries or by putting too much emphasis on new low-cost locations in favor of established ones, this might very well offset the cost advantage of being able to implement and run projects with high reliability and few cost overruns.

Ways to reduce the labor cost has not been in the scope of this study, but a simple suggestion is to follow the recommendations I have given for reducing difficulties in chapter 4. This should prevent the use of unnecessary manpower and hence keep costs low.

3.2 Skills

One advantage of GDCC is its ability to attract the skills it needs. This is evident from its rapid expansion where GDCC in 2006, after only four years of operation, already had 2000 employees. One reason for the easy recruitment is the large pool of suitable candidates for employment. The labor pool has expanded further with the establishment of the Chongqing site, as it has enabled easy recruitment of graduates from several universities in that region as well.

Another tool to recruit new employees is the use of internships. Many universities require their students to get work experience through internships before they graduate. The internship is typically done at the end of the student's education. GDCC cooperates with the universities to receive interns, and usually have at least one or two interns on every team. When the internships are over, GDCC converts all interns that have shown high performance into regular employees.

HP in China, including GDCC, has an edge towards other employers when attracting both interns and regular employees because of its good reputation. HP was very early as an international software company when it established its first operation in China 20 years ago. Since then it has put great emphasis on being a fair and responsible employer, with good benefits and a company culture that encourages openness and individual growth. This is confirmed by the fact that it is still considered one of the top employers by today's computer science students. (Pettersson, Interview March 30, 2008)

There are risks that threaten to lessen the recruitment advantage that GDCC has. In 2007, the annual turnover rate in the IT industry in China was 23 %, up from 15 % in 2004 (Yan, R. 2007). For GDCC this figure is still lower, something that the people I interviewed attribute to the good company culture. However, several of the employees at GDCC voiced concerns about that salaries are slipping compared to the salaries at other companies, which might make employees harder to attract and keep in the future.

Even though the rising cost of salaries reduces the cost benefits of GDCC the cost increase should, as I have already mentioned, also be weighted against the advantages of having a site that can start up and run new projects reliably. Based on the difficulties in obtaining or training senior team members, described in 4.2.2, it would be unwise to risk losing experienced employees because of uncompetitive salaries. Even though the difference between the salaries of junior and senior employees is large at GDCC, the complexity of the applications that the four teams supports suggests that having fewer and more experienced employees might be better having more, but inexperienced ones. A continued focus on promoting and marketing a good company culture is also important in retaining the advantage in attracting interns and employees, as well to encourage existing employees to stay.

3.3 Cultural Differences

National cultural aspects of work performance is difficult to measure and as this has not been a major focus for this thesis, I will refrain from drawing any conclusions about how national culture affects work performance at GDCC. With that said, I have noted that the people I interviewed take pride in being hard working and proactive. Many have told me about how they work long hours and how they raise issues that are outside their direct responsibility. The ambitious attitude of GDCC employees have been confirmed by people I have interviewed at HP Sweden, as well as by my own observations.

As for corporate culture, GDCC has profiled itself as a unit that meets the highest quality standards, for example SEI CMMI Level 5⁷ and ISO 9001⁸. Following these quality standards imply, among other things, that regular audits take place where the teams are reviewed to make sure that they comply with all the requirements of the quality standards that GDCC is certified in. On an individual level, GDCC encourages its employees to take trainings and go through certifications. As an example, all employees working for the Customer have IT Service Management training, and about 30 % have the ITIL Foundation certification.

3.4 Relationship Specific Knowledge

An important difference between the situation now and the situation two years ago is that there is now a well established cooperation between GDCC, HP Sweden and the Customer. From a technical perspective, all communication tools are in place, they have been tested and all three parties have extensive experience in using them.

Even more importantly, there are now many people on each side that know each other. Relationship specific experience exist on every level from management to technical specialist, making people more secure in how to communicate with each other. The people I interviewed, both from GDCC and HP Sweden, say that communication is mostly smooth. I have been given several examples of things that people at GDCC pay special attention to when communicating with Swedes from the Customer or HP Sweden. I have received similar examples from HP Sweden employees about communication with team members at GDCC. Especially the team members of the original System A team emphasized the improvements in communication, and as these team members have been involved the longest, this indicates that relationship specific communication knowledge has been developed.

A major factor that has contributed to the successful startup of the three latest teams is the reuse of the knowledge gathered during the first years of the System A team. This knowledge has been preserved and now forms a framework that can be reused. One part of this framework is for planning, where experience specific to the work with the Customer has been adapted into HP's high level transformation framework, along with other experience from both GDCC and HP Swe-

⁷ A description of SEI CMMI Level 5 is available on Wikipedia: Capability Maturity Model.

⁸ A description of ISO 9001 is available on Wikipedia: ISO 9000.

den. By the time the third team was about to start, the planning material was already well adapted to both the cooperation between HP Sweden and GDCC, and between them and the Customer. Another part of the framework is the operational documents, which range from processes and guidelines to e-mail templates and forms for handover between shifts. These all constitute knowledge specific to the work with the Customer.

Probably just as important as the written documents is the implicit knowledge that has been developed in the form of human experience. This knowledge was put to use in the startup of the System B project. The team members of the original System B team were all drafted from the System A team. These employees now divide their time between the System B and the System A, according to the needs of each project. For the System C project, three of the seven original team members had a background in the System A team. In the most recent project, System D, six of the nine team members had previous experience from at least one other team for the Customer at GDCC.

There are several key advantages to this movement of people between teams but within the Customer account at GDCC. One is obviously that the experience from previous teams can be better utilized if it is passed on not just as documented knowledge but also as the implicit knowledge of people with experience from these teams. Another advantage is the possibility to develop specialists for specific tasks rather than specific teams. For example, the same person that developed the processes for System A was responsible for the development of processes for System B, System C and System D, and has now moved on to yet another project. A third advantage to this movement is that it enables employees to further their careers within the Customer account. The team leader of the new System D project is an example of this, as he has already moved from the System A team to the System C team, and has now gained a leadership position.

A recent relationship specific development is that GDCC has formed an account team to oversee all the teams working for the Customer. This team not only manages the teams at the department from Application Management Services, but also a few other teams for the Customer at GDCC. Besides providing a structure for firm management support for all Customer teams, the account team also incorporates functions for testing, quality control and knowledge management that operates across all projects related to the Customer.

4 Difficulties Facing Offshore Teams and How They Can Be Minimized

This chapter describes the difficulties that I found and it is structured based on the same four categories that I used in section 2.2. Each category also includes recommendations on how the difficulties I found can be reduced or removed.

