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ITIL

Practice and Theory – An Empirical Study

Master's Thesis

for

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Abstract

Through this thesis we attempt to acquire general knowledge about how to make the best use of ITIL and how to implement it sensibly in real-life situations. This aim is achieved by studying relevant literature, conducting qualitative and quantitative research, upon which we eventually make our analysis and conclusions.

ITIL is a framework for best-practice IT Service Management (ITSM) based on consensus recommendations from IT practitioners from all over the world. We give a short presentation of the field of IT Service Management and the related field of process management, whereupon we try to give a brief, but to-the-point presentation of the core ITIL literature. We continue with a literature study on organizations and communication to understand the backdrop against which any IT project will take place. Thereafter we narrow down our focus when going through characteristics of projects, project management and the pertaining PSO (abbr. for People, System, Organization) perspective, as well as change management. An ITIL implementation is typically carried out through the means of a project implying changes not only to the Systems at work in the IT department, but also to the People and the Organization.

Our empirical data are based on an ITSM status survey conducted in the Nordic countries as well as interviews with three experienced Norwegian practitioners. This gave us data on ITIL progress and viewpoints among Nordic companies in addition to in-depth, partly tacit information from well-respected ITIL practitioners. We compared our theoretical understanding to how it corresponded to the experiences of our interviewees and the results from the survey.

Based upon what we learned from this process we have launched six propositions (see Chapter 5.1). The purpose of the propositions is to keep our analysis discussion structured and goal-oriented. In addition we now propose our two general research questions, with which we try to formulate the main problem of our thesis. We will also cover more specificities and related features in our analysis and discussion of our propositions in Chapters 5 and 6.

Research Question 1: How can ITIL be useful to organizations and IT departments, and how could it be introduced optimally to different organizations? In other words: Is there a universal introduction recipe?

We find reasons and benefits for why both small and large IT departments should implement ITIL, although ITIL needs adaptation and a pragmatic approach for it to work purposefully in a specific situation. The reasons for choosing ITIL vary, but they all rest on the fundament that ITIL, when used sensibly, gives more efficient IT Service Management. We conclude that there is no universal introduction recipe. However, the implementation may be aided positively by the help of an external consultant that is unaffected of internal power structures and able to see the organization from an out-of-the-box perspective. To internalize process thinking among IT employees is typically a time-consuming process.

Research Question 2: How can one deal with the change process that ITIL initiates?

We conclude that one must be vigilant when dealing with the soft aspects of change – implementing a technical system supporting ITIL processes can be done quick and easy. However, internalizing ITSM and process thinking among employees and an organization that have not before worked in such a manner is more challenging. To be aware of developing the people and the organization parallel with the development of ITIL-supporting systems can be a key to reducing resistance to the change an ITIL project may bring about. Applying such a parallel focus, called PSO, may even create understanding for the necessary changes so that people begin supporting the ITIL initiative and start engaging in its success. Another specific recommendation for making the IT employees understand the benefit of using ITIL and be positive towards the upcoming change may be to first introduce some of the ITIL's operative processes, thus achieving so-called quick-wins, i.e. showing with immediate effect how ITIL can enhance the efficiency of the IT department by its structured way of working.

Preface

Although we both have working experience from the IT support at our business school and possess general knowledge about IT, we have learned a great deal from writing this thesis. We wanted to explore the opportunity to write about something that could be relevant to our future career in the business world and preferably also with a twist of IT, since it is an important tool in any organization we are likely to end up working in and since it is a discipline we enjoy working with. At the same time, in our line of work, i.e. helping users with IT-related problems, we have too many times seen how the IT support structure is organized unsatisfactorily or inefficient. As a result of this thesis we have gained useful knowledge about how it is to be working in a project organization, and many specific and general aspects concerning how to introduce ITIL to an organization's IT department.

The choice to study ITIL in particular was quite coincidental; one of us had attended an introductory ITIL course a few years ago, but did not remember much of it. After having looked deeper into the specifics and the purpose of the framework it was clear to us that our search for a thesis subject had ended. This subject was superior to all other previously considered alternatives, as it seemed more relatable, interesting, useful and down-to-earth.

Our thanks go to our advisor Mr. Tore Holmesland for keeping us on the right track, focusing on the working methods of a master thesis, and providing vital feedbacks. Through our meetings we have gained additional understanding concerning the literature we have used. The naïve student sometimes needs an experienced advisor to point out the good and bad apples in the big world of available literature. Tore indeed helped us in interpreting reality or literature in a critical and sound way, as well as recommending useful references. Besides, Tore's cheerful attitude and positive way of giving advice have been invaluable contributors to keeping our motivation high and the writing enjoyable.

Moreover, we were fortunate to have one of the most well-known Norwegian ITIL academics right here at NHH as our co-advisor – Mr. Jon Iden. He deserves many thanks not only for his contributing with tips and guidance about how to approach the literature and the ITIL environment in Bergen and Norway, but also for letting us take part in the ITSM Monitor 2010 survey, based partly on his 2007 and 2008 Norwegian surveys, but this year extended to include also Sweden, Denmark and Finland. It resulted in several fruitful discussions over the conference table where we agreed on modifications and improvements. Jon's advice on ITIL, as well as the content and structure of our literature study and analysis were complimenting the feedback from Tore in an excellent way.

We also want to thank those who have contributed to our database; first of all our three interviewees and those participating in the survey. It has been a delight to visit the companies and to meet with the interviewees, who turned out to be very hospitable and helpful. It was also exciting to use video conference as an interview method because of geographical distance. The technicalities of the video conference were taken care of by Mr. Roy Myklebust at NHH who acted in the most professional way, setting up the connection and aiding our interviewee in Oslo. Another internal NHH resource we used as a sparring partner early in the process of narrowing down how to use ITIL in our thesis, was the head of NHH's IT department Mr. Thor-Inge Næsset. Our thank-you also goes to these two gentlemen.

- Torje Hirth, Bergen, June 2010
- Lars Arild Melander, Berlin, June 2010

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1. Objective

The purpose of this thesis is to give an understanding of, and to discuss and analyze, ITIL in theory and practice – what guidelines are to be followed when implementing ITIL and what pitfalls are to be avoided. This is a central objective of our thesis. We also strongly believe that a master's thesis is supposed to serve as leverage for learning, giving us as students the possibility to independently search for relevant knowledge, gather appropriate literature, present and analyze theories in a critical and purposeful way, and lastly be able to see the big picture by being able to relate theories to each other and to collected empirical data, and synthesizing them into the most important lessons to be learned.

Another of the thesis' objectives is to determine the extent to which Nordic organizations have implemented ITIL's standards and processes, to collect practitioners' perception of the effectiveness of ITIL, and to identify critical success factors and barriers to learning. We will approach this through a survey (ITSM Monitor 2010) in collaboration with the itSMF (abbr. ITSM Forums) chapters in Denmark, Finland, Norway and Sweden. To give structure to our discussion, we have formulated two guiding and general research questions that shall be answered:

1. *How can ITIL be useful to organizations and IT departments, and how could it be introduced optimally to different organizations? In other words: Is there a universal introduction recipe?*
2. *How can one deal with the change process that ITIL initiates?*

2. IT Services

The IT department of any organization exists mainly to deliver IT services, and services are different from products in important aspects. Services are created when the service provider and the customer interact simultaneously. Services cannot be assessed before delivery, and the quality of the service is partly depending on the interaction between the two parties, their previous experiences and expectations, which can result in different quality assessments (van Bon 2004). IT Service Management (ITSM) is the modern way of viewing how one should approach IT service delivery. In this chapter we will discuss the concept of IT Service Management, process management and the core literature of the ITIL framework, concepts to be used as background information for our data collection and analysis later on.

We have used different organizational size, focusing on the size of the IT department, as a way of partly framing our discussion in Chapter 2 and 3. One could say that we see the organizations through our "different-size glasses" to probe into the applicability of ITIL to IT departments that are relatively small or relatively big. The comparison between a city and a village can prove a useful metaphor to understanding important differences (OGC 2009). The city and the village typically have people with different attitudes and behavior patterns, as well as different circumstances, opportunities and constraints. As well as there may be humans preferring to live in either a city or a village, there may similarly be employees preferring to work in a large multinational company or in a small enterprise.

We have decided to consider organizations employing less than about 20-25 full-time IT professionals as a small IT organization. This is a limit we have set after having asked several people in the IT sector for advice. In our thesis we sometimes use the word SMB (abbr. for small to medium-sized businesses), other times small organization or similar phrases. Whenever using them we are referring to a small IT department within (in most cases) a small or medium-sized organization. Roughly speaking; the size of the overall organization is not a focal area in our thesis, it is the IT department in which ITIL is implemented. This use of the terminology is adapted from OGC (2009).

2.1 IT Service Management

IT service management takes a process-oriented approach and does not imply the use of any specific technology, but rather provides a framework for structuring IT-related activities and the interaction of IT personnel with the organization's customers and the users of its technological infrastructure (van Bon 2004). Development of technological infrastructure as such is not included in the discipline, but a necessary complement to most ITSM introductions. However, the *use* of technologies in the organization is the focus of IT Service Management, making it a practitioner-centered thinking. An understanding of the IT infrastructure, architecture and configurations, as well as an active relationship towards people's competences is, however, a necessary prerequisite for using technologies sensibly. Sallé (2004, p. 1) views IT Service Management as "actively identifying the services customers need and focusing on planning and delivering those services to meet availability, performance, and security requirements", whereas van Bon (2004) defines it as "the management of all processes that co-operate to ensure quality of live IT services, according to the levels of services agreed with the costumer." We see that both definitions have focus on dynamically managing and adapting the services to the customer, i.e. to deliver quality in the sense of fulfilling the customer's expectations (or exceeding them if it does not require unreasonable additional resources/costs). Hence, the quality of services and quality assurance will be discussed next.

2.1.1 Services and Quality

Many organizations have become reliable on IT to such an extent that it would be unimaginable to conduct business successfully without it. Van Bon (2004) remarks that IT services often are not only expected to support the business, but also to present new ways of conducting business operations. Besides, the high expectations of the IT services tend to change over time, and reoccurring revisions of the delivery of the services are necessary to be in step with the users' expectations.

Technology development occurs at an increasingly faster speed, and the importance of sound management of the IT-related or IT-supported services has become increasingly imperative. Before, the use of IT services was largely considered a technology issue – the IT department was to provide the organization with its technological infrastructure in the sense of making sure computers worked, data storage was stable, security of information exchange was maintained, etc. The modern view, however, is to assess the contribution of IT services from the customer's or user's perspective. The IT function in today's organization is therefore not only a technology provider, but an essential part of the overall business strategy and one consequently needs to have a broad perspective on its role in the organization. Sallé (2004) emphasizes this importance of the coordination of the business strategy and the IT function. Moreover, Galup et al. (2007), as referred by Cater-Steel and Pollard (2008), point out how technology focus is not enough, but that the IT service provider must also consider the overall *quality* of the services and the relationship with the users of the service.

Van Bon (2004) highlights three essential factors that customers use for assessing service quality. Firstly the customer wants the service to meet their *expectations*, which could just depend just as much on how the provider agreed with the customer about the deliverables, as on the supplier's actual performance from an objective point of view. For instance, we believe that a service may be assessed as high-quality if the provider understands that the customer only needs basic features or functionality, whereas a basic-feature delivery may be assessed as low-quality by another customer who may be very interested in and able to learn use new technology quickly. Hence the importance of understanding the customer's expectations should be clear. Secondly, the customer wants a service of *similar quality in the future*, which is attainable through *continuing dialogue* between user and provider, so that they both know what to expect. Thirdly, after expectations have been agreed upon, the *cost of the service* has to be negotiated. Cost can be considered a quality attribute itself, since the cost always has to be considered in relation to the quality features of the service. Only a reasonable balance between cost and other quality attributes will make the customer satisfied with the service.

2.1.2 Quality assurance

A service consists of several processes and pertaining activities, something we are going to delve deeper into in the next section. Effective coordination of the processes does not only call for sufficient quality of each separate process, but also consistent quality through the process chain.

The quality of the activities can be controlled by using Deming's Quality Circle (Deming 1986)[1], see Figure 1. Proper quality should be ensured by repeatedly going through the following steps (van Bon 2004):

Plan – think about "what, when, where, who, by what means and how" the activity-related issues should be executed.
Do – the planned activities are carried out.
Check – decide whether the expected results have been achieved.
Act – modify the plans so that they correspond more closely to the expectations.

Figure 1: Deming's Quality Circle

[1] Deming (1986, p. 88) gives the credit for the reasoning behind "Deming's cycle" to Walter A. Shewhart, "Statistical Method from the viewpoint of Quality Control." Graduate School, Department of Agriculture, Washington, 1939, p. 45.

2.2 Process Management

A *process* as can be defined as "a logically related series of activities conducted towards a defined objective" (van Bon 2004). We therefore assert that a well-described process structure of a business should include what has to be done, what the expected result is, how one is to measure whether expectation is met, and how the results of one process affect the results of other processes. Accordingly, business process management can be defined as "the achievement of an organization's objectives through the improvement, management and control of essential business processes" (Jeston and Nelis 2006), and is a core objective of the ITIL framework.

Although most ITIL introductions are accompanied by the acquisition of some process-modeling tool, it is futile to think that business process improvements will follow automatically. Such a tool is just a piece of software, and without it being complemented by a sensible process-improvement methodology, qualified people and management commitment we believe that tool will be of little use. Hence we realize that process management is an integral part of business management, and does not only concern improving or redesigning the organization's processes, but also has to take managerial issues, implementation, execution and analysis of the modeled processes into account to be successful.