4.1 Conditions for Effective Knowledge Transfer

As described in 2.2.1, the transfer of knowledge can be described in terms of knowledge inflow to the target unit and of knowledge outflow from the source unit. The knowledge inflow will increase when an increase is made of either the capacity to absorb knowledge, the motivational disposition to acquire knowledge, and the richness of transmission channels. The knowledge outflow is similarly increased by increasing the value of the source unit's knowledge stock, the motivational disposition to share knowledge, and the richness of transmission channels. Review Figure 3 for an overview of how these factors affect the knowledge transfer.

In an ideal situation, all factors are as high as possible. This is, unfortunately, usually not the case. In the following section I will describe the knowledge transfers that took place during the startup of the four projects in terms of these factors. Using the theory of Gupta & Govindarajan I first measure the level of each factor. Based on these findings I will suggest how improvements can be made and where they will make the most difference.

4.1.1 Knowledge Inflow

4.1.1.1 Motivational Disposition of Target Unit

There are two main reasons why the motivational disposition of the four project teams is likely to have been high during the startup of each project. The first is that there are strong incentives for the teams to play down any "Not invented here" attitude. None of the four teams operate applications that are common in education and industry in China, which means that almost no team members had more than a little prior knowledge of the application they were about to take responsibility for. There were also organizational aspects that had to be learned, like how the application is used by the Customer and what communication routes are to be used for different issues.

The other main reason is that time was in very short supply. Each team had a startup period of about three months before they were to assume full responsibility. However, the startup periods were all designed to let the teams begin support work one month before assuming full responsibility, where they would do most of the work but where more experienced people were available to assist the team when needed. As a result, they only had about two months to learn what they needed, and the urgency is likely to have motivated them to learn as much as possible during the knowledge transfer.

Because of these two reasons, the motivational disposition of the teams to learn as much as possible during the first months of the new projects was high. This is confirmed by my own impressions from both interviews and direct observations. Unless the situation becomes markedly different, it can be assumed that the motivational disposition of future projects will be high as well.

4.1.1.2 Capacity to Absorb Incoming Knowledge

The capacity to absorb knowledge is largely a factor of the level of prior knowledge. The prior knowledge cannot, however, be determined only at one given point in time. This is because the effectiveness of training, even during as short a period as a few weeks, is largely due to what has been learned up to the point when the next training session starts. If the level of knowledge is sufficient, the new session is likely to increase knowledge. However, if the prior knowledge is not enough, new training might not have any effect at all. This makes the order in which the training is given very important, since the most advanced training cannot likely be appreciated unless most of the basic training has been completed.

The initial training periods of the System A and the System C teams show that it is important to be familiar with the purpose of the system and the environment in which it is operated. The people interviewed from the System C team both told me that they were not able to make full use of the advanced training because the team did not have a basic understanding of the system environment. The situation was even worse for the System A team. Their initial training was about the core application, but as they had not yet any knowledge of the purpose and implementation of System A, the training quickly became too advanced and in the end they learned very little.

4.1.1.3 Richness of Transmission Channels

The richness of transmission channels has four elements: frequency, openness, informality, and density. A high level of each of these contributes to a high level of richness of transmission channels, which in turn will contribute to a high inflow of knowledge.

The *frequency* is high for both of the two main communication methods, e-mail and phone. All teams state that they exchange e-mails with HP Sweden and the Customer at least once per day on an average. Scheduled meetings, in the form of phone conferences, occur at least once a week. Regular phone calls are also common, but usually occur at more irregular intervals when urgent matters need to be discussed. The form of communication that has low frequency in all four teams is conversations face-to-face. The few occasions when such meetings have taken place have been during the startup phase for some teams, and during infrequent visits in Shanghai by staff from the Customer or HP Sweden.

The *openness* is the ability to freely voice ideas and concerns during communication. All team members responded that they could both voice ideas and concerns during the regular phone meetings, and their issues would then be discussed during that meeting. My own observations during participant observation suggest that e-mail is also used to talk about ideas and concerns. Even though I do not

have an estimate of how large a part of all ideas and concerns are voiced, the findings suggest at least a fairly high degree of openness.

Informality is operationalized as the number of opportunities given to engage in discussions that are work related, but do not take place during formal work sessions. These kinds of opportunities are typically only given when working in the same workplace, and as stated above, this happens very infrequently. Therefore it is implied that the informality is low.

Finally, the *density* of communication is the number of participants from each side taking part in communication. Phone communication during the startup period, whether for training sessions or for meetings, is usually done as phone conferences with all of the project team present. Even though the entire team is present, it is usually the senior team members that do the talking. For e-mail communication, forwarding incoming messages is very common. Between 50 % and 80 % of all e-mails, depending on the team, were forwarded to the entire team. Almost all e-mails on technical issues were forwarded, while e-mails about operations or management were forwarded when the content was considered important for the rest of the team. Outgoing messages were mostly written by the senior team members, even though most team members took part in some external communication. Because of the involvement of the entire team in much of the communication, the density of communication can be regarded as high.

To summarize, as the frequency, openness and density of communication is high, the richness of transmission channels should be considered to be fairly high. However, the frequency of face-to-face communication and the informality is low. These characteristics are important prerequisites for creative discussions, which might prevent some of the most advanced forms of knowledge transfer from taking place.

4.1.1.4 Recommendations

Neither the motivational disposition nor the richness of transmission channels should be a problem in reaching a high level of knowledge inflow. The practice to involve the entire team in the information sharing is considered as especially important. By having all team members present during phone meetings, the team members can learn about the team's progress and current issues first hand. It also gives them an understanding of the goals of their team. For the same reason, sharing most or all of the e-mails that are sent to the team increases each team member's understanding of the project.

The one thing that needs to be managed more properly, and where large improvements can be made, is the capacity to absorb knowledge. One action that offers great potential for improvements is to make sure that the training is efficient. This can be accomplished by following the recommendations for trainings during startup in section 4.2. Another action that can increase the ability to absorb incoming knowledge is to have someone on the team that is familiar with the general structure of a system environment at the Customer. This can also be expected to improve the other part of the capacity to absorb incoming knowl-

edge, the likeness of the communicating units. These team members are likely to be familiar with the communication patterns that have been built between HP Sweden, the Customer and other related teams. There have been migrating employees from the System A team in all three new teams started after System A, and this is probably a major reason why these projects have been able to run so smoothly.

4.1.2 Knowledge Outflow

The knowledge outflow can be studied on several levels, depending on what is regarded as the source unit of the knowledge. It can be each organizational unit by itself and it can also be the sum of the organizational units that have been involved in the creation and management of a system at the Customer. Regardless of which view is chosen, three of the four elements that make up richness of transmission channels will be the same as for knowledge inflow. Only the density of communication will change, depending on both how many source units take part in the knowledge transfer and on how many people take part from each source unit.

To illustrate the importance of the other two factors that contribute to the level of knowledge outflow, the motivational disposition of the source unit and the value of the source unit's knowledge stock, I will give an example from each team. The System A team had a problem in that the Solution Architect, with knowledge about the System A customizations, was perceived to be quite reluctant to share information. While the source unit had a high value of knowledge, the low motivational disposition made it difficult for the System A team to get the information it needed.