Arranging activities into processes, does not take the existing allocation of tasks, nor the departmental separation as fundamental perspective. Having a well-deliberated and documented structure of the IT-related activities could make it easier to see how each group of activities is related to other groups, and how each of them contribute to the purpose of the business. Process management deals with the essential steps needed to reach a certain pre-specified goal, and often and it can make clear that some activities are uncoordinated, duplicated, neglected or unnecessary (van Bon 2004). We therefore consider it likely for process management to be successful in discovering and eliminating non-essential and non-value-adding activities.

A process is the result of several interrelated activities transforming input into output (van Bon 2004). The input and output can be assessed against quality characteristics and standards, so that the results of the activities can be tracked easier, both at points along the way, and at the end of the process chain where the customer receives the deliverables. The standards have to be set so that if the output of each process meets its pre-defined standard, the service at the end of the process chain will be satisfactory. A process meeting a pre-set standard is *effective*. The process is *efficient* if it also is conducted with a minimum expenditure of costs and effort. Process management aims at achieving efficient and effective processes through planning and control (ibid.).

Through the allocation of roles with pertaining responsibilities, activities and authorities, ITIL's process management aims at achieving efficient delivery of IT services. A role is defined in a process and could be granted to a person or a team. One person or one team could have multiple roles. The literature gives some role merging recommendations. However, common sense and specific circumstances should in many cases be sufficient to decide the appropriateness of merging multiple roles. All processes have a *process owner* who is responsible for the results of a process. The *process manager* is responsible for the carrying-out and the structure of the process, and reports to the process owner. The *process operatives* are responsible for certain activities and they report to the process manager. Commonly, one will be working with consensus-based *performance indicators* and *standards* to ease management's quality assessment, leaving the everyday control of the process with the process manager. The process owner can then to a large extent rely on periodic reports of performance indicators, and make an assessment of whether the indicators are meeting standards satisfactorily (van Bon 2004). The generic ITIL process model presented in Figure 2 puts it all in a diagram, showing the coherence and interaction between the different elements taking part in preparing, executing and evaluating a process.

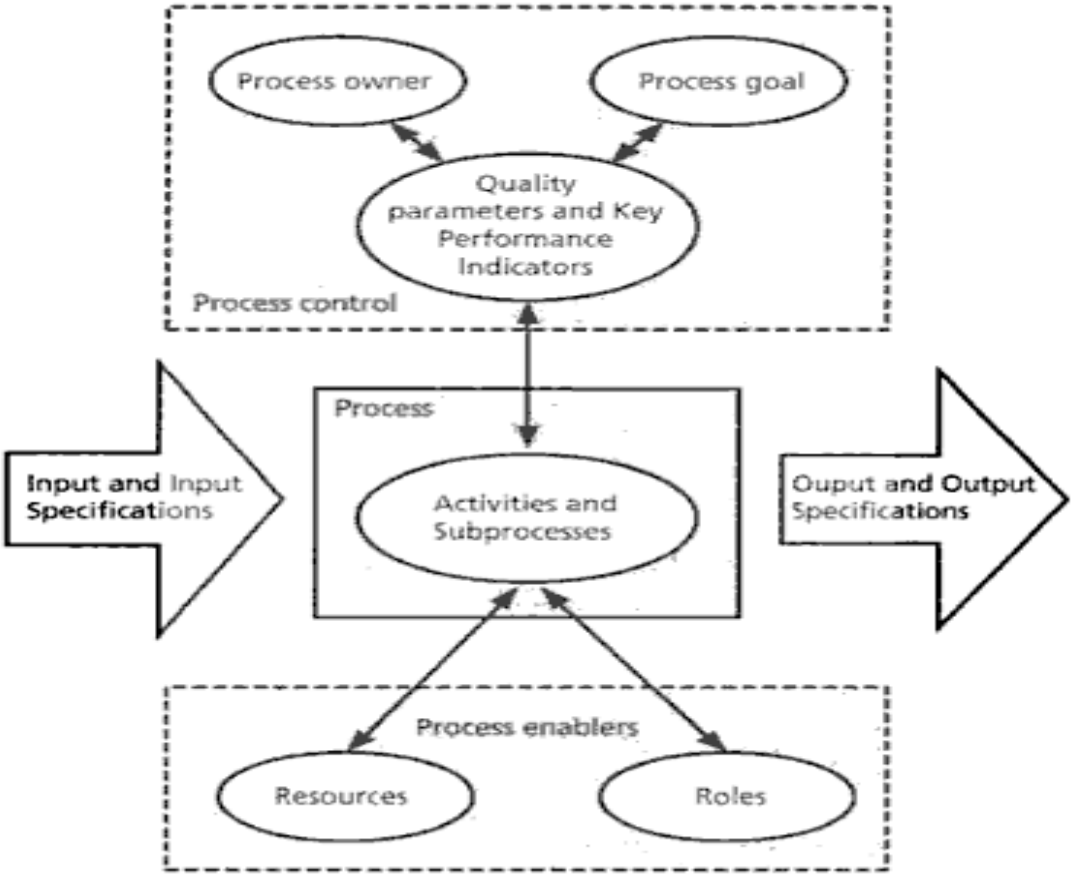

Figure 2: Generic ITIL Process Model

IT services often rely on several departments, customers or disciplines (van Bon 2004). The challenge of assessing service quality can be resolved through measuring process-specific aspects of quality such as availability, capacity, cost, and stability. The service-focused business will strive to match such aspects of quality with the demands of the customer. A sensible structure of inter-divisional processes is particularly important to retain good overview of the service quality, and to provide useful input to service planning, control and improvement efforts.

To sum up, IT Service Management tries with its process and service focus to contribute to the quality of IT services. It is important also to be aware of the specific situation of the organization such as policies, culture, size, structure etc. ITIL, which is the most wide-spread IT Service Management approach, deals with organizing the IT organization's processes by using roles and resources as process enablers. ITIL's systematic way of working with processes could in principle be applied to any kind of organizational department.

2.3 The core ITIL literature

ITIL, an abbreviation for Information Technology Infrastructure Library, started out in the UK in the 1980s, published by the forerunner of the Office of Government Commerce (OGC), which is the current publishing organization. It was at first developed for the British government agencies, introducing them to one common IT management practice. The intention was to accommodate the increasingly growing dependency on IT and at the same time serve business goals and needs efficiently. The framework has seen a tremendous development and expansion since the 1980s. With the recent transition from version 2 to version 3 (hereafter referred to as ITIL V3, or just V3) in 2007 it meant broadening the focus by not only looking at how to deliver IT services, but also taking the lifecycle of services into account. The lifecycle concept will be explained in connection with the impending presentation of the Service Strategy book. For reference and improved readability we have compiled an adapted ITIL Terminology list in Appendix D. We will now provide a brief overview of the five core books in ITIL V3, starting with Service Strategy.

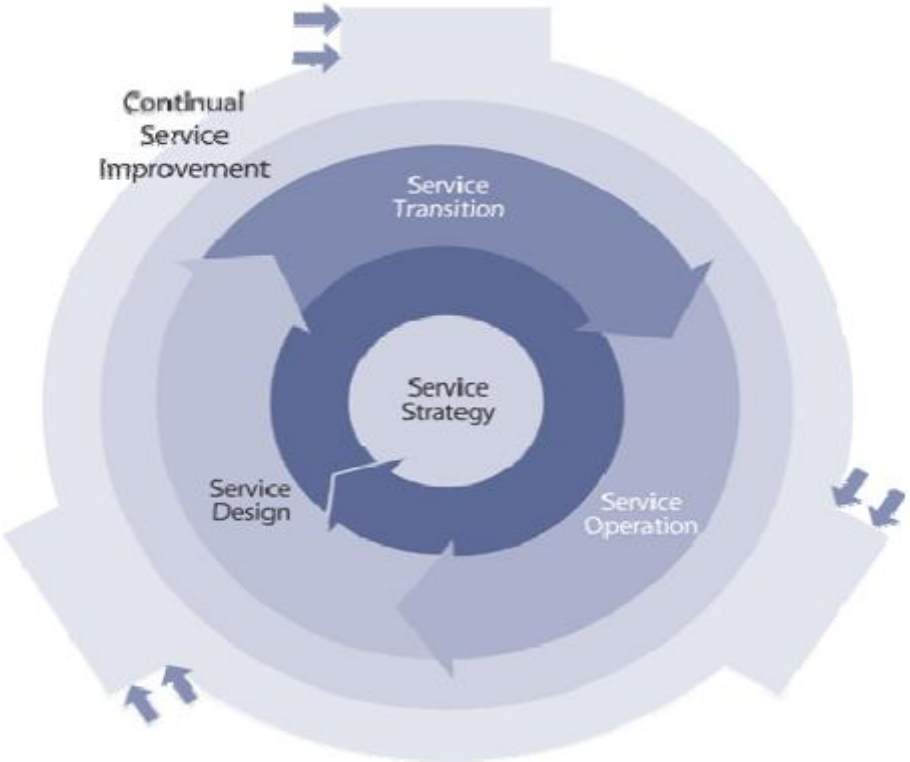

Figure 3: The ITIL Service Lifecycle

2.3.1 Service Strategy

Service Strategy is in the middle of the ITIL Service Lifecycle acting as a hub for the surrounding spokes (see Figure 3); Service Design, Service Transition and Service Operation, with Continual Service Improvement keeping the wheel rolling. "Service Strategy is about ensuring that organizations are in a position to handle the costs and risks associated with their Service Portfolios, and are set up not just for operational effectiveness but also for distinctive performance" (OGC 2007a, p. 25). As the citation states Service Strategy is assisting in educating a service provider on its capabilities. By developing the ability to think and act in a strategic way, the Service Strategy helps organizations to operate and grow for the future. The OGC (2007a, p. 27) states "Readers benefit from seeing the relationships between various services, systems or processes they manage and the business models, strategies or objectives they support." Hence it is clear that the OGC now views service management as not only an organizational capability, but also as a strategic asset.

Other key concepts in relation to understanding the Service strategy are *value creation*, *service provider types*, *service structure* and *return on investment* (OGC 2007a). Topics covered in Service Strategy include the development of markets, internal and external, service assets, Service Catalogue, and implementation of strategy through the Service Lifecycle. The OGC (2009, p. 39) recommends that "the basic service strategy of an SMB should contain the management of a service portfolio, the ability to monitor patterns of service demand and a model for financial management." As with much of the OGC literature we find this to be sensible, but very general recommendations. So in the end, it is very much up to the particular SMB to decide on a strategy and its specifications.

2.3.2 Service Design

"The main aim of Service Design is the design of new or changed services" (OGC 2007a, p. 46). As one of the spokes surrounding Service Strategy, Service Design extracts the qualities from the Service Portfolio, processes these and compares them to the hub's defined strategies. From this we understand that Service Design is not only limited to new services, but that it also includes the changes and improvements to maintain delivered value to the customers over the lifecycle of the services. Hence, the design of a new service cannot be done isolated, but should build on the Service Strategy and its components, as for instance Service Portfolio, service structure and return on investment.

The OGC (2007c) lists ten main goals and objectives of Service Design, which are; to design services which satisfy business objectives with consistency and business focus, to design services that can efficiently be enhanced, to design secure IT infrastructure to ease the identification of risks through measurement methods, to produce and maintain IT plans, processes, policies, architectures, frameworks and documents to meet business needs, and contribute to the improvement of overall quality of IT service by reducing the need for reworking them once implemented. The latter objective refers to the fact that it is more expensive and difficult to redesign a service instead of doing the design properly at the first try.

A key message about the architecture of the design is that it should be kept clear, concise, simple and relevant, since the OGC (2007c, p. 29) further states that "all too often, designs and architectures are complex and theoretical and do not relate to the 'real world' ". This is one of the many pitfalls one should be aware of in this core book. The OGC (2009, p. 49) states that for the SMB, scaling will involve addressing (...) the design of new or changed services, service management-, technology systems, processes required and measurement methods. The book further mentions the use of specialized skills that can be outsourced when skills are not available in-house. Some of the processes under Service Design are the Service Catalogue process whose goal is to produce and maintain information on operational services, the Capacity process which makes sure that agreements are met, considering both cost and time constraints, the Availability process which defines, analyzes, plans and improves the availability of the IT services, and IT Service Continuity Management, a process responsible for minimizing risks associated with the IT services.

2.3.3 Service Transition

After the services have been adapted to the business governance and been designed to fit the strategy, it is time for Service Transition to make the on-the-paper processes ready for operation. Put differently; the processes of Service Transition serve the objective of transition, i.e. moving the designed services into becoming operative as smoothly as possible. Working together with the previous mentioned elements in the Lifecycle, Service Transition ensures that meeting business need, cost and efficiency demands are achieved with minimal risk, maximum optimization and the highest degree of confidence possible (OGC 2007d, p. 15). Its aim is to narrow down the gap from what has been written on the paper to live environment.

According to the OGC (2007d, p. 38) some of the purposes of Service Transition are to plan and manage the capacity and resources, provide a consistent and rigorous framework, establish and maintain integrity of all identified service assets, provide good-quality knowledge and information for effective decision-making and to ensure that the service can be managed, operated and supported within the requirements and constraints specified from Service Design. In other words Service Transition tries to reduce variation in delivery of services. Since the SMB is more likely to have limited resources when it comes to money and perhaps also time the OGC (2009, p. 55) points out that it is particularly crucial to small IT departments to reduce overall cost and duplication of data, emphasizing a uniform view of service management and to allow synergies with related processes, tools and techniques used in other parts of the organization. Some of the processes under Service Transition address the issues of planning and coordinating the resources, controlling the changes in the entire lifecycle, maintaining information and sharing the knowledge gathered from this. Other processes introduce change in the live environment for testing and evaluating, thereafter deciding whether to keep the change or not.

2.3.4 Service Operation

The OGC (2007e, p. 18) gives a summary of what this section is all about: "Service Operation is the phase in the ITSM Lifecycle that is responsible for 'business-as-usual' activities. Service Operation can be viewed as the 'factory' of IT. This implies a closer focus on the day-to-day activities and infrastructure that are used to deliver services. However, this publication is based on the understanding that the overriding purpose of Service Operation is to deliver and support services. Management of the infrastructure and the operational activities must always support this purpose." Behind these words one can also extract that it is important to maintain stable processes coming from the preceding books of Service Strategy, Design and Transition. The Operation book actually deals with measuring the stability of processes, thus providing an overview of, monitoring and notification about any changes in quality and potential threats to persistent quality, partly by using preemptive measures. The daily operations of an IT department often take a big portion of the IT budget. At the same time, many of these operations are quite easy to outsource. Although the SMB should keep an active relationship towards policies and process governance within the Service Strategy boundaries, the OGC (2009, p. 69) states that an SMB can combine roles, activities and processes to help scale and adapt the Service Operation to the smaller IT department. One of the main activities in Service Operation is the managing of Events, which can be dealt by a merged Incident and Problem Management in a small IT organization.

2.3.5 Continual Service Improvement

As earlier mentioned, Continual Service Improvement (CSI) is the element that keeps the hub and spokes of the ITIL Lifecycle spinning. As its name reveals it deals with continuous improvement of the services, thus providing guidance in the evaluation and improvement of the services, and their quality. CSI also oversees the development of the ITSM Service Lifecycle and its underlying processes through aiming at maintaining "the overall health of ITSM as a discipline, the continual alignment of the portfolio of IT services with the current and future business needs and the maturity of the enabling IT processes required to support business processes" (OGC 2007a, p. 23). The purpose and objectives of CSI are, according to the OGC (2007a, p. 125) "to identify and implement improvements that support business processes, resulting in some of the following objectives to review, analyze and make recommendations on improvement opportunities and Service Level achievement results, identify activities to improve quality and effectiveness and improve cost effectiveness without sacrificing customer satisfaction." "The key for the SMB is to realize what should be measured and having the resources to do this" (OGC 2009, p. 81). We understand this latter quote quite positively for SMB – it should try to figure out the most important aspects worth measuring in their IT service operations and how they could be improved. This should actually be an aim of any company, but may be more important to be aware of for the small IT department. One of the benefits that SMBs may have is a closer co-operation with their customers, which could give them better knowledge about what to improve.

3. Literature

3.1 Features of Organization and Communication

In this section we will go through essential features of organizations, with an emphasis on communication and related properties. The sources of information, from which the content of this section is adapted, are the Office of Government Commerce (OGC 2009), Flaa et al. (1993) and Jacobsen and Thorsvik (2007). These books are mainly reference literature listing different existing models and common organizational concepts. We have therefore used them as resources in structuring this section, and as a starting point for our own interpretations and reflections. The information we acquire in this section will be useful as general background literature in relating to features of projects and project management we are going to study later in this chapter, as well as to the ITIL and ITSM features already studied in the previous chapter. Lastly we will use the knowledge gained from the literature study of Chapters 2 and 3 to aid us in designing our interview guide (Appendix C) and to analyze and work with the results from our interviews and the survey (Appendix A).

3.1.1 Hierarchy and Specialization

Organizations that are bigger, usually measured by the number of employees, are as a necessary consequence of their size employing stronger horizontal and vertical specialization (Jacobsen and Thorsvik 2007, Flaa et al. 1993). Consequently, we can infer that larger organizations tend to have more separate units and more hierarchical levels than smaller organizations. Increased size must thus result in increased horizontal and vertical complexity.

An organization with more employees will have the possibility of hiring *specialists*, whereas the smaller organization has fewer resources and often finds itself only affording to employ one or two persons dealing with the basic functions of for instance marketing and accounting. A larger organization would separate functions to a greater extent and have several specialists employed in many areas, enabling them to work more isolated from the rest of the organization. Being familiar with a small IT organization, we know that it can

only support a limited range of proficiency, and its staff must be carefully aligned with the needs of the organization, typically making them cover a relatively broad range of skills. However, the tasks of the small organization may be just as complex as those of the larger organization, since it for instance may use less standardized tools and approaches. Small does not necessarily mean simple!

3.1.2 Administration, Formalization and Control

Another aspect of the structure of an organization is the administrative component. Having studied the classical research by Parkinson (1955) and the recent research by professor Jamtveit at the University of Oslo (Hellevik 2010), we find reason to believe that the administrative staff of an organization often grows much faster than the value-adding staff. This can partly be explained by the fact that more bureaucrats will not only provide administrative services to the increased value-adding staff, but also create more work for the purpose of self-administering themselves. Two employees may do the effort of two full-time equivalents, whereas three employees may do the effort of two and a half full-time equivalents (growing exponentially inefficient). Parkinson's (1955) ironic essay refers to some dubious psychological mechanisms supporting his theory. However, whatever reason is causing the tendency of administrative over-growth; it seems to be backed by the empirics of both researchers. The trend is found to be clearer in public organization. We believe this may be the result of public organizations not being driven as hard by the money-making philosophy of the free market, where the number of administrators may be allowed to grow more recklessly.

Increasing size also leads to increased need for coordination through more *formalization*, i.e. more rules and standardized procedures (Jacobsen and Thorsvik 2007, Flaa et al. 1993). We know how relatively easy it is to maintain direct contact with colleagues within a small IT organization. Random meetings at the coffee machine are not always just of a social nature, but could often be an arena for getting updates on the work of others, getting feedback to one's own professional challenges, etc. In larger organizations it is necessarily harder to have everyone informed about each other's activities in a similar manner. Therefore, they have more rules to the flow of information sharing, to ensure that the most relevant information is shared. The increased number of rules and regulations typically enforced in

larger organizations is also used as means of *controlling* the employees. We find it natural to believe that personal follow-ups become less frequent in the larger organization. Thus, the implicit control that the SMB manager is able to exert typically decreases as the organization grows, and the control of the employees becomes more palpable as the ad hoc follow-ups must be replaced by more formal rules and regulations.

3.1.3 Culture and Communication

Communication upwards in the hierarchy has the inherent weakness of suppressing information and affecting the interaction between subordinates and managers (Jacobsen and Thorsvik 2007, p. 261). With relatively fewer people on top a filtering process is deemed necessary, and filtering is increasingly limiting the information flow upwards. This limiting of information may not be bad as such, but it could potentially lead to losing of essential information, lengthy communication processes and making responses from subordinates inadequate or unreliable. In a big organizational structure there could be communication channels that are irresponsive and selective towards sharing information, thus giving incentives for informal communication bypassing the formal communication routine (ibid.).

As implied earlier, small organization tend to have a relatively *informal atmosphere*. Few staff members interacting across functions and hierarchy frequently are generally more aware of their collective talents, typical reaction patterns, attitudes, biased perceptions and perspectives on different issues. We realize that informal communication needs not always to be beneficial, for instance by the occurrence of undesirable discrimination of information exchange and positioning of information dependent on who is receiving, which may result in misunderstandings and rumors. A complex hierarchy where the top management gives orders directly to “the guys on the floor”, ignoring middle management’s opinions (or refrain from conferring with them) may be a potential source of conflicts in an organization.

Strong informal communications between the IT organization and the business often occur in small organizations. This can be beneficial by having operations done with a minimal number of complications, but can also lead to lack of consultation and documentation in the business operations (OGC 2009). All in all, we are of the opinion that communication is more likely to be challenging in a larger organization, and that the culture tends to be more

informal in a small organization, although the overall culture of the company may be just as important as size in this respect.

3.1.4 Team Spirit and Responsiveness

Drawing on our experience from NHH's student association, we find reason to believe that the members of a small organization are more likely to view themselves as members of a single team striving to reach common goals with collective efforts. Larger organizations are likely to have several teams, and rivalry between them could occur. However, we consider the general culture to be the most important factor for how much of a *team spirit* an organization has. For instance, voluntary student organizations often have a culture of dedication and passion, making it relatively easy to achieve a positive team spirit.

The OGC (2009, p. 27) states that the SMBs are more responsive, since rapid scrutinizing of information among all IT department employees within a working day is possible. They mention that this responsiveness could lead to benefits such as ease of launching an initiative without a lot of planning, easier tailoring of ideas during a project or service, and easier execution of changes because the decision-makers are more accessible and because the employees involved know the requirements and abilities of the rest of the IT organization. They therefore claim that changes in the small organization are quick, accepted by other employees, and adapted to customer needs. Again, we find reason to believe that the reality is more nuanced, and that the general culture of the organization may be equally decisive in defining how responsive an organization is. Hence, we do not doubt that also large organizations could reap the benefits of being responsive.

3.1.5 Understanding the Business

We believe that the fewer people working in a company, the more likely it is that they have thorough knowledge about the company's supply and process chain, making it easier for them to adapt their work to fit the business requirements. If information is defined as "what gets transferred," then communication is the process describing *how* it gets transferred. As an organization expands the structure of information transfer increases rapidly.

More specifically, each employee (n) can talk to everybody except themselves, therefore n(n-1) describes the number of potential monologues. Since A talking to B is the same as B talking to A, we must halve the number of monologues to find the potential number of communication lines (i.e. dialogues): n(n-1)/2. If you apply this formula you find that an organization going from 5 to 10 employees increases the number of communication lines from 10 to 45. Similarly, doubling the size once more (to 20 employees) the number of potential communication lines has already reached 190, making the inter-organizational and wide-spread thorough understanding of the business rapidly more challenging. This model merely takes one-to-one communication into consideration. If we also take into account that communication often appears to and from groups we get 120 potential relations with 5 employees, while 10 employees would raise the number of potential relations to 3.6 million (see O'Connell. 2010).

3.1.6 Reliance on Individuals

Our impression is that small businesses often have only one person working with certain activities or within a certain field. The cost of training a new employee within a particular field is only worth taking if there are major risks to business viability, and if the employee is expected to stay at the firm for a considerable period (OGC 2009). In accordance with the specialist discussion, we find it likely for the SMBs to have knowledge gaps since few employees have limited knowledge capabilities. Small organizations will therefore more often have *generalists* rather than specialists, i.e. staff members that combine several roles or functions, thus knowing a little about many things, rather than a lot about a few things (ibid.). A pragmatic approach can be to adapt the structure of the organization to the skills of the employees. When skills are not available in-house an option is to hire the service from a third-party supplier such as a consultant.

In a small environment there are fewer possibilities for solving problems if things go wrong. Personal conflicts may be hard to prevent from being damaging in a small organization (ibid.). We believe that personality clashes are easier to deal with in a larger organization, as employees can be moved around to make the conflict less damaging.

3.2 Projects and Project Management

An ITIL implementation in an organization will usually be done through a project. Therefore we find it natural to briefly mention what distinguishes a project from other ways of working in an organization. We find the Goal Directed Project Management terminology of Andersen et al. (2004) useful when talking about project characteristics and project management, and it will therefore serve as the main reference for this section. Since the book is written by three project practitioners, not merely academics giving literature reviews, we find it particularly hands-on and relatable.

3.2.1 Project Characteristics

Andersen et al.'s (2004) description of four project characteristics could be a useful way of understanding what a project is. They state that a project is a *unique task* designed to achieve a *specific result*, that it requires a *variety of resources* and is *limited in time*.

An organization consists of people performing more or less repetitive tasks, which are specifically designed to achieve the purpose of the organization. Sometimes, tasks occur that the base organization is not properly equipped to deal with, tasks that are of non-recurring type. Examples would be finding new markets for the organization's products, coming up with new product ideas, or, in our case the introduction of ITIL to the IT organization. These tasks typically require the involvement of many people in the organization, but would be hard to conduct within a pre-existing organizational structure. Therefore a temporary organization, or project, is set up to perform the task. A common problem with the unique task that has not been performed previously is that there exists uncertainty about how to execute the project work, even for specialists who have worked on the same subject before, since the organization, people or circumstances can be new. Therefore, even technical specialists should take the people and the organization into account when a system is going to be implemented, something we will discuss thoroughly in the next section. Different people and organizations may require different approaches for successful implementation of the same system or the same IT Service Management framework. The specific result of a project could be, if we continue to use our theme as example, the implementation of ITIL processes, routines and methodologies to the extent that the IT management has defined.

The implementation of ITIL requires a variety of resources that has to be committed from the base organization to the project organization (Andersen et al. 2004). Often it is difficult to create an understanding within the base organization for the amount and type of resources needed for a project to be successful. Commonly, project members are having a full-time position beside their project engagement. Thus, even if there is an understanding for the project's resource needs, it often proves difficult to release staff capacity when people are needed for the project work. Yet another management challenge with projects is that they include diverse people coming from diverse backgrounds with different experience and expertise. The project management therefore needs to develop the team, i.e. to enable the team members to get to know how to work with each other, so that they are aware of each other's backgrounds, expectations, ambitions and strengths, and can use that knowledge later on to promote efficient and effective project work (Grude 2010).

The focus on the time constraint is frequently prominent in a project, and often the project's success is judged on the basis of whether it is completed by the set deadline. The deadline is then potentially a big disappointment date. Andersen et al. (2004) therefore recommend splitting the result objectives into intermediate goals planned for delivery during the project, to minimize possible disappointment at the due date.

3.2.2 The PSO Perspective

Much of the traditional project literature focuses narrow-mindedly on the technical aspects of projects, following the engineer approach to project thinking. In our case that would be to over-emphasize the development of ITIL-supported software or systems. Andersen et al. (2004), however, emphasize the importance of taking a broader approach to project management through using the PSO (abbreviation for People, System, and Organization) perspective. The starting point of any ITIL project would be to focus on the tangible aspects of designing and managing processes. Then it is up to the project manager to actively define the project as a PSO project, i.e. to take the concurrent development of the people, the system, and the organization into account. The perspective has its roots from multiple experiences with implementing IT systems; therefore we feel the PSO perspective is particularly suitable for analyzing how ITIL projects are being managed.