The situation for the System B team was much easier because it had a good source unit for the knowledge transfer. The team from the Customer responsible for the system had a high motivation to share knowledge as the System B team was about to take responsibility of the technical parts of the system, easing the workload of the Customer's team. As they had been managing all parts of the System B application until then, they had a high value of knowledge to share. Both the high motivational disposition of the source unit and the high value of their knowledge stock contributed to a smooth knowledge transfer.

The System C team had, like the System B team, only one real source of knowledge: the previous application support team, in this case from IBM. They had developed the core application, made the customized system, and had managed it until HP took over. Because of this they had a high value of their knowledge stock. Being replaced by a main competitor like HP lowered their motivational disposition, but because they were bound by their contract to complete the knowledge transfer, the motivational disposition did not have too much of a negative impact on the knowledge transfer.

The fourth team, System D, had potential sources with large knowledge within the Customer. However, support for the System D had been transferred to India recently and several key people had already spent time on this knowledge transfer.

Therefore they were reluctant to become involved in yet another knowledge transfer. In other words, their motivational disposition was low. Instead, the India team agreed to do the knowledge transfer. Unfortunately, they lacked depth of knowledge due to their short time of operation. This meant that, while their motivational disposition was high, their value of knowledge was low. In the end, the knowledge transfer to the System D team at GDCC was not sufficient and the team was forced to do a lot of self-study to catch up on what they needed to know.

4.1.2.1 Recommendations

For the knowledge outflow, we have seen that a high value of the source unit's knowledge stock and a high motivational disposition to share it is, obviously, the ideal situation. If one of them is not high, a high value of the other is not likely to compensate enough to make the knowledge transfer successful. If there is no single unit available with both valuable knowledge and motivation to share it, attempts should be made to increase the density of communication channels by increasing the number of sources. This will not be an ideal situation, but at least it increases the possibility that enough knowledge will be transferred.

4.2 Initial and Ongoing Training

In contrast to the previous category, which employed a theoretical approach to the analysis of knowledge transfer, the following section deals with the practical issues of training. The first part covers the same timeframe as the previous section, while the second part is about the training that takes place after the startup phase.

4.2.1 Training During Startup

None of the team members that I interviewed thought that there had not been enough time for training during the startup phase. Most were unsatisfied, though, and the causes for this can be summarized as difficulties with the quality and the timing of the training. These two difficulties are related. The concerns for quality of the training were either about not receiving a deep knowledge of the core product, or about not knowing the customizations that had been made around the application. The training had given the team members a general understanding, but they were concerned that they would not have the knowledge to respond to more complicated issues.

Concerns about the timing of the training are very much related to what I have discussed previously about the capacity to absorb incoming knowledge. It centers around in which order the technical training and the training on customizations should be had, as well as when the team should first be able to access the environment by themselves. People from two of the teams complained that they had not had any chance to access the environment before the technical training began, which resulted in their being unable to understand all of the training. Especially, they had not been able to ask the questions that they later discovered that they should have asked. The problem was especially true for the System A team, as their training was provided by an external company that did not have any under-

standing of the System A application themselves. One delivery lead stressed the importance of getting a detailed plan of the training early on, so that the team has time to prepare for the training in advance.

4.2.1.1 Recommendations

Based on the difficulties in training during startup, I propose the following general structure for the initial training. First, the team should get access to the supported system as early as possible. After a short time of familiarizing themselves with the environment, the team members are ready to learn the basics of what the system does for the customer, its most important customizations and what the most common support requests are. With this basic understanding of the system, the team members will now be ready to take on more advanced technical training, to learn about support processes and to start some trial support work, in parallel with the previous support team. Now they should also be ready to assimilate more advanced technology training. An illustration of my proposed structure for training during the startup phase is shown in Figure 4.

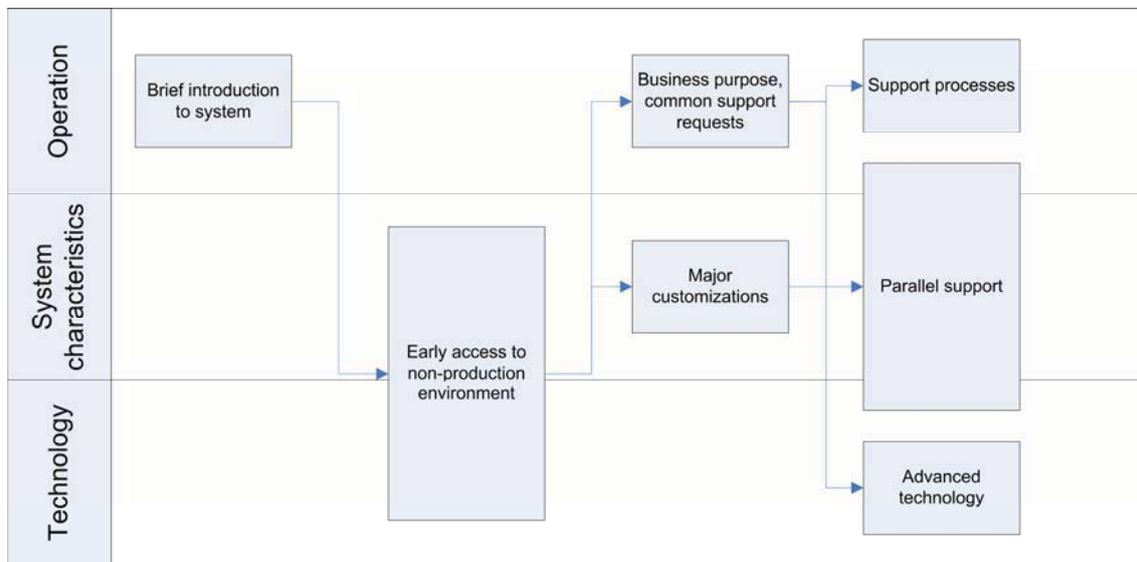


Figure 4 - Proposed structure of training during the startup phase.

Source: Authors own creation.

The exact timing of the different parts of the training will of course vary somewhat depending on the circumstances. But regardless of what the exact sequence is like, it is important that a detailed training plan is made available to the team from the beginning. With this plan, they will be able to prepare for each training session by studying the part of the system that will be covered and, most importantly, come up with any questions that are related to it.

4.2.2 Ongoing Training

Ongoing training consists of two parts: training of new team members and developing junior team members to become senior ones. The first kind of training seems to work quite well. All four teams started to create guidelines on how to perform common tasks early on. These guidelines both served to enable team members to deal with the most common tasks, and to preserve the knowledge

gathered during the knowledge transfer. The guidelines are considered particularly useful by the teams that have made a practice of involving all team members in the creation of guidelines and are having regular trainings on them. Some of the teams have also made a practice of assigning a mentor to new team members, and making the mentor responsible for the new recruit's training. For example, the mentor might help the new team member to study the guidelines and get a deeper understanding of why things are done the way they are.

The other part of the ongoing training does not seem to go as well. As there are few people available in China with experience in the applications supported by the teams, senior team members have to be trained internally. In the System A team, which has been operating the longest, this is now becoming a problem. The people I interviewed thought that it took too long to train skilled senior team members, and that more structured training was required to improve the situation. The required knowledge was considered to be present in the team, but it was not shared in an efficient manner. Another problem is that even though some senior team members were trained, their skills tended to be limited to specific areas. The team also needs people who concentrate on understanding the workings of the system as a whole, and such skills are not developing right now.

One difficulty that is common to both parts of the ongoing training is internal knowledge management. All teams have the same basic structure to store documents, where one external document repository is used to store documents that can be shared with designated people outside the team, and one internal repository that is only viewable by the team. The internal repository contains most, but often not all, of the documents in the external repository. All teams make and gather new documents on a continuous basis and as the number of documents increase, the repositories get more and more complicated. In the System A team, which has produced documents for more than two years now, finding a document has sometimes been so hard that somebody instead creates a new one, in effect producing duplicate documents. This is a problem that is likely to get worse over time if no changes are made.

4.2.2.1 Recommendations

The ongoing training of junior team members is not facing any large difficulties and hence needs few changes. I have witnessed myself how quickly new recruits are integrated into the support teams. To keep this ongoing training working well the guidelines must be maintained and updated regularly. The mentoring should be put in place as a formal training tool in all of the teams, and should be followed up to ensure that each mentor indeed takes the responsibility he or she is given.

The development of junior team members to become senior ones needs more effort. Formal training takes time to prepare and needs scheduled training sessions. There are, however, several advantages with having regular internal trainings. For one thing, they can be more specific than the general trainings that GDCC and HP online trainings provide, giving more depth and allowing the participants to focus on the team specific questions. Formal internal trainings are also better

than informal internal trainings as they are likely to be better prepared and more people can attend them. For these trainings to happen, the most senior team members should be allowed time to prepare formal training sessions. In the short term this might reduce the number of people that are available to deal with the team's regular tasks, but in the long run it will be a significant improvement as it produces more senior team members that can share the workload of the most advanced issues.

Finally, the internal knowledge management needs improvements, as the current system of document repositories is not sufficient to handle the ever increasing number of documents added to it. As the System A team has as its main task to support an advanced document handling system, there should be plenty of experience that can be used when trying to improve the current situation. There is a new knowledge management system that is currently being rolled out to support knowledge sharing between projects. I have not studied this system in any detail, but perhaps it will help the current situation. Still, care must be taken so that this new knowledge management system does not just become a new place where some documents are stored, making document searches even harder.

4.3 Operations

4.3.1 Service Level Management

None of the four teams regards meeting the Service Level Agreement as a major problem today. The requirements are easy to understand and easy to put into practice as a measurement of performance. Occasionally some complicated issues take too long to solve, but not to an extent that causes serious worries. The largest concerns are instead about how the performance of other teams can affect the performance of the teams at GDCC. This can become an issue if the team gets responsibility for a service call when that service call has already missed its deadline, or if other systems, related to the system that the team is supporting, has errors that causes errors in the operation of the system supported by the team. It can also happen when some issues are caused by a fault in the application that needs tendering by the application's vendor.

4.3.1.1 Recommendations

Even though the teams' performances are stable, there are concerns for the cooperation with, and reliance on, other teams. Questions regarding this cooperation are covered in the topics below.

4.3.2 Processes

During the System A team's first period of operation, the amount of formal documents was still low. The team only had processes for the most important tasks, as all new processes had to be adapted from teams that supported other customers or from the relatively high level HP standard processes. However, the processes were developed over time and the System A team now has a full set of processes. The new teams have been able to produce a full set of processes during their three month transformation period, thanks to the fact that they could reuse

both documents and experience from the System A team. The Customer has an interest in that the processes are well defined as they serve as a guarantee that the services from HP will be carried out in a reliable fashion. Both the System C team and the System D team have had their processes studied and commented by the Customer, something that the team members I interviewed considered to be very valuable input.

All four teams have had problems with other parties that did not follow the processes for their systems. When that other party has been HP or the Customer, they seem to have been quite easy to get in line as they know the importance of following the processes. It has been more difficult when other companies have been involved, since they are sometimes less familiar with the kind of processes that are used and might have seen the requirements as unnecessary trouble.

4.3.2.1 Recommendations

If the processes are not followed it constitutes a serious risk, as the approved processes, with their clear descriptions of procedures and communication channels, are one of the most important preventive measures against disruption of the operation of a system. Making sure that they are followed by all teams should be a priority. This is not, however, just a task of distributing process documentation and saying that it should be read and followed. If a process is too complicated, or perceived as being too general, it is likely to be regarded as a bureaucratic document that is a burden to follow. Instead, the processes should provide a relevant and useful structure that can be used to deal with the task at hand. This requires that the processes are written specifically for the supported system. The requirement has been supported by a Performance Manager from the Customer, when he during a review of a process requested that it should be made short, simple and useful, instead of long, complicated and bureaucratic.

The concern is valid for the processes of all four teams as they are all adopted from the System A processes. The fact that the System A processes were reused by the new teams is a good thing, but the further development that has been done when adapting them to the new projects has not necessarily made them less complicated. Continuous effort should be made to further simplify the processes, and any improvements for one project should also be implemented for the other projects.

With simple and useful processes it should be easier to push them to other parties and convince these of the importance that each process is followed. However, this does require that the GDCC teams know the processes well themselves. Continuous training is probably required in order to accomplish this, especially for new recruits who have not taken part in the creation of the processes during the startup phase. If all improvements that each team makes are shared with the other teams, it should be possible to keep the structure of each type of process very similar. This allows process training to be performed for all teams together, making regular process training possible.

4.3.3 Contact with Other Teams

All four projects have to cooperate with teams in several different companies, located in several different countries. This can be a big difficulty for a team at GDCC, for if some problem occurs, they cannot solve it by themselves, and the team does not know where to get help. The System A team experienced this problem from the beginning and has as a result been building their contact list for more than two years now. The other teams have also experienced similar problems, but they seem to have learned from the System A team as they routinely ask for contact lists to related contacts whenever they are to take on a new task. The people at HP Sweden and the Customer are usually able to help, but sometimes the searching takes a while.

Opinions differ on how fast the teams at GDCC get help from other teams when they request it, but everyone agrees that it is often slower than they would wish it had been. Whether this is because the other team does not offer 24x7 support, because they have a large workload, or because of some other reason, it is still a problem whenever the teams at GDCC cannot get the help they need quickly.