In our context we understand the development of people as the training and motivation of the users, not only for them to use the IT system in a technical sense, but also to understand the logic behind the ITIL lifecycle thinking (as explained in Chapter 2.3), so that the technical systems are used in a sound and purposeful way. We understand the concurrent development of the organization as the coordinated efforts of aligning organizational aspects, such as communication routines, relationships, responsibilities and authorities, to the ITIL framework so that the organization easier can accommodate the methods and processes prescribed by ITIL.

Moreover, Andersen et al. (2004) note consequently that PSO projects should result in a combined outcome where goals should be achieved for each element – People, System, and Organization. The introduction of ITIL and IT systems is a more intangible, and thus a more complex, matter than the very concrete task of for example constructing a building. Therefore we argue that projects aiming at implementing ITIL should in particular benefit from looking at the composite goal provided by the PSO perspective, since there is so much more to sound IT Service Management than being able to use ITIL-compatible software or systems in a strict technical sense.

3.2.3 Participant Involvement

In relation to the PSO discussion, Andersen et al. (2004) mention another characteristic feature of project work – namely the extent to which the members of the organization who are going to use the result of the project are included. In our context that would then be to which extent the IT staff and other affected organizational members are being included in the ITIL implementation phase. The two extremes of this continuum of user inclusion are purely specialist projects and purely process-oriented projects. The *specialist projects* employ only specialists without end users' collaboration or consultation along the way. A purely *process-oriented project*, on the other hand, includes everyone involved, and the interaction between people is in itself defining for the progress of the project. The problems or possibilities that the involved people consider most important at any point in time will thus be integrated into the project work.

Some project elements will naturally be dominated by specialists, whereas other elements will benefit from a more process-oriented approach. As mentioned, the project management must actively express the want to change the people and the organization when working with IT projects that are likely to affect all parts of the organization. Since the IT function of an organization is integrated in the business by being a part of the overall strategy of the organization (a relationship we have tried to illustrate in Figure 4), any changes to the IT service delivery have potentially far-reaching consequences.

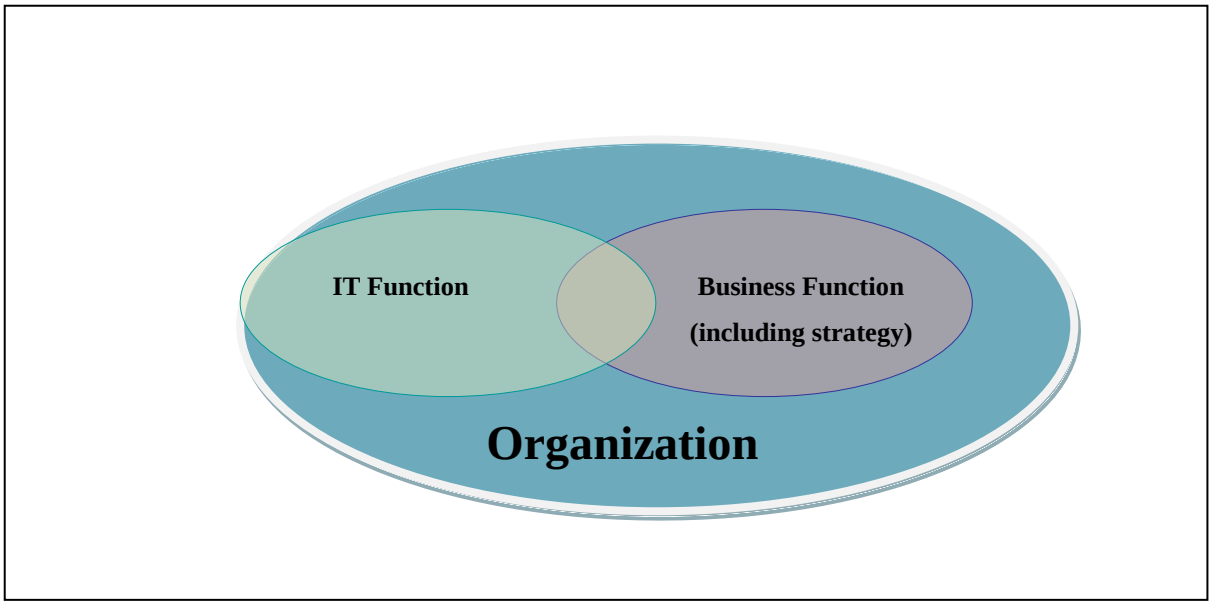

Figure *4:* The IT Function in the Organization

In an ITIL implementation project we argue that it will probably be purposeful to involve the users to some extent when it comes to most of the aspects. Hence, we consider such projects to be mixed projects, having elements both from the specialist approach and from the process approach. Some aspects, such as setting up ITIL-compatible software, may wisely mainly employ specialists or experts, so that the expertise and technology-knowledge of a few skilled technicians is used in the best way. Other aspects of an ITIL project, probably most aspects, will benefit from a broader end user involvement throughout the implementation phase. The end users for ITIL projects will be the IT staff members who are going to use the system, processes, methodologies, etc. These IT professionals will in most cases be sufficiently interested and knowledgeable about the characteristics of the business and its IT service needs, so that a broad involvement of the end users will be fruitful in many situations, for instance when it comes to adaptations of the ITIL-recommended processes and activities to the specific organization.

3.2.4 Project Management

Project management can be divided into four tasks (Andersen et al. 2004):

1. Establishing a foundation for the project
2. Planning the project
3. Organizing the project
4. Controlling the project

Establishing a foundation deals with making clear what the project owner wants from the project, the purpose of contributing resources to dedicated activities. In this context it is vital to establish support from the base organization, so that it commits sufficient resources and backs the work of the project. If one succeeds in establishing an organization-wide understanding of why the project is undertaken, why it is beneficial to the organization, and what the expected deliverables and positive effects should be, a sound foundation for the project has been established.

The planning task includes arranging a purposeful schedule of what should be done at what time, with varying level of detail according to need, time frame and resource demand. To ensure progress in the project work milestone planning can be applied. A milestone is a description of a *state* that the project should be in at a certain stage. At the same time it is a checkpoint at which progress can be evaluated. A milestone plan shows the logical dependencies between the states. Sometimes, work on a milestone cannot commence before the previous milestone has been accomplished. However, often it is deemed necessary to start on the next milestone without the previous being finished. Milestone planning is not chronological, in the sense that one does not have to pre-define specific dates for certain states. Often the time perspective of the project seems more defined in retrospect, as actual completion dates for certain milestones can be moved along the way, as new or unexpected events or problems occur. The rules and the timing of milestone planning can vary from project to project, and if you understand one way of denoting a milestone plan, it may not necessarily be a universal way of working with milestones.

Nonetheless, Andersen et al. (2004) have positive experiences from milestone plans functioning as an effective way of communication between the project and the base organization. Milestone plans have proven to be efficient in making line management aware of the achievements expected by the project at certain points in time, as well as making the relationship between different future project states clearer. Thus, milestones can contribute to making the base organization more involved and interested in a project, as well as enable it to control or overview the project better. The commitment by the regular organization could even become so strong and positive that base-organization members involve themselves in the project by offering their advices by remarking logical flaws or omissions in the milestone plans.

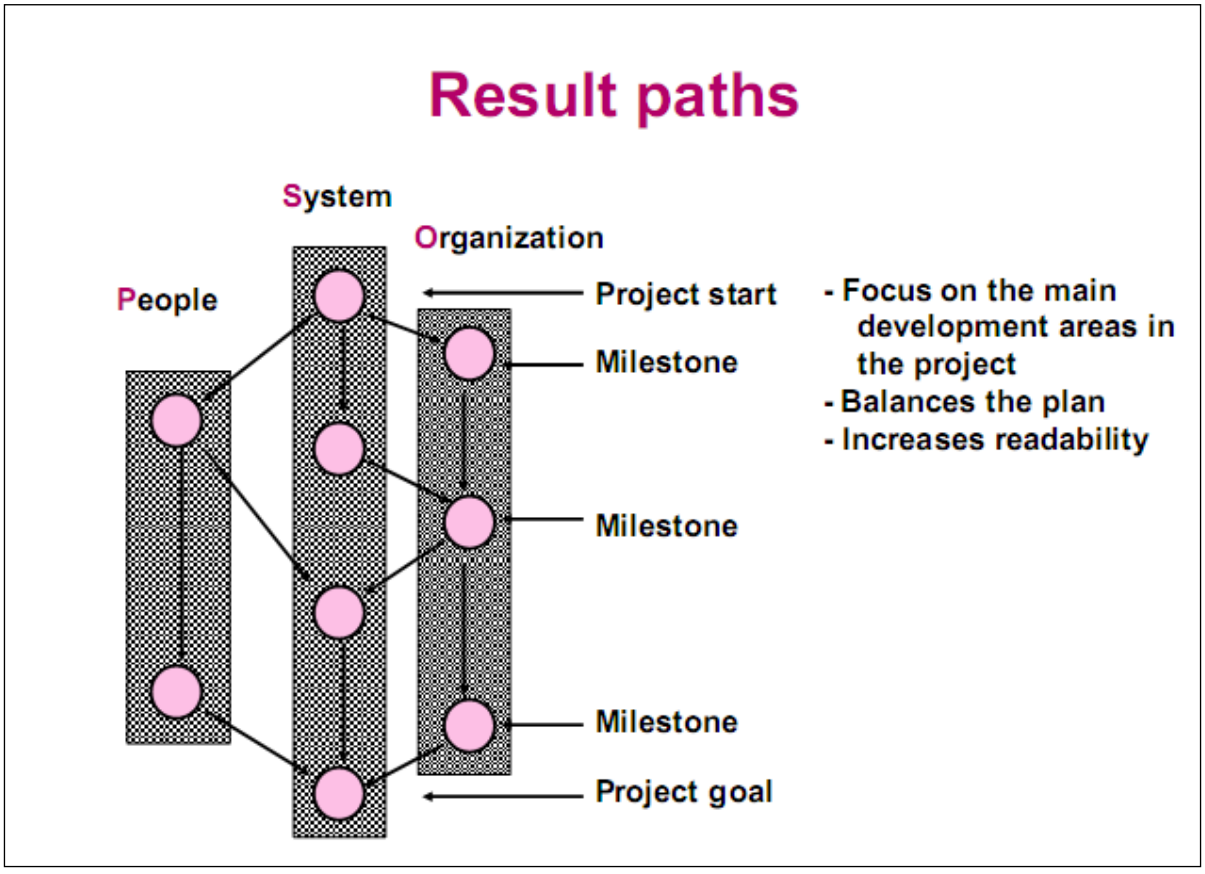

Figure 5: PSO and Milestones Combined

To maintain the necessary broad focus in projects, Grude (2010) suggests having milestone plans for each aspect of PSO, one for People, one for System, and one for Organization, with dependencies between them(See figure 5), e.g. ensure a minimum progress within one area before another area progresses beyond a certain level. If an ITIL specialist project for instance is driven by the technical development of processes and pertaining software procurement/development, one could agree on system milestones that concur with a certain development of people and the organization at certain pre-defined points in time. Hence, people will be made aware of what is being developed and given the chance to give feedback and opinions before the project progresses on the technical side. Necessary organizational development could also be accommodated or probed before the development of people and system features are continuing further than what is considered appropriate. The Goal Directed Project Management terminology stresses the benefit of having plans at a global level, thus focusing on the aggregate goal of the plan and not the specifics about *how* to reach that goal. By so doing activity level changes or change of the methods used along the way do not have to imply changes to the global plan and the milestones associated with it. If a plan seems to change content or structure often, it will easily be taken less seriously by the stakeholders and lose legitimacy as an effective project management tool.

The execution of the project then aims at matching resources with tasks in a timely manner, this being the *organizing* task. Now, the advantage of having a plan that guides the execution should become clear. Organizing the project includes delegation of tasks among project participants. To make the delegation of tasks easier, we believe a good preparation could be to have the participants work together in teams and letting them get to know each other before the project commences. Lastly, through the *controlling* task the project is to be assessed against the plan, and if it is found to be delayed or not executed properly according to how it was planned, necessary actions have to be taken. Such actions could be to move deadlines to a later date, re-allocate resources, improve cooperation by changing the set-up of teams, change the activities or methods used (preferably without changing the aggregate goal, as discussed earlier) or similar actions.

3.3 Change management

Andersen et al. (2004, p. 11) states that "a PSO project is a change process." This description of the link between project management and change management they analyze further; stating that a change process alters the people's environment and organizational understanding. The authors conclude: "consequently, project management is change management" (ibid., p. 11), a statement we are not completely in line with. We find this latter statement to be too absolute and bombastic, as we see the concept of project management as more tangible, with timelines, defined goals and milestones, while change management, to us, is more about the idea and structuring of the vision behind the change. However, by actively deciding to include the development of people and organization, as discussed earlier, project management and change management do converge.