4.3.3.1 Recommendations

HP Sweden has voiced concern that it is hard to get offshore teams to see the “big picture” for the system they are supporting, as they are mostly only working on their own small part. A complete contact chart would help to convey this “big picture” by showing all the different teams and people involved with a particular system. During the knowledge transfer the four teams have been presented with illustrations that show the layout of their supported systems using both logical and physical views. A similar diagram, but instead focusing on which teams are involved in which part of a system, should be both useful for communication and serve as education on the organizational environment of the supported system.

Regardless of how it is structured, a list of the main contacts should be provided by HP Sweden to every new project team as early as possible. It is simply much more efficient that one person at HP Sweden puts such a list together than later having an entire team seeing their work disrupted because they had not realized that they would need help from a particular contact and now do not know how to find it. If the system has been supported by another team before, HP Sweden should be able to put together such a contact list even before the team at GDCC is formed.

Another thing that should be made available by HP Sweden to a new team from the start is a guide on how an issue can be escalated. If some supporting team is too slow to respond or too slow dealing with a request for help, the teams at GDCC need to know when and how they can escalate the issue to management level. This is especially true if it is another team within HP that is not responding well, since an escalation to management level should be able to speed things up.

4.3.4 Account Management and Network Access

Some teams had no problems in getting all accounts available during the startup phase, but for some teams this was a major issue in the beginning. It seems like

this difference was largely a factor of the environment for the particular system, as all teams had satisfactory help from either HP Sweden or the previous support team. Later, whenever new or changed accounts are needed they are usually processed in a few days. However, sometimes it takes longer and sometimes account requests need to be resubmitted for some reason. This sometimes forces team members to share accounts in order to enable all team members to take part in the support work.

It seems an undisputed fact that the network connection between GDCC and the systems they are supporting at the Customer in Sweden have been really slow. Sometimes work has hardly been possible at all. The people I interviewed say that the slow network speed is something one eventually gets used to, but some voiced concern that it might be a potential cause of errors. Because response from the systems takes such a long time to arrive, team members might draw bad conclusions about the state of the system and take actions that, in the worst case, might even be harmful to the system. The cause of the slow network is generally regarded as the connection between China and Sweden, but it is not much worse than the connections to India and the U.S., which are also very slow.

4.3.4.1 Recommendations

Even though account management has not been a difficulty for more than short periods of time, it still needs improvement. The Customer has an explicitly stated rule that all accounts are strictly personal and may not be shared with anyone. Even in cases where the security risk is presumed to be very low, sharing such accounts with other team members might be a breach of contract. A first step to facilitate account management for new teams is to put into practice that the first team members should find out which accounts are required and apply for them right away. In this way, the team quickly learns about where to apply for each account that is needed and have time to react if some unforeseen problem arises. It would also be a good practice to keep one of the team members assigned to the role of account manager, to ensure that new team members can get the access they require quickly without sharing someone else's accounts.

The slow network connection was a big problem, but after all interviews were done GDCC had a major network upgrade that increased the speed of up to 10 times. Since then, this hurdle has been reduced dramatically.

4.4 Ongoing communication

4.4.1 Efficient Communication

The four teams use both e-mails and phone conversations in the communication with external parties. Everyone I have interviewed about communication recognize that each method has both advantages and drawbacks, but that they combined form a good basis for efficient communication. Phone conversations are used to discuss operational issues, and also when a problem needs to be solved quickly. E-mails are good to describe technical issues and when a phone conversation is not possible due to the time difference.

Reading or writing in English is not considered a problem by most team members, even though some of the team members I talked to suggested that more effort should be made to proofread e-mails before sending them. Based on my own experiences, I concur with their opinion. A bigger difficulty in communicating efficiently is that it is quite common that the content of e-mails is too brief to convey the intended message, or that the e-mails are structured in a way that makes them hard to understand. This difficulty is true both for communication with other support teams and when giving support to end users at the Customer. The cause for this difficulty might be that the writer assumes the recipient knows more than what could reasonably be expected, or that the writer just does not take the time to compose a clear message. The biggest problem is that problem descriptions and problem solutions are often written in a way that is far too technical and require a detailed knowledge of the system, which the end users are unlikely to possess.

While the difficulties in e-mail conversations are less about language and more about general e-mail writing skills, the language difficulties are more apparent in phone conversations. Many of the Chinese speak English with a heavy accent, but so do some of the Swedes. This means that at least some team members have difficulties both in expressing themselves and in understanding what the others are saying. However, the team members I interviewed say that these difficulties gradually diminish as both sides get to know each other. One person suggested that a reason for this improvement over time is that people learn to accept the fact that these phone conversations are more difficult than phone conversations in the native language. They learn to speak more clearly and become less afraid to ask others to repeat whenever necessary. Another person suggested that the use of well prepared meeting agendas make the participants better aware of what issue is discussed, and that minutes of meetings are very helpful to confirm what has been agreed upon.

4.4.1.1 Recommendations

E-mail is perhaps the most important communication channel in an organization using global delivery. Effective e-mail communication is therefore crucial to effective operation. While the requirement to write in English adds to the difficulty, composing clear and efficient e-mails is not only about language skills, and many native English speakers also write poor e-mails. Specific training on e-mail writing is likely to give significant improvements both larger and quicker than general English trainings would.

The importance of efficient e-mail communication in the offshore business is not new. For example, Microsoft had to implement an extensive e-mail training program for a joint venture in Shanghai (Farrell & Grant, 2005). Taking regular e-mail trainings is a minor requirement for people who rely on e-mail writing skills to perform their tasks every day. This is true for both employees at GDCC and at HP Sweden. HP offers good online e-mail trainings to its employees, and I recommend that all employees that engage in offshore activities take such trainings at regular intervals. The exact amount of e-mail training that a team member

needs is individual, and I suggest that managers take responsibility for pointing out to employees if they need extra training.

4.4.2 Meeting Scheduling

The time difference between China and Sweden poses several difficulties. The most obvious is that the working days only overlap during a few hours. By doing most of the communication during the afternoon in China, which is in the morning in Sweden, this difficulty is usually quite easy to overcome. The people I interviewed about the time difference think that other aspects of it are more troublesome. One is that while the teams at GDCC has engineers on shift-duty to provide support during Swedish business hours, it is not possible for the teams at GDCC to get any help from Sweden during the first half of their workday. Most of the time this is not a major problem, but sometimes it causes important work to be delayed for several hours.

Another issue is that larger upgrades to the systems have to be done after Swedish business hours. This is because an upgrade might affect the operation of the system if something goes wrong. Because of this the upgrades usually have to be performed at four or five in the morning in China. On the other hand, the teams at GDCC are well aware that the Swedish employees that also have to take part in the upgrade will be working very late such nights. The situation is generally regarded as annoying, but something that just have to be accepted.

More serious is that there is a mild annoyance about that meetings are regularly being scheduled after Chinese business hours. This is usually understood to be done because the people in Sweden are not able to attend at an earlier time. However, some of the people I interviewed describe how they, puzzled, have witnessed how such meetings are suddenly ended because lunch time arrives in Sweden. When this happens, the Chinese team members will already have missed their dinner altogether.

4.4.2.1 Recommendations

The cause for having late meetings is probably a combination of that the Swedes does not realize that this is actually an annoyance for the team members at GDCC, and of the fact that the GDCC team members do not protest and request meetings to be rescheduled earlier in the day. Surely, some meetings will have to occur a little late in China, but if the Swedes pay more attention to this problem and if the GDCC team make a habit of asking if late meetings can be moved a little earlier, the problem can be resolved. One thing the Swedes should consider is that even though the Chinese are willing to work extra hours, for example to catch a late meeting, they will not get extra pay for this overtime.

The other issue regarding meeting scheduling is how long meetings can run. Swedish employees tend to schedule meetings and other activities tightly, and will be reluctant to make the meeting run longer than scheduled unless that is absolutely necessary. Even a simple arrangement like having lunch with a colleague at a specified time may be sufficient to making sure the meeting ends on time. The Chinese employees are generally more flexible, and will make room for

a meeting that lasts longer than expected unless it is in direct conflict with another meeting. To avoid misunderstandings and annoyances, it is therefore very important that both parties make a habit of telling everyone well before the time is up whenever the meeting time cannot be extended. And, in a case when someone has to leave before the meeting is over, it is important for this person to say so at the beginning of the meeting. Someone might have important questions to ask this person questions that they want to have answered during the meeting.

4.4.3 Defined Roles

An issue that was brought up by several people during the interviews was that there have been several misunderstandings concerning planning. A typical problem is that HP Sweden asks the team at GDCC to perform a task, with no plan how this is to be accomplished. Such assignments have been considered strange at GDCC, since HP Sweden have the responsible managers and are therefore expected to make the plans. To overcome this problem the GDCC teams have started to make the plans by themselves and are submitting them to HP Sweden for approval.

One difficulty that I have noticed myself is that it is difficult for teams at GDCC to carry out a negotiation with external parties, like third party contractors in Sweden. These negotiations are usually caused by different opinions on who should be responsible for larger tasks that have to be done. Communication where the two parties have diverging interests is in some cases quite different from when both parties are trying to cooperate towards a common solution. In a dispute, even a slight one, the object of the communication turns from creating understanding to gaining advantages. Using a language to convince, instead of just find a common solution, is much more difficult. A debate also reveals cultural differences in communication patterns that might otherwise not be visible.

4.4.3.1 Recommendations

In an interview with a manager at HP Sweden, he confirmed that one of the major difficulties in working with offshore teams is to know what actions can be anticipated when a task has been assigned to them while the people at HP Sweden expect that performing a task also includes performing related sub-tasks like planning, the offshore teams often make different interpretations. The problem is further complicated as there are differences from one offshore location to another. As I see it, the only way to overcome this difficulty is to make sure that each employee is given a clearly defined role. The definition should not just include which tasks the employee should perform, but should also include in which areas self planning and proactive action is expected to take place without instructions to do so. By making clear what the role imply, and by showing what responsibilities the surrounding roles have, it should be easier for the team members to see what is included in their responsibilities and what is not.

When a dispute or negotiation is underway between any part of GDCC and a Swedish party, HP Sweden should step in to either support the negotiation or even act as the principal negotiator, for three reasons. First, they are used to debate and negotiate with other Swedish people, and are more likely to present an

argument that is convincing to Swedes. Second, they have regular face-to-face contact with the Customer and other parties, and are thus more likely to have a closer personal relationship with the people involved. Third, they have the option to make the discussion more informal by speaking in Swedish.

5 Conclusions

In this chapter I will summarize my findings on both success factors and difficulties. Based on my findings I also suggest three focal areas where developments would offer substantial benefits to the cooperation between GDCC and HP Sweden. Finally, I will round off the thesis by suggesting a few topics that would be interesting for further studies.

5.1 Success Factors That Help Overcoming the Challenges of Offshoring

The first aim of this study was to identify success factors that have enabled GDCC to overcome the general challenges of offshoring. The success factors are listed in Table 1.

They are all reasons why the latest projects at GDCC have been implemented successfully and why new projects are likely to be successfully implemented in the future. Many of them are the result of strategic decisions of HP on where to locate GDCC and how to develop its operations. Some of them are the causes of actions taken during the startup phase and early operations of the System A team.

Challenges	Success Factors
Cost	Successful transformations makes startup of new projects cost reliable. Low salary costs makes on-going support cost efficient.
Recruitment	A large labor pool for recruitment. Internships are an effective tool for attracting, training and selecting recent graduates. Good reputation among potential employees.
Culture	A national culture that makes employees ambitious and hard-working. A corporate culture that promotes quality and skill development.
Relationship Specific Knowledge	Proven communication tools. Knowledge of the people at HP Sweden and the Customer and of how to communicate with them. Established frameworks for planning and operation. Experience in using these frameworks. Established cooperation between the projects working for the Customer, including migration of employees. Shared management structure for the Customer account.

Table 1. Summary of success factors

Many of success factors cannot be affected directly; especially since the teams working for the Customer is only a small part of the operations of GDCC. However, with an awareness of the success factors actions can be taken to manage them. For example, while the overall level of salaries at GDCC might be hard to

change based on considerations for the Customer account, the cost of salaries can still be adjusted by selecting the number and seniority of the employees that work in the account. That means that the success factors, and the risks that might threaten them, should be supervised by the management of both HP Sweden and GDCC. The relationship specific success factors are possible to control directly and suggestions on how to develop them are the theme of section 5.3.

5.2 Difficulties Facing Offshore Teams and How They Can Be Minimized

As can be expected in such complex work as is done in the cooperation between GDCC and its Swedish counterparts, there are several specific difficulties which removal would make the work of the teams at GDCC, and often also HP Sweden, easier. The difficulties and their proposed solutions are listed in Table 2.

Categories	Difficulties	Recommendations
Knowledge Transfer	Many advanced parts of the system are not understood.	Well structured and performed training makes it easier to understand complex issues.
	The team has not enough experience to form questions during the training sessions.	Employees who have worked on other teams performing work for the Customer have more experience on the system environments and on communication with the Swedish counterparts.
	Those who deliver the training do not have enough knowledge to cover advances issues, or are reluctant to share their knowledge	Having more sources increases the amount of knowledge that can be transferred.
Training	The advanced training during the startup of a new project is hard to understand.	The training should be performed in the right sequence, focusing first on general understanding of operations, system characteristics and technology. The advanced training can then follow later.
	It takes time to develop junior employees into senior ones.	Senior employees should prepare and hold regular training sessions for the junior employees.
	The internal knowledge management is too complex, with several large document repositories that are difficult to navigate.	The structure of the repositories needs to be designed from the ground up to cope with the increased size of the projects.