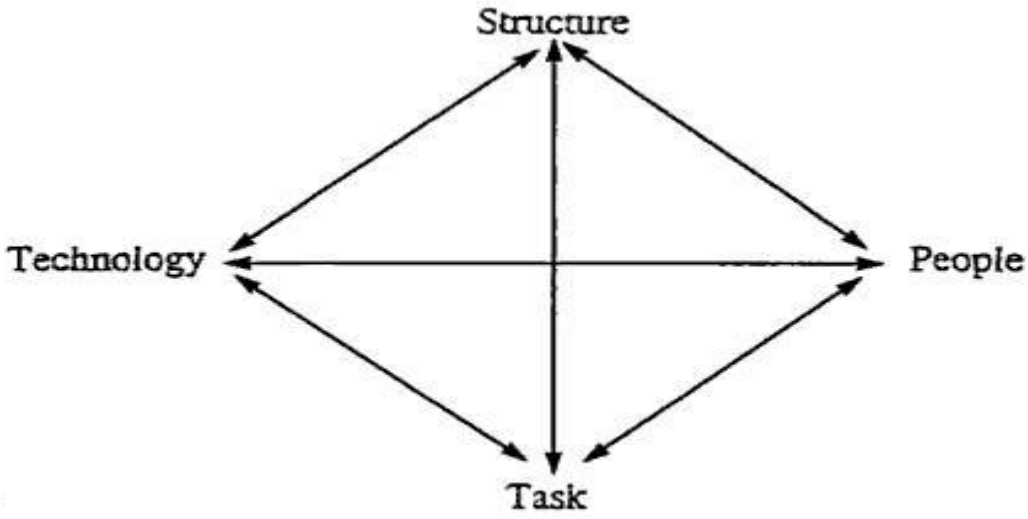

Figure 6: Leavitt's Diamond

Leavitt's Diamond model (Leavitt 1965) presented above is a commonly used model for systematically analyzing change. The four components of the model are *structure*, *technology*, *people* and *tasks*. Structure refers to the stable elements of the organization, e.g. hierarchic patterns, labor systems and communication systems. Technology is defined as manipulated problem solving mechanisms, e.g. machines, routines, rules and knowledge. The people element is defined as experience, education, attitude and motivation, etc. Task is described as production of goods, marketing and sale of these, finance etc. The interaction between these components is mutually dependent as shown in Figure 6 and they cannot operate isolated; change in one component may affect other components. According to this

model, change may then be approached from four different starting points. A structural change aims to improve the resource utilization, based on a want for change regarding power structure or working conditions. A technological change deals with efficiency and organizational structure problems. A task change aims at implementing changes in the work unit's tasks. A people-oriented approach aims towards change trough influencing the organizational members' attitude and behavior. We find this model useful since it creates awareness about how multi-faceted intertwined the elements of a change process are. However, the model is still quite simplistic, and we feel that there is still something missing.

Another change model, that can be used to find important factors for success in a change project, is the ISOMØST-model (Holmesland 1998). It takes the idea of the simple Leavitt model to the next level, developing it into an object-oriented search scheme for finding success and failure factors. The model formulates potential failure factors that can easily be reversed and understood oppositely as success factors. ISOMØST is a Norwegian abbreviation standing for each of the following seven object classes: *External environment, Technological, material and logistical components, Economic and financial circumstances, Info-logical fields, Social, organizational and human dimension, Tasks and Structure*. Considering these elements isolated we get seven possible reasons/categories for project failure or success, but if we combine each possible class with the others we get a maximum of 28 groups of reasons.

For instance could a certain project's success be particularly dependent on the external environment and the economic circumstances by needing government support for developing new technology, as well as being able to lend enough money from banks to have enough capital for research and development. We find the Social, organizational and human dimension particularly interesting in relation to ITIL introductions. In an ITIL implementation the factors that Holmesland (1998) mentions under this dimension are all highly relevant – factors such as willingness to learn individually, learning and evaluation in relation to the post-project, and database systems assisting organizational learning. It should be clear that these factors (and the other factor groups) can be failure factors or success factors, depending for instance on whether you achieve the beneficial learning or not. By now, we are starting to realize how complex project management can be, and how the success or failure of a project actually could become assessed differently by different parties, depending on the factors they choose to emphasize.

3.3.1 Resistance to Change

Resistance to change when implementing a new set of processes typically comes from the people that the change involves (Jacobsen 2004). An organization consists of people – individuals and groups of people, and there may be different factors governing their willingness to change: *individual*, *social*, *technological* and *structural*.

On the individual level there may be a fear of the unknown. This fear can be further divided into three under sections; fear of losing one's job, fear of losing one's identity in the workplace and the fear of not being adequate (ibid.). Another individual factor is the potential risk of unwanted increase in the workload because of the change/reorganization and/or required pertinent learning programs.

Social factors deal with the social systems within an organization, and potential changes in the relationship between the people in the organization (ibid.). One important negative result of a change process could be the loss of positive social relations, e.g. a regrouping forcing people to get to know and work with a new group. Another reason for resistance is "violation" of psychological contracts, when one has to acquire new information about how to relate to colleagues which takes time and effort.

Technological factors may also be a source of resistance, not necessarily always promoting effectiveness (ibid.). The cost of acquiring new technology is normally divided in two; machine and knowledge, the first dealing with sunk cost as a concept, leading to inertia in the change process.

Lastly, both the formal and informal power can change in the organization, making it an unstable organization and setting the focus temporary towards regaining the power status prevailing before the change. Structural factors deal with changes in the decision authority regime. Such changes can lead to reduced influence for the individual, both in practice and on a more symbolical level (ibid.). Distribution of offices, personal bonuses or benefits, and career opportunities may be at stake.

3.3.2 Criticism on Resistance to Change

The literature referred to in previous section may give a gloomy impression of people's attitudes and willingness to change. Are humans really that critical to changing their way of thinking and behaving when it comes to changes in the workplace? Not necessarily – Tronsmo (1998, p. 26) argues that it is equally correct to say that people are supporters of change, as it is to say that they are opponents of change. People have a basic need for stability, predictability, anchoring, identity, a place to belong, a need for safety and recognition. People need peace and harmony, but also challenges. Most people need to improve, stretch, test limits, learn, make use of resources and capabilities. Humans are creative, innovative, curious and eager to learn. "We need excitement!" as the article author claims.

This is an obvious truth in the real world, but often overlooked by academic treatments of the topic. The human mindset is not black and white, and regarding change it is important to acknowledge that people need both stability and challenges (ibid.). If a change has been a success or a failure cannot be judged until after the change, and even then it is not always easy to diagnose. Thus one can state that resistance is an ongoing debate, which then is a dialogue between the parties. By avoiding to think about the change process in a confrontational way, and instead consider the change process as an open discussion where critical feedback is exchanged, the discussion about what to change, how to do it, where to start etc. gives important information about problems and/or solutions potentially without being harmful to the people it involves (ibid.). In fact, it would be more terrifying to experience the opposite - not to experience any resistance at all, where nobody is interested in how the organization is doing, good or bad.

4. Applied methods

In this chapter we aim to give the reader a description of the methods we have chosen to apply to collect data for our analysis. We will also discuss reasons for choosing the methods, including drawbacks, advantages, and characteristics. In addition, the validity and reliability of this thesis will be deliberated. In attempting to model reality for the purpose of analysis we have collected data by applying a verbal structuring of the results of our interviews, thus applying a *qualitative method*. We have tried to back our qualitative findings with numerical results from our survey, thus also applying a *quantitative method*.

To combine two or more different data collection techniques results in the *triangulation method*. In our case, the in-depth expert interviews and the email based survey. As well as systematizing the qualitative information, "survey research may also contribute to greater confidence in the *generalizability* of results" (Jick 1979, p. 604). Another advantage of triangulation is that researchers can become more convinced about their results (ibid.). Saunders et al. (2009) indeed state that our chosen approach of triangulating quantitative data through a questionnaire with the qualitative method through semi-structured interviews is a commonly used and sensible approach.

4.1 Qualitative Method

Bogda and Biklen (1998) state that the two major types of qualitative research are *participant observation*, in which data is gathered in a natural environment through traditional fieldwork, and *in-depth interviewing*, in which open-ended questions are used to get detailed information from the interviewees. Since we have chosen to study ITIL in more general terms, and since the fieldwork approach is very laborious, we found the in-depth interviewing approach to be more appropriate, as well as more practical.

In studying something that is relevant for several situations, i.e. general, the informal qualitative interview is indeed a suitable method (ibid.). We are doing our research on such a general basis, in the sense that we are not looking at one particular ITIL implementation project. We have found this to be quite a challenging, but nevertheless interesting, approach.

The challenge lies in being able to understand the big picture and make sensible and tangible generalizations when analyzing the interviews. On the other hand, a general discussion of the ITIL framework we find more interesting than just studying one single implementation project, as we can get a more broad insight and learn from the extensive multiple experiences existing in the area.

We have chosen to interview three selected persons who share a particular interest in ITIL, both as practitioners and from engagements in the Norwegian itSMF forum. Thus, we believe that they can represent common perceptions and well-informed perspectives on the subject at hand. We believe that our informants qualify as being "a few *special* persons who are extensively interviewed and upon whose responses exceptional reliance is placed, and, thus, is to be most clearly distinguished from randomly or representatively sampled interviews" (Campbell, 1955). Therefore, we believe that our informants need not to be high in number, as long as their knowledge, experience and involvement in our research area are plentiful and useful to our analyses. This is backed by Repstad (2004), who states that the main criterion for choosing an interview object is that the person has relevant information for the research question at hand, whether it is opinions, knowledge, attitudes, experiences, or others. A term often used in relation to expert interviews is "tacit knowledge". We believe that our informants possess tacit knowledge in the sense that they have valuable information that they are not necessarily actively aware of. It is then our task to ask the right questions, interpret the answers, and in this way end up with a wealth of information from which we are to infer insights. These insights give us new and valuable information specific to our research questions.

Repstad (2004) continues to state that when the researcher finds his information need satisfied the number of interviewees may be considered sufficient. This satisfaction of course depends on the research question and the researcher's appetite for information. After three expert interviews we found ourselves quite enlightened and well-equipped with material to proceed to discussing and analyzing the interviews. Using a few respondents for generalizing usage can also be backed in the history of psychology, in which the collection of general knowledge was prescribed to be best attained by focusing on a few case studies (Kvale 2006).

4.1.1 Interviews

In choosing semi-structured interviews with open-ended questions we get the advantage of allowing the informants to answer from their own frame of reference, instead of being confined to a very strict and pre-defined structure of questions requiring a specific or brief answer (Repstad 2004, Bogdan and Biklen 1998). We found the flexibility of this relatively unstructured approach useful, as it allowed us to have enough structure to cover all the different topics we wanted to, but at the same time stimulate the interviewees to express themselves as freely as possible and thereby covering a wider specter of information, as opposed to a more rigid interview form.

We conducted three interviews with people coming from relatively different occupational backgrounds. Interviewee1 is a man who works as a consultant, helping businesses implementing ITIL during the last nine years. Interviewee2 is a woman who has worked with implementing ITIL within different companies, but mainly within an IT company providing IT solutions to other companies. Interviewee3 is a woman who currently works in the public sector, providing IT services to one of the largest Norwegian municipalities. However, she has many years experience from using and implementing ITIL in both public and private organizations. All of our respondents have previously been or are currently active on a regional or the national Norwegian itSMF board. Although our interviewees did not demand to be anonymous we chose it actively. The anonymity was chosen not because of privacy, but since we wanted to keep the reader focused on *what* the interviewees have said, not who they are. On request, the contact information of our interviewees can be given.

Each interview was conducted using a tape recorder and a digital recording device, to ensure documentation. The interview with one of the IT-departments was conducted as a video conference, as they are located in Oslo. The quality of the picture and the sound was good enough to compare it to a real-life interview. Therefore will the interview methodology referred to in this chapter also apply to our video-conference interview. None of our interviewees had any objections against the interviews being recorded, as long as we guaranteed confidentiality of the sensitive content. We did not feel that the recording made the situation particularly uncomfortable for any party, and it is our sincere opinion that our interviewees talked freely and gave a fair and truthful representation about the topics discussed. Since the recording freed us from having to franticly note down the answers, we

could follow better up on what was being said and cover relevant digressions off the main track better than we would have had without the tape recorder. In addition, we could focus better on the non-verbal behavior during the interview. Not only does the tape recorder document what is being said (intonation, emphasis, etc.), but also how it is being said. The non-verbal communication of gestures and facial expressions is easier to pick up if the interviewer does not have to take notes (Repstad 2004). Our experience is that there is a lot of information conveyed through the non-verbal elements of an interview, and being aware of this during the interviews made it a lot easier for us to interpret the transcribed pure texts and the understand the intention of the interviewee when analyzing the statements in retrospect.

We prepared the interviews by designing a general interview guide to be sent to every interviewee before we met them (Appendix C). We decided to send roughly the same interview guide to everyone. Very small adjustments were made to the guide after each interview, after we learned that some questions could be phrased clearer or more unambiguous. By keeping the interview guide as similar as possible allowed us to easier compare the statements between the interviewees, even though the digressional nature of a semi-structured interview weighs against this benefit. Our interview guide was made with a blend of keywords, specific issues we needed exact answers to and open questions to be discussed back and forth. We also adapted some of the questions from the interview guide based on the observation in during the interview. Our questions in the interview guide we based on the theoretical models from chapter 2 and 3, our acquired literature on ITIL and from working on the ITSM Monitor 2010 survey. We had for example statements that focused on the PSO-perspective from chapter 3.2.2; “Training of employees in relation to the ITIL framework (People), Adoption of ITIL software (System), Organizational Adaptation (relationship, responsibility, authority – Organization)” Others dealt with the perceived difference of introduction of ITIL between large and small IT departments, this dealing with the interviewees experience/knowledge in this field, thoughts on reasons and the distribution of roles within ITIL. Appendix C contains further explaining on the derivation from the theory and how the interview guide supports the research questions and propositions.

After each interview we summed up our thoughts and noted down essential keywords for our own use in the upcoming analysis. Thereafter, each interview was transcribed, as carefully as possible trying to give a written reproduction of the interview responses. The structuring of

the material in written form gave us a first overview, and the transcribing consequently in itself represents the first step towards an analysis (Kvale 2006). We chose to condense, slightly reformulate and adapt the orally performed statements to a more written language, as it might be expedient when the purpose is to get a general impression of the interviewee's viewpoints (ibid.). Repstad (2004) supports using quite hard-handed editing when the purpose is to collect relatively objective information. At the same time we were aware of the situations were non-verbal elements could be essential to understanding the true meaning behind the actual words being said.