Categories	Difficulties	Recommendations
Operations	The processes are not followed by other teams.	The processes should be simplified in order to make them more useful and easier to follow.
	It is hard to find the responsible teams for some issues.	HP Sweden should help with the creation of a contact list when a project is first started. The team then needs to update it regularly.
	Other teams are slow to respond and/or do not prioritize the issue.	Clear instructions on when and how escalation to management level can be done should be included in the initial training.
	New accounts take time to create, which lead to sharing of account.	Make sure someone on the team have a thorough understanding of all accounts required for the team, especially during the startup phase of a project. Emphasize that accounts cannot be shared as that constitute a breach of contract with the customer.
On-going communication	E-mails are written in a way that is hard to understand.	Recognize that e-mail writing skills are not about language skills. Make performing regular e-mail training mandatory for all employees.
	Communication on the phone is difficult due to language difficulties.	Make sure that important communication is conducted by experienced employees, as experience has a very positive influence on communication. Prepare the phone meeting in advance, and make sure to follow up on it to avoid misunderstandings.
	Meetings are scheduled after Chinese business hours.	Recognize that the meetings should be held earlier whenever possible.
	There are different views on the importance of keeping meetings within the scheduled time.	In the beginning of the meeting, point out if the meeting has to end at a specific time or if somebody has to leave early.
	There has been confusion on who should make plans for some work.	Make sure that the roles are clear; especially about what tasks should be directed from HP Sweden and what actions are the responsibilities of GDCC.
	Differences of opinions with other teams are hard to settle.	HP Sweden should be involved in all arguments, preferably leading them from the HP side.

Table 2. Difficulties and their proposed solutions

Some of them can be addressed by GDCC exclusively, but many also require the involvement of HP Sweden. This is especially true for all suggestions concerning

the startup phase of a project, as the projects originate from HP Sweden and the assignment of resources during this phase is typically made by them.

Some of the solutions are of the nature that they can be solved once and for all, but many will require continued attention to accomplish. The daily work of each team can still be done without these suggestions being implemented and that means that if the benefits of the suggestions shall be realized, they will need conscious attention. This thesis does not provide detailed steps on how the solutions should be put into practice, but by creating awareness that improvements can be made I hope that the thesis will inspire the people involved to devise such steps. Then the solutions can be implemented and the difficulties be reduced.

5.3 Suggestions for Further Development of the Success Factors of GDCC

While the success factors described above help to ensure that current projects run smoothly and that future projects can be implemented effectively, they need to be actively maintained and developed. The following three sections give suggestions on some ways in which this can be accomplished.

5.3.1 Focus On People Development

Most of the employees of the four teams had little work experience when they joined their respective team, with a large part of them coming directly from university. As the teams are operating longer, more and more of them are likely to look for promotions where they can use the experience they have acquired. Whether their aim is a more senior technical position or a position with some leadership responsibilities, the Customer account at GDCC would benefit if their skills and experience are retained.

Movement between teams has already started as the new teams have to a large part been made of employees from previous teams. As the Customer account expands, and more and more people seek promotions, the need for a deliberate strategy for handling people movement will increase. This strategy needs to account for both how internal promotions should be promoted and how they should be put into practice. Although most of the first System A team members are still in the Customer account at GDCC in roles like senior technical specialist, team leader or manager, they are not likely to stay there forever. That makes a strategy for people movement necessary to ensure delivery quality in the future.

5.3.2 Regular Exchange of Staff

As I described in section 4.1.1, face-to-face contact is the form of communication that offers by far the largest potential for improvement. Whether it is employees from GDCC that visit HP and the Customer in Sweden, or employees from HP Sweden that travel to China, such contacts offer opportunities to develop the cooperation that other forms of communication does not. Also, as shown in the study by Holmberg, Bäckman & Tonnby (2006) of a large Swedish IT company and their cooperation with offshore units in different parts of the world, people experienced cultural differences to be much smaller when meeting face-to-face.

Such face-to-face meetings do not have to be frequent, but they should at least be regular.

One a management level, the cost of sending someone abroad is not insignificant, but with more and more people working for the Customer at GDCC, that cost is getting smaller and smaller compared to the potential benefits of improved cooperation. Apart from direct work on improvements in organization, operation and communication, such face-to-face meetings can tighten personal ties and improve each side's understanding of the other. An additional advantage if a manager from GDCC visits HP Sweden is that they can also visit the Customer. The difficulty in making the offshore units understand the customer's expectation has been described to me by a manager from HP Sweden, and such visits might go a long way to overcome that difficulty.

The advantages of face-to-face contact are not limited to exchanges on the management level. So far, two technical specialists from the teams at GDCC have been dispatched to work for HP Sweden, in Sweden, for periods of several months. To HP Sweden, these specialists are means to increase the workforce during periods with high workload, without the high cost of finding and hiring consultants. As additional senior technical specialists are trained at GDCC, the potential for this kind of exchanges increases. However, the assignment of regular staff from China to Sweden also benefits GDCC in several ways. One is the creation of opportunities for the employees to work abroad. Another is the experience that they can share with their team members when they return home. Much of what the employees at GDCC know about Sweden in general and their coworkers at HP Sweden and the Customer in particular have been told to them by the GDCC employees that have visited HP in Sweden.

5.3.3 Removal of Unnecessary Dependencies

A final way to further develop the success factors of GDCC is to decrease its dependence on HP Sweden. Holmberg, Bäckman & Tonnby (2006) describes how small offshore units require more communication with the onshore unit than large offshore units. A small offshore unit has less collected knowledge; hence it requires more instruction and support from the onshore team. Holmberg, Bäckman & Tonnby also describes how a large time difference will make such dependencies more troublesome as there is less shared working time when communication may occur.

While the part of GDCC that is working for the Customer could definitely be regarded as a small offshore team a few years ago, this is no longer the case. Both the large number of experienced employees and the management structure that is now in place make GDCC much more capable to support itself. HP Sweden employs a policy of having a single point of contact for each team. A single point of contact might still be a good way to ensure efficient communication on some issues, but it also causes an unnecessary dependence on one person for the teams at GDCC to perform their work. This is especially true during periods when the single point of contact has a high workload, as high workload combined with the difficulty of only having a few hours of common working hours, may cause delays

where the teams at GDCC can do nothing but wait for a response. Simpler tasks, like applying for accounts, should preferably be done with as little involvement from HP Sweden as possible. The teams at GDCC should also be enabled to manage most communication with support teams in HP without going through the single point of contact.