All our interviews were conducted with the two of us present as interviewers. Only one person was interviewed at the time. Repstad (2004, p. 100) emphasizes the benefit of being two interviewers, since it allows one interviewer to follow the interview guide and ensures that all planned topics are covered, while the other interviewer can focus on the non-verbal elements of the conversation and think out improvised follow-up questions according to the situation and the interviewee's answers. We believe that we have been able to reap the benefits of being two interviewers, and that it also was an advantage in the process of interpreting the statements and agreeing on what certain potentially ambiguous statements implied.

4.1.2 Post-interview analysis

After the interviews we had around some twenty pages of transcribed interview text. We printed each transcription, using different formatting for each interviewee, easily recognizing any text fragment as being the statement of a certain person. Thereafter, we cut the interviews into fragments, i.e. answers to one or two questions, and sorted them preliminary into different categories envelopes. Most of the categories we had roughly imagined on beforehand, while some categories were adjusted or established as a consequence of the actual result of the interview responses. After all interview statements had been categorized, and put into an envelope, we revised the category setup. For instance, some categories were merged together into a more general or broader category. Some statements were found to be overlapping in content, and therefore we had duplicates of all the pieces of text. The overlapping fragments were put in both envelopes with cross-references between them.

The statements of each category envelope was studied carefully, and after obtaining an overview of the content we tried to express the central theme of the category as straightforward and clear as possible. The category content was then seen in view of our propositions, and we tried to find out how the statements could help us in discussing our propositions. Lastly, a reworking of each subject was made, to get even more accurate and relevant texts to work with in the upcoming analysis of our propositions. The original transcripts audio records were of course kept for reference, in case we needed to go back to the original texts at any time. This analysis procedure is inspired by Kvale's (2006) modified method of *meaning condensation*.

4.2 Quantitative method

Saunders et al. (2009) summarize the survey method as follows: "the survey strategy allows the collecting of a large set of data to be retrieved from a huge population in a resource-economical way." Using a representative selection of the entire population, the cost is lower than by collecting data from the entire population. Ensuring that this selection is representative can be done by working on the survey design, by testing the data collecting instrument, and by working for a good response rate. By using a questionnaire the data is standardized and can easily be compared and analyzed quantitatively by using descriptive or inferential statistics.

4.2.1 The ITSM Monitor 2010 Survey

The ITSM monitor survey we have conducted is a continuing survey first introduced at the itSMF conference in Norway in 2007 by Jon Iden. This survey was based on the survey conducted at the Australian itSMF conference performed by Cater-Steel and Tan (2005). Permission was obtained and adjustments were made for the Norwegian survey in 2007, resulting in a report by Iden et al. (2007). The 2007 survey was lacking in theoretical foundation, something Jon Iden improved for the 2008 version, based on theories of Business Process Change (BPC), IT's role in BPC, Business Process Management, Change Management and Process Reference Models.

In cooperation with our advisors Tore Holmesland and Jon Iden, the ITSM Monitor 2008 survey was examined, improved and updated. We removed some questions to make the required time to take the survey shorter. We also consolidation some questions, added a few new questions and improved the general layout. It is always a challenge to make such surveys as relevant, brief and as little tiresome as possible. This year all questions were specified to concern the respondents' own organization, not other organizations they had knowledge about or previously worked in. This was done to emphasize that we were looking for respondents in organizations that use ITIL (i.e. those having first-hand user experience with ITIL), not consultants and tool vendors. Some of the changes conducted were to accommodate ITIL V3 and its processes, as the previous survey only looked at ITIL V2.

Saunders et al. (2009) recommends having as few screens to click through as possible. To follow this guideline we narrowed down the amount of pages and questions in the survey, and routed some questions. For example, if one checked "No" to the question: "Did your organization consider to interrupt the ITIL-project during its implementation?" one did not get a follow-up question. We also used the routing option when dealing with the different countries' own currencies – after having checked which national itSMF chapter the respondents belong to, they are also automatically routed to the correct questions involving their currency later in the survey. By routing questions we avoided complicated sequenced (and possibly irrelevant) questions. We also tried to keep the questions precise and to avoid making them too complex. A great deal of effort was put into formulating and phrasing the questions in the most reader-friendly way.

The adaption to the sample made some natural changes to the survey necessary, like for instance to remove some of the response options in the question: "What is your position in the organization?" The removed options were Consultant, Information security manager, Capacity manager, Availability manager and Release manager. Some of the choices were also removed because of lack of answers in the previous ITSM Monitor surveys conducted, and we therefore believe that these options were redundant. New questions that we added to the survey were: "How would you describe your organization's business conditions during the ITIL implementation?", "Rank the significance of: The ITIL framework feels suitable for our organization's size", "The ITIL mindset has been hard to communicate to the IT staff", "The processes in the IT-department have been improved (and standardized)". These questions were made to illuminate our propositions.

When designing the survey we had a clear view at who the receiver was going to be. After discussions with our two advisors we came to the agreement to do the survey with only one participant per company and to exclude consultants and tool vendors. The decision to only have one participant from each company was based on the thought that it would prevent the big companies to become over-represented in the data, giving skewed distribution. Instead we asked to have the most ITIL-competent person of the company to do the survey. The exclusion of consultants and tool vendors were made since we wanted to find out about the implementation work done in the companies, not as much general ITIL experiences. These two issues will be further discussed in the validity and reliability section. It proved to be difficult to achieve such a sample of respondents, as some countries did not have the

resources to filter their lists according to our criteria. From Norway and Finland we got a list of respectively 3463 and 1401 individual e-mail addresses. Sweden and Denmark had correspondingly 104 and 139 e-mail addresses originally after having filtered their lists properly. These numbers rose to 1977 and 524 addresses correspondingly when Sweden and Denmark had to go back to their unfiltered lists. After removal of duplicated e-mails in the lists we ended up sending the survey invite to 7218 e-mail addresses in the Nordic countries.

Churchill and Iacobucci (2005) refer to a definition of the *response rate* being given by the number of completed questionnaires divided by the number of eligible respondents in the sample. Saunders et al. (2009) also mention this formula, but state that a more common way of doing it is by the *active response rate* formula. In this formula the respondents who have been unreachable are excluded from the denominator. In our case we got 557 automated responds after the first mail invite, divided among 224 undelivered report messages and 323 relating to people out of the office messages. The reminders gave us a number of 621, and 556 emails bounced back.

According to Saunders et al. (2009) the main attributes of Internet-mediated questionnaires are that they are suitable for computer-literate individuals who can be contacted by e-mail, something which also gives a high confidence that the right person has answered. The likelihood of contamination of the respondent's answers is also low, i.e. low probability of outside influence on the respondent. A web survey is an impersonal and anonymous channel for administering a survey. Such e-mails often end up in the junk mail, or just become deleted. We sent the invitations as an e-mail containing an introduction text, first in every country's own language, and then the reminders in just English and Finnish. In this introduction text we tried to state reasons for participating, what the purpose of the survey was and ensuring the respondents of anonymous treatment.

Recommended time to complete the collection of data from an Internet survey should be within 2-6 weeks from distribution, depending how many follow-ups and reminders to be sent out (ibid.). In our case we let the survey be active in 3 weeks, with 2 reminders. After the first week we got 262 responses, the second week gave us 115, and we ended up with a total of 446 responses.

When using the Internet, the size of the sample can be large and geographically dispersed, as in our case with an invitation to 7218 respondents distributed among the four Nordic countries. Saunders et al. (2009) further state that the likely response rate can be variable; up to 30% is reasonable within organizations and commonly 11% or lower using the Internet. The big and unfiltered e-mail list we had to go for made us change our view on the response rate – hoping for a high percentage seemed unlikely given the presumably low quality of our new list. Indeed, we got an active response rate of 6.69%. This is not a very high percentage, but the absolute number of respondents, 446, is still much higher than the absolute number of previous years' surveys, and should be high enough for inferring some general features of the ITSM and ITIL status in the Nordic region.

As we used an automated survey program (called QuestBack) our school already subscribes to, the resources to realize the survey and do follow-ups were kept at a minimum. We did experience challenges operating this program, as in automating the removing of the many e-mails bouncing back and removing respondents who did not want to participate. Doing a manual removal of e-mail addresses proved challenging as the program only allowed editing addresses by viewing 20 addresses at the time. When going through over 7000 addresses this would have become a very time-consuming job. We therefore decided to apologize for re-sending e-mail to those who got it over again without wanting it, since manual removal would be too time-consuming to be worth it.

4.3 Validity and Reliability

In this section we will discuss the credibility of our research findings. By looking at our research design we call attention to validity and reliability, which are important matters to be aware of in any kind of research.

Validity can be split into internal and external validity. The *internal validity's* goal is to represents the reality, which we mean that we have accomplished. We backup our conclusion about the reality check by the high number of participants in the survey, together with the responds from the three in-depth expert interviews. Even though the information that we gathered from the interviews could be enough to achieve a satisfying internal validity, the combination with the survey gave us an extra dimension in our research, and higher internal validity.

This study has been performed on a great number of participants keeping the possibility to generalize high, which is the goal of the *external validity*. It was conducted not only within Norway but also included Sweden, Denmark and Finland. Although one should be careful to say that a research result is possible to generalize outside one's particular research setting, it is possible to test the robustness of the research by doing a follow-up study. As our survey builds on previous years ITSM Monitor surveys we can see that our result does not point itself out, giving us an indication that the research may give the same findings when being repeated, being a measurement for test-retest reliability. We also strongly assume that other researchers would find the same results as we did in our observations. As we have triangulated with interviews we have the possibility to check for internal consistency reliability as well, as the two different approaches gave about the same results. From Saunders et al (2009) we interpret that these three concepts summarizes the central topic of reliability, i.e. consistency in the research findings.

Our interviewees did all participate voluntarily and were selected by ourselves. In this way we could ensure that our interviewees were of high knowledgeable standards and could therefore be used as experts. Our interviewees were or had been accessory in regional or national itSMF Boards. Some of the people that we contacted felt that they did not have the time or knowledge enough to participate in an interview, but these were positive to the

research and recommended other people for us. In one interview a different person showed up then originally planned, luckily for us this person also was of high quality for us. Another way for us to ensure that we had good enough interview objects was to make use of our advisor Jon Iden, who has very good knowledge of the ITIL community in Norway.

We felt that our interview objects spoke openly and with no strings attached, giving us the "right answer", and not a biased one. We did not experience any subject/participant bias during our interviews, being that our interviewees gave wrong answers to influence the result of the research. We also felt that we interviewed our objects in their own normal behavior pattern, increasing the consistency of the research. And consistency is a central topic when dealing with reliability,

We have both worked part-time as IT user supports at our business school, and are thus familiar with some of the very practical aspects of the IT function of an organization. Before we started writing our master's thesis we virtually had no experience with ITIL. One of us had attended an introduction course many years ago, but really had no relationship to the framework. However, we feel it has been useful to have experience from inside a small IT department. Though our IT department does not employ any of the ITIL processes as such, it nonetheless delivers IT services to its users. Understanding the delivery of these services has indeed been eased by our experience from working as IT user supports. When that is said, it could be that we have certain predispositions when it comes to how we look at delivering IT services. Perhaps could our view be dominated by the function we have had inside our IT organization. However, we have tried to keep this potential objectivity drawback in mind when doing our research, and thus believe that it has had minor impact on the quality of the thesis. We have tried to act as professionals, being aware of our interviewer bias, when doing the interviews and when interpreting the responses given.

Although this thesis is written by two Norwegian master students at a Norwegian business school we have chosen to write it in English. Although the original ITIL jargon has been translated into a Norwegian terminology list (itSMF Norge 2009), we know little about the use of this new terminology. The survey has been conducted in English to get a common language between the Nordic countries. This secures that nothing is lost in translation, and mixed up with local terminologies. The interviews are all carried out in Norwegian; citations used are translated into English.

5. Analysis and Discussion of Propositions

The analysis will be based on our study of ITSM and the ITIL framework (Chapter 2), and the background information we gathered through studying organizational theories, project and change management and the pertaining PSO perspective (Chapter 3). We will look at how what we have learned from the literature research corresponds to the experiences of our interviewees and the results from the Nordic survey. Based upon what we have learned from this process we will launch six propositions below. The purpose of the propositions will mainly be to keep the discussion structured and goal-oriented in answering and complimenting our aforementioned research questions:

How can ITIL be useful to organizations and IT departments, and how could it be introduced optimally to different organizations? In other words: Is there a universal introduction recipe?

How can one deal with the change process that ITIL initiates?

5.1 Propositions

1. Managing and improving processes becomes easier and more efficient with a sensible use of ITIL. The ITIL processes that are clearly related to the operational side of the organization are perceived easier to start with and commonly more well-developed in practice.
2. Several reasons are triggering organizations to choose ITIL. However, the efficient IT management it can offer through providing a common ITSM frame of reference is pivotal and the fundament for these reasons. The initiative may come from an internal source or from an external party.
3. The pure volume of the ITIL literature and the number of roles it prescribes makes the framework appear more suitable and easier to adapt to the larger organization. ITIL has indeed become a very broad-reaching framework, but is in essence still a hands-on tool for delivering IT services.
4. The success of an ITIL implementation depends on important inter-dependent factors such as management commitment, external consultants and accommodation of the PSO perspective.
5. A project, such as an ITIL implementation project, that will affect the people and the organization can benefit from using the PSO perspective. Therefore ITIL implementation projects require a careful approach to organizational and individual change. All change management processes are different and require different approaches, but there are experiences from implementing ITIL in the real world that can be helpful to others who want to implement ITIL in their organization.
6. An ITIL implementation project could benefit from broad participant involvement in some phases and a specialist approach in some phases, as suggested by the PSO perspective. The external view that a professional consultant can offer to the internal staff during an implementation project may be very valuable.