If the dependencies are reduced, the time spent on communication about simple tasks should also be possible to reduce. The time that is freed up could instead be used to develop the overall cooperation. The Global Delivery method of outsourcing that HP employs removes the problem of long distance communication between the customer and the outsourcing partner. However, that problem is still present within HP. The less time and resources that HP Sweden and GDCC need to spend dealing with operational communication, the more time and resources they can spend on ensuring that the cooperation is executed efficient, and the better they can serve their customer.

5.4 Topics for Further Study

There are several topics related to this study that has the potential to increase the scientific understanding of the part of IT offshoring that I have studied, and would also provide HP with more valuable information.

One is to study the comparative advantages of GDCC to other offshore sites. Are the success factors found in this thesis a particularly strong set, or do other sites have advantages that are just as strong? Such a study could also serve to validate if the success factors that I have described are indeed the most important strengths of the teams working for the Customer at GDCC.

A related topic is why teams at some offshore sites are considered to be more proactive than others. Are the reasons for this cultural, organizational, the cause of very individual characteristics like which people are involved, or something altogether different?

Another approach would be to concentrate more on the organization of the cooperation. An interesting topic would be to study if the organizational structure is optimal for this particular kind of activities, both at HP Sweden and GDCC? The organizational aspect can also be researched with a much broader view in a study of the entire global delivery organization for the delivery to the Customer. Why is it composed the way it is, and how can it be improved?

6 References

- Baily M., Farrell D. (2004) *Exploring the Myths About Offshoring*. McKinsey Global Institute.
- ComputerWorld (2005) Gartner: Five reasons why offshore deals go bust, <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=102677> (2008-01-22)
- Dubie, D. (2007) Outsourcing moves closer to home; offshore service providers consider nearshore locations as cost and cultural issues challenge the success and diminish the ROI of client contracts. *Network World*, vol. 15.
- Edgell, J. (2003) Offshoring – which way to India? *Computer Law & Security Report*, vol. 19.
- Farrell, D. (2006) *Smarter Offshoring*. McKinsey Global Institute.
- Farrell, D. & Grant, A. (2005) *Addressing China's Looming Talent Shortage*. McKinsey Global Institute.
- Gartner Inc. (2005) Press Release: Gartner Says 80 percent of Customer Service Outsourcing Projects Aimed to Cut Costs are Destined to Fail. Gartner Inc.
- Gupta, A. & Govindarajan, V. (1991) Knowledge Flows and the Structure of Control within Multinational Corporations. *The Academy of Management Review*, vol. 16:4, pp. 768-792.
- Gupta, A. & Govindarajan, V. (2000) Knowledge Flows within Multinational Corporations. *Strategic Management Journal*, vol. 21, pp. 473–496.
- Holmberg, M., Bäckman, P. & Tonnyby, D. (2006) *Key factors for successful off-shore outsourcing projects: A case study of an IT-company*. Master/Bachelor Thesis, School of Business, Economics and Law, Göteborg University.
- Hunter, P. (2003) Security issues with offshore outsourcing. *Network Security*, vol. 2003:8, p. 5-6.
- McCarthy, J. (2007) *China's Diminishing Offshore Role*. Forrester Research Inc.
- Nicholson, B. & Sahay, S. (2004) Embedded knowledge and offshore software development. *Information and Organization*, vol. 14, p. 329-365.
- Pettersson, Jimmy. Interview March 30, 2008.
- Yan, R. (2007) Bosses alarmed as turnover rate hits peak of 23 %. *Shanghai Daily*, December 18
- Tapper D., Kolding., Kroa V., Chang., Real C., Wallis N. (2007) *Worldwide and U.S. Offshore IT Services 2007-2011 Forecast*. IDC Market analysis #208283.

7 Appendix A - Operationalizations

These are the research questions that I used as operationalizations of the areas where I searched for difficulties. For the interviews, I rephrased the questions to make them suitable to the interviewee.

Conditions for Effective Knowledge Transfer

With which frequency did communication happen using e-mail?
With which frequency did communication happen using phone?
With which frequency did communication occur face to face?
To what degree was the communication informal?
To what degree was the communication open?
Who participated in phone meetings from HP China?
Who participated in phone meetings from Swedish parties?
Who participated in conversation using e-mail?
How large part of the e-mails was forwarded to the entire group?
With what frequency does the communication occur today?
What other changes has been made regarding communication?

Initial and Ongoing Training

Training During Startup

Was enough training provided to meet all team members' needs?
Was it relevant and well communicated?
Did it cover all parts of the tasks to be performed?
Was the technical deep enough?
Was the training provided at a suitable time?

Ongoing Training

Do the team need additional training?
Are there opportunities for this internally?
Are there opportunities for this external?

Guidelines

Were the guidelines easy to create?
Were enough guidelines created?
Was the creation of guidelines time consuming?
Were they ready when first needed?
Was it easy to make the rest of the team aware of their content?
Are the guidelines widely used today?
Are they updated regularly?

Product documentation

Was access to product documentation provided in a timely manner?
Was it provided for without need to "hunt" for it?
Is the product documentation understandable?
Was the source code provided in a timely manner?
Is all documentation and code available?

Operations

Service Level Management

Is there a need to influence SLA? Is it possible?
Is the SLA easy to understand?
Is the SLA easy to implement and use in practice?
Are the requirements for reporting SLA performance clear and easy?
Where SLA possible to accomplish within given timeframe?
Is the SLA continuously met?

Processes

- Were there previous processes that could be reused?
- Was it easy to modify them to HP standard processes?
- Were Ericsson's requirements clear?
- Were Ericsson's requirements easy to meet?
- Was the negotiation with Ericsson clear and thorough?
- Were the internal responsibilities for processes clear?
- Was it easy to make the rest of the team aware of the content?
- Is the entire team aware of the processes?
- Are the processes followed?
- Has Ericsson or HP Sweden been involved since on-going support?

Contact with other teams

- Was a good overview of relevant contacts provided, including how to contact?
- Did the communication with previous AM go smoothly during handover?
- Was the division of responsibilities clear?
- Who was contacted when help was needed?
- Was fast response available when help was needed?
- Was enough training in escalation and escalated issues given?
- Is any specific instance used today when help is needed?
- Is fast response available when help is needed?
- Does escalation and escalated issues process smoothly today?

Accounts

- Were the requirements for access clear from the beginning?
- Were passwords/accounts provided for?
- Was the relevant passwords/accounts available when first required?
- Were accounts available to the entire team?
- Were requests for additional passwords/accounts processed timely?
- Who was contacted regarding password/account problems?
- Is handling accounts considered a problem?

Access and network

- Was the performance of the connection good?
- Was the availability high enough?
- Were the resources accessed in an optimal manner?
- Were enough team members able to logon at the same time?
- Have there been any changes to this?

Ongoing communication

- Did the time difference constitute a problem?
- Were phone conferences with Swedes as easy as with Chinese?
- Did the Swedish parties always interpret dispatched e-mails correctly?
- Did HP China always understand e-mails from Swedish parties?