5.2 Implementing ITIL in the Real World

5.2.1 Process Management and Improvement

Many companies do not have a *structured approach* to managing their processes, nor any process-model maintenance practices. This is something our empirical findings have shown that ITIL can provide. Although most ITIL projects manage to introduce process thinking, Interviewee1 notes that it is not particularly common to end up with a structured approach towards the Continual Service Improvement literature or have some sort of regular revision of the processes after the implementation project. To understand this better, the introduction of the process and service perspective often means changing the *culture* of the organization, something which is very difficult to do in practice. Therefore, you cannot just say "here are the processes" and then declare the implementation for successful and complete. Quite the contrary, any successful implementation of the process and service perspective means working on the processes on a daily basis and make each individual constantly consider "how can I make my working day better". This is indeed often a challenge in an ITIL context – that the routines for improvement and revision of the processes are not good enough.

Most of the companies our interviewees have worked with have not had an *established practice for administering process models* before introducing ITIL. Our interviewees mentioned that if any practice exists, it could be that the organization has looked at COBIT (Control Objectives for Information and related Technology)[2] in relation to control objectives in the organization, but then from a management perspective, not directly related to how you work with the process models. Even though many businesses are not actively employing the ITIL way of continual improvement, Interviewee2, as opposed to Interviewee1, still believes that it is common for organizations to have some sort of relationship, formal or informal, to revising and improving processes. Her company is continually working on following up how the processes are being used, and they have measurements of the maturity of the processes enabling them to track their status on overall IT service maturity, with intervals of minimum once per year. To sum up, our impression is that it is uncommon to implement the Continual Service Improvement processes of ITIL.

[2]COBIT is an IT governance management and control framework, seen from the business point of view.

This is being backed up by our survey (Appendix A, Q17.3) – 32% have not even started implementing the CSI processes, while 38% are only at an early stage.

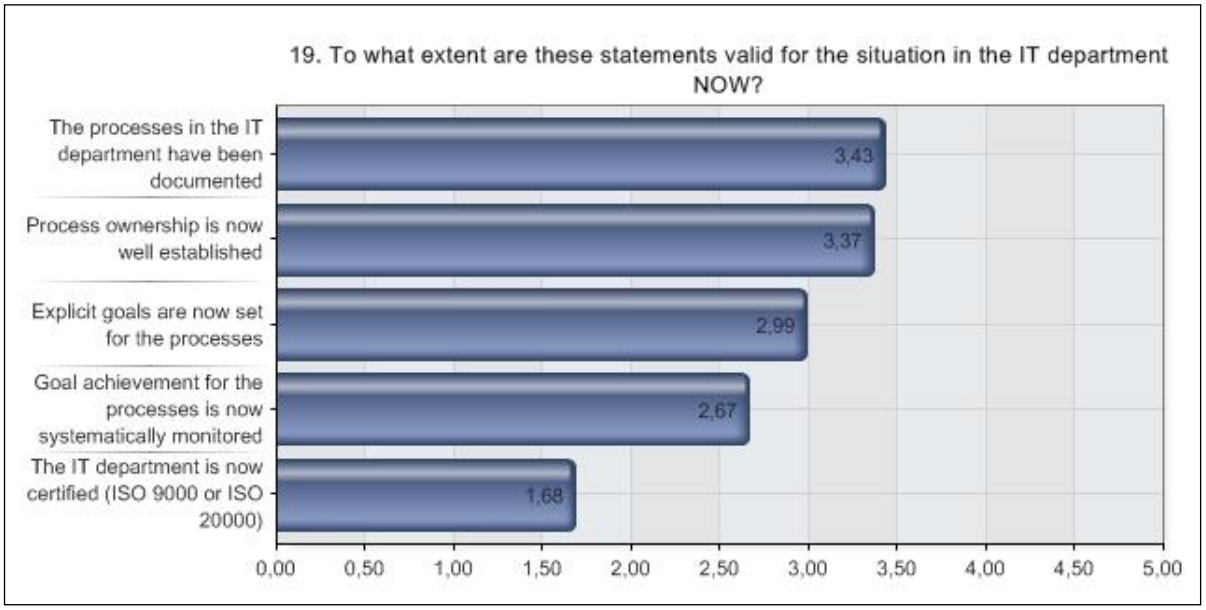

Figure 7: Achieved Process Improvements (Appendix A, Q19)

To give some empirical support to the process improvement discussion, we note that the most common result is to have the processes documented. Almost equally common it is to establish process ownership. To have explicit goals for each process and to monitor their achievements systematically, however, are of less significance. We find this to be a natural and expected distribution, since the two most common results are the essential core of ITIL – to define structured and predictable processes, as well as clarifying pertaining roles and responsibilities. As organizations mature and adapt more to process thinking they probably become more aware of also setting measurable goals for the processes, thus being able to monitor their outcomes properly, serving as useful input in the process of service improvements.

IT service maturity can be measured using internal metrics or ISO certifications. Interviewee2 noted that while ITIL is the most widely recognized framework for IT service management, it is not a certification that any company can attain; only individuals can become ITIL certified. The ISO20000 standard, which is based on ITIL to a large extent, but still different and less comprehensive, is possible for a company to adhere to and attain certification for. Thus, some companies may choose to only opt for the ISO20000 certification and have that as the main structured approach towards IT service management.

Specifically, Interviewee2 noted that her company uses ISO certifications (ISO9001, ISO14000, ISO27001) as a way of keeping the focus on measuring deviations and working on continual improvements, thus also relating the work to the Lean Management methodology, in addition to using the ITIL framework. In reality, however, we see that it is quite uncommon for most IT departments to prioritize ISO certification, with 80% ticking off the two lowest progression alternatives (Appendix A, Q19.5).

An ITIL project is often divided into sub-deliveries, starting with one process (Interviewee1). First, the organization's current process or task is mapped, then improvement suggestions are made and possible organizational changes or alignments are considered. The process work should not stop there; work on the processes has to be an ongoing concern - detailing, updating, and improvement should be considered at regular intervals or constantly subject to the scrutiny of the IT staff. Again, it is important to create a service-oriented culture or atmosphere, in which the IT staff sees the usefulness of adhering to the process-oriented way of working and are aware of the improvement potential, even if things seem to be working just fine at present.

In the Service Operation book, the *Incident Management* process and the *Service Desk* function are among the most commonly developed ITIL elements. As many as 70% of the respondents have reached an advanced stage, or completed these two Service Operation elements, as shown by Figure 8 and specified in Appendix A, Q16.2 and Q16.6. Another well-developed element is the *Change Management* process from the Service Transition book with an above-medium implementation progress of 3.35 (Appendix A, Q15.2), using the same comparable 5-point scale as in Figure 8.

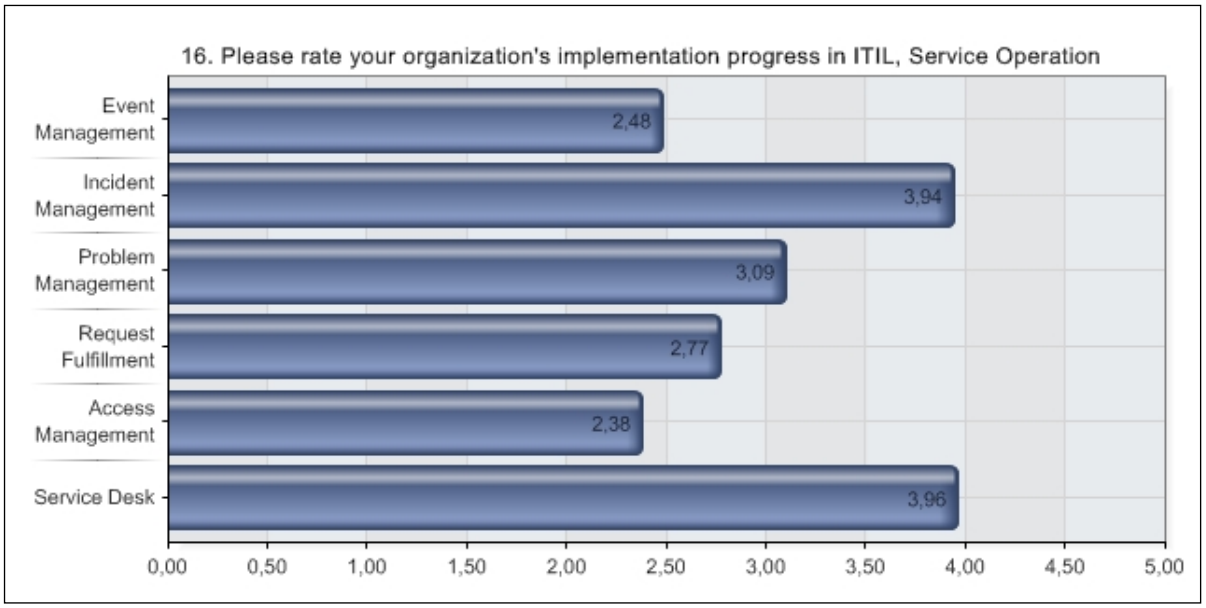

Figure 8: The Progress of the Service Operation Processes (Appendix A, Q16)

Interviewee2 thinks that the Service Desk function, the Incident and the Change processes are the *easiest to start with*, because they represent the least culture change and the fastest quick wins. These three focus areas are very easy to see the consequences of because they give a rapid positive effect to the operational stability. Interviewee3 agrees upon the focus on Change Management, as it provides control over the changes made in the organization, thereby preventing that for instance two people change the same system at the same time. She highlights the focus on operational quick wins through the means of decreasing the bureaucracy surrounding the processes, making the benefits of ITIL clearer. By introducing Change and Incident as a small first portion of ITIL, one can obtain a positive attitude in the organization towards the framework, improving the employees' view on the implementation.

Ideally, however, beginning with the *Service Catalogue* one finds out what one actually delivers, and why. In an ideal world one knows exactly what the company's strategy is, what the customers want, and then one appropriately defines a Service Catalogue. This mapping of IT services serves as prerequisite to further ITIL alignments. There was indeed consensus among our interviewees that there is a difference between what is normally being implemented first because it provides quick wins, and what implementation order you should have in an ideal world. They agree with the ITIL literature that you should ideally start by looking at the strategy of the organization, and then get an overview of the operational

services and their interdependencies, and have other necessary background information, before implementing the service management processes.

5.2.2 Why Organizations Choose to Implement ITIL

In addition to ITIL's pivotal role of giving structure to managing the organization's processes there are several other motivations for choosing to implement ITIL. Interviewee1 noted a related benefit being that it provides a *common reference* or tribal language for the IT department. One example is how ITIL differs between an Incident and a Problem, a difference which is often unclear in pre-ITIL regimes.

Another prominent reason for starting to use ITIL is that it is a *well-recognized framework for best practice* in the sense that companies are satisfied, and experience improvement of the business performance as a consequence of implementing ITIL (Interviewee3). However, it is important to be humble and admit that it requires time to implement the ITIL processes and make people work according to them appropriately; the maturity process of the organization is not to be underestimated. There is no point in implementing ITIL just for the sake of the façade. The goal of an implementation is to create a stable and well-functioning organization both for the sake of the business and for the individual employee.

All our interviewees have experienced that companies often introduce ITIL to *professionalize the IT department*. One underlying reason for this could be that the *users* or *customers* paying for the IT deliveries express dissatisfaction with some of the services provided by the IT unit to their business areas. Dissatisfaction could result in demands to the IT department on how to work and on improving the quality standards of the services. Interviewee1 talked about the help desk as an example; one can conduct a survey to measure the user satisfaction towards the user support offered, and perhaps conclude that ITIL could be a good idea, or the initiative can come from process owners or leader of the help desk as they want better interaction with the users. Interviewee2 stated that customers often demand that the company is using certain recognized processes and/or that it is ISO certified, and especially for those processes concerning the customers' own interface, e.g. Event, Incident and Change management. She noted that even though the market has not come far enough on

the Availability and Capacity processes, these are often also demanded from customers using her company for consultancy services, or as an ITSM tool vendor.

The want to professionalize the IT services could also come from the *internal IT staff*, without outside pressure causing the initiative. With the IT staff's overview and knowledge of their own organization, they may realize themselves that ITIL might be a useful way of ensuring the quality and consistency of the services they deliver. Some firms, as that of Interviewee2, have a process department which works with processes and the development of these. In such cases, any ITIL initiatives are likely to come from this department. Others get suggestions from their employees, for instance from the project owner. Employees could have been to courses or read about ITIL, thereafter wanting to improve their professional standards or organizational relations (Interviewee3).

Our survey shows that more than 70% of the respondents state that the organization's ITIL initiative came from the IT top manager or the IT operations manager (Appendix A, Q6). However, we believe it could often be hard to see the difference between the people having the authority to launch a project and the people that first mention the idea. In addition, these manager positions are being held by a majority of the respondents. Thus, 70% may be too high a number because of a possible self-serving bias by the respondents, i.e. that they take more credit for their company's ITIL initiative than an objective person would do.

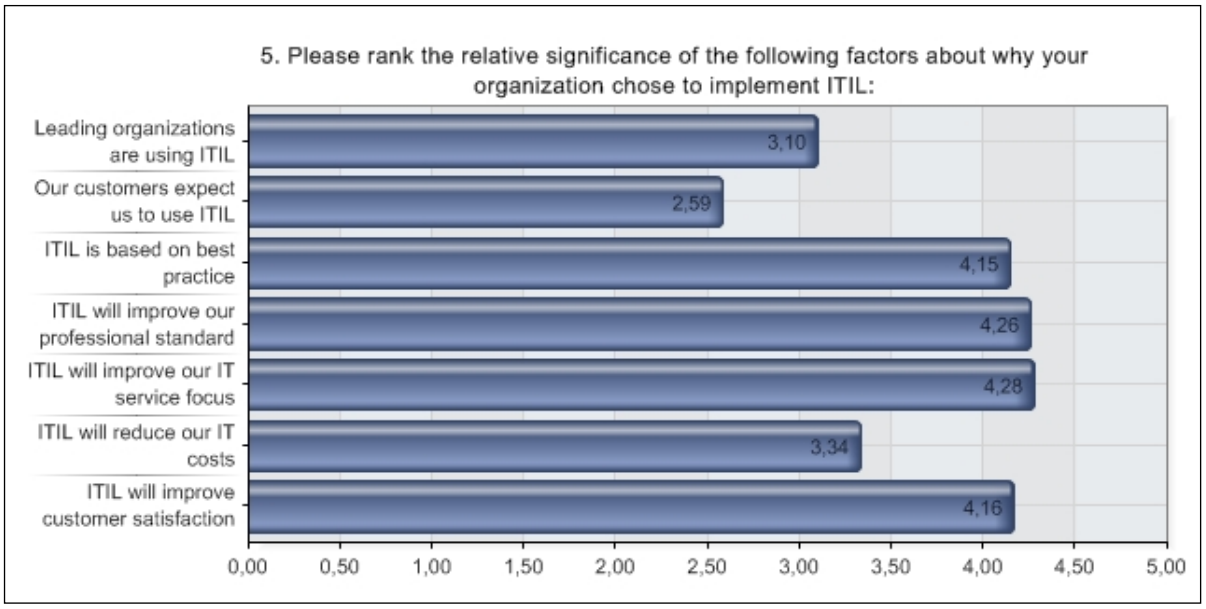

Figure 9: Reasons to implement ITIL (Appendix A, Q5)

We can see from the results of our survey that there are four factors that stand out as important for why the organizations choose to implement ITIL (Figure 9). These factors have also been emphasized in our interviews, but it is interesting to have them substantiated through quantitative measures. We can see that fundamental reasons of wanting a more professional standard and improving the IT service focus score the highest. These two reasons are solidified by the fact that they also score high as benefits provided by the ITIL implementation (Appendix A, Q18). Thus, it seems like there is genuine interest in the Nordic countries in making service management better, not only on the façade.

We learn from the survey that the user and customer satisfaction has improved (all above medium satisfaction, see Appendix A, Q18.1-2). This can be reflected in the above-average satisfaction also from the management and the IT professionals (Appendix A, Q20.1-2). In general, ITIL met or exceeded expectations among over 60% of the respondents (Appendix A, Q22).

5.2.3 Organizational Size and ITIL

Interviewee2 felt it was tempting to say that small companies implement fewer elements of ITIL. She knows about small companies that have implemented all of the ITIL processes, but to have focus on implementing all of them simultaneously is hard, and not a recommended modus operandi. This is something that was backed by our other two interviewees. Interviewee1's experience is that small companies often feels it is hard to internalize ITIL, since it is understood as a framework which in principle is made for the large companies. He also thinks that it often is more common in practice that the large company implement ITIL than that the small company choose to implement ITIL. Interviewee2's IT organization, categorized as a large IT department, may serve as an example of an organization not having fully implemented ITIL. It has only integrated three elements, namely the Incident, Problem and Change processes. They are working with other processes as well, but on these three they are high up on the maturity scale. She therefore thinks it is unreasonable to believe that a small IT unit can manage to integrate and fully operate all of ITIL's 26 processes.

Contrary to what the organizational theory made us believe, Interviewee1 enlightened us on the topic, drawing from his experience; it is often harder to sell the ITIL implementation to

employees in small organizations, because of the close ties between the IT department and the business areas they support. One of the benefits with ITIL is the structuring of the relation between IT and business, but ITIL often goes against the guiding principle that many small IT departments is based on. That principle is to be a partner to a business area as well as supplying IT services. Here we see a clear conflict of interest between the IT employee and the businessperson, which often will be the same person in a small company. This person could perceive the ITIL implementation negatively, since it attempts to change his view on jointly managing business and IT operations. A change in the small company's authority structure as a result of ITIL may induce negative attitudes among certain people who get changed responsibilities. We therefore find reason to believe that an implementation project that is not able to sell the idea of ITIL to its employees may end up with poor results. One poor outcome could be that the formalization of ITIL processes will be followed strictly by the book, maybe to the extent that the formalization hinders effective responsiveness, quick communication and necessary decision-making, perhaps since the literature easily could seem overwhelming and the fundamental reasoning of process thinking could disappear in the wealth of information. Another poor outcome could be that the employees completely ignore the new regime, or do not follow it through, and continue working according to the old routines. A study by Iden (2008) actually showed a case of many employees choosing not to follow the new processes, even though they were implemented in the organization.

Some of the ITIL roles are hard to combine, but others should be no problem. Both at Interviewee2 and Interviewee3's company some of the key personnel have multiple roles, even though there are several people to divide amongst. These key people have to be aware of what role they are having in different situations. Interviewee1 mentions that the "Small-scale Implementation for ITIL V3" (OGC 2009) gives recommendations on the groupings of process areas, roles that are appropriate to merge, etc., but that the original framework is still perceived extensive and general, leaving many specific decisions open. Based on our impression of ITIL, we believe it is important to be pragmatic when combining roles, and look at the specific processes that the organization needs and adapt them to the current circumstances.

Interviewee1 said that smaller organizations have informal processes running all the time, since all organizations actually are doing the essence of ITIL by delivering IT services, but

to a more or less formalized extent. ITIL is only the sensible formalization of the IT service delivery. In the small company where everyone knows each other, you would continually do the processes on an ad hoc basis. There is no urgent need to formalize the process flow, since everyone knows what to do and who to contact. When the organization reaches a certain critical size, the need for formalizing the processes to achieve more predictability and structure in delivering services becomes clearer, as you do not want to rely on individuals as much anymore. Anyhow, small organizations will always benefit from the ITIL perspective on tasks and roles. Necessarily, in an SMB individuals are likely to combine multiple roles. But ITIL's linking of activities/authorities and roles will also be useful to the small organization to highlight "what is our organization actually doing?"

In relation to this discussion of ITIL's scope and applicability to IT departments of different sizes we will briefly discuss the future of ITIL as an IT Service Management standard. Interviewee1 believes that ITIL will not increase its scope additionally, but that it will become increasingly common to look at ITIL in conjunction with other well-recognized frameworks, as is already done by many companies. Roughly speaking ITIL says what you should do to deliver IT Services, i.e. which process areas to work with, while the Lean Management methodology deals with improving these processes by removing waste, i.e. non-value adding activities. Lastly, the Six Sigma framework gives you an approach to reduce the number of errors in your processes, i.e. how to reduce the number of deviations when delivering the services.

The lifecycle approach introduced in ITIL is perceived as an improvement from previous versions among our interviewees. This approach emphasizes looking at the big picture of service delivery – establishing coherent processes for each stage of the services' lifecycle: connecting the company's strategy to the design, transition, operation and improvement of the service. Interviewee1 believes that with the lifecycle approach it has indeed become easier for companies to maintain a continual improvement focus, even though, according to him, it still is common to see this aspect of ITIL being ignored or downplayed in the real world. Interviewee2 doubts that the OGC is willing to narrow down the breadth when V4 comes, but hope that they will provide more tips and guidance on how to make it accessible to all those being overwhelmed by the sheer volume of the books. She remarked, in line with the others, that ITIL is not a fully specified instruction manual for providing IT services, but

that you have to make wise decisions about which elements to implement and how to make it fit with your organization and its employees.

5.2.4 Critical Factors for Succeeding

All our interviewees agree that the success of ITIL is critically dependent on *management commitment*. They emphasize that it is not enough that the management say they support it, but also that they show it in their actions (Interviewee1&3). To *include everyone* who are going to be affected is another important success factor, as well as focusing on people's attitudes and make the arguments easily understandable and relatable for them (Interviewee3). Interviewee2 recommends changing attitudes through using the "what's in it for me" approach when selling ITIL to the employees.

Placing *good ambassadors* tactically in the organization or having people that *champion* ITIL is important since they can permeate the organization with positive attitudes and knowledge about why and how ITIL can make sense to them (Interviewee1). Indeed, Interviewee3 highlighted that enthusiastic people have a driving force that any ITIL project is dependent on. We understood that it is not necessary to have champions present throughout the whole project, but rather that they spread their enthusiasm towards the line. Those who initially were negative towards ITIL might very well end up becoming the most efficient ITIL champions and propagators of the service and process perspective (Interviewee1). This we will discuss further under the "Coping with Change" section. This paragraph has highlighted the importance of champions and management commitment. An additional critical factor that Interviewee1 mentioned explicitly was the importance of the PSO perspective, also to be discussed in a section of its own.

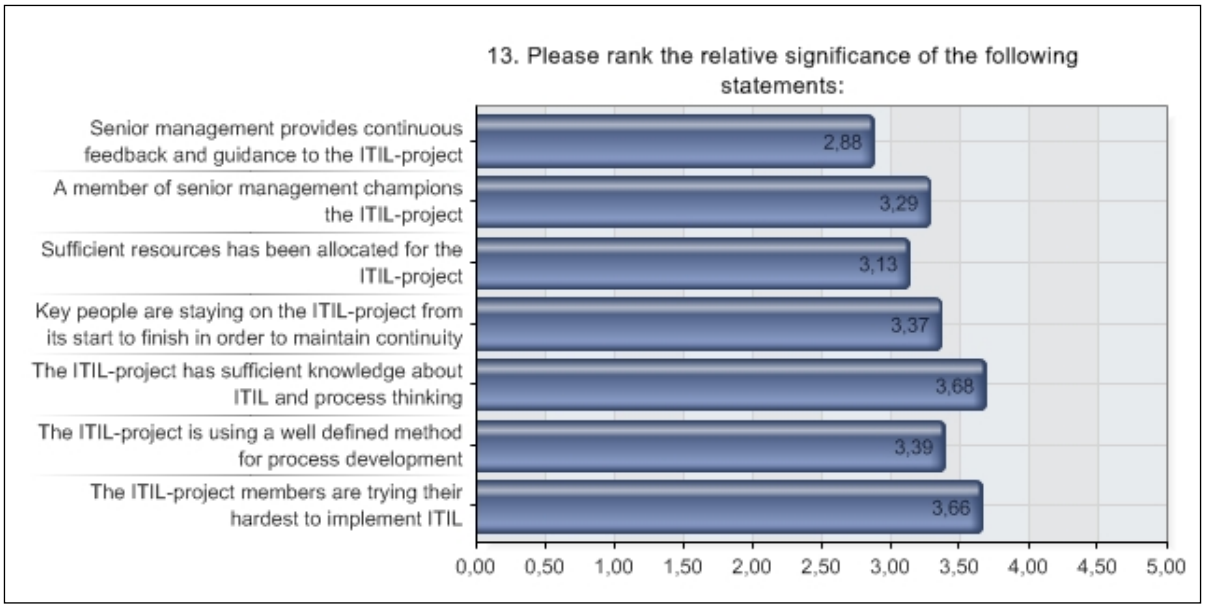

Figure 10: Success factors (Appendix A, Q13)

From the survey we get a quantified impression of the importance of different success factors, as experienced by the respondents themselves in their projects. The averages of the statements rank around medium or slightly higher, verifying that all of the success factors in Figure 10 are important. The two highest ranking success factors are that the implementation project has sufficient knowledge about ITIL and process thinking, and that the project members are committing themselves to the task (Appendix, Q13). We get a confirmation of the fact that it is necessary to both allocate enough resources, and having an enthusiastic approach, for instance by the presence of people championing ITIL. Champions do not necessarily have to belong to senior management, but could be ordinary project members or other people in the organization, as we understood from all our interviewees.

5.2.5 Change Management and the PSO Perspective

When introducing ITIL organizational change is often needed, something all of our interviewees recognized. Organizational change is closely linked to the people working there. People need time to change, and the organizations are often also differing when it comes to how flexible and prone to change they are. Power could be located at different places in the organization, being aware of this is important in a change process, and including both those with formal authorities and those with informal power is important (Interviewee1). Sometimes the ITIL process-alignment project entails changing the authority structure of the organization, and particularly the task of taking away power from someone could be challenging (ibid.)

Interviewee3 recommends introducing ITIL in a careful and gradual manner, not acting like a bull in a china store, but allowing for the processes to evolve over time. Most companies have employees skilled in their work, but who necessarily do not know ITIL, neither the terminology nor the practical application. In one case she referred to the management introduced ITIL in an organization without informing the employees properly about the philosophy behind ITIL and process thinking, but demanding the new rules to be followed to the letter. Such an approach made further work on the ITIL implementation a long and challenging struggle, resulting in resistance from the employees. To avoid such situations from occurring, one should prepare the employees for change by having information campaigns, introductory courses or certification seminars before introduction. The latter was done with success at Interviewee3's organization. Interviewee2 remarks that when major changes are done for a process at her company a training scheme is planned, making the role owners attentive to the upcoming changes.

In a traditional bureaucracy the authorities rest on the top of the hierarchy. Delegating authorities to lower-level employees, so that the individual employee can give the user/customer appropriate service in an efficient manner can make ITIL less bureaucratic and more purposeful to the organization (Interviewee1). Companies that have a bureaucratic orientation towards the processes may experience silent resistance; the employees find ways to get around the strict regulations and rigid form rules. Interviewee3 had experienced this in person, where strict documentation requirements and incompetent receivers of the documentation made her undermine the processes. The bad experience some employees

experience in unfortunate events can give two outcomes, some develop apathy because of the bad experience, while others learn from it and turn it into a positive experience. Interviewee3 accentuates the importance of keeping ITIL on a practical level to avoid making it a bureaucratic hindrance to purposeful service delivery.

Interviewee2 sees resistance towards change on a daily basis in her company, both concerning implementation and compliance. After the introduction of process thinking individuals may not cover the same authorities they had before ITIL. Employees inherently want to be indispensable, through having a position where they can show their expertise. A person could for instance have had the responsibility for three different areas before, and then end up with the responsibility for only one of the areas after ITIL. This person is often likely to want to show his competence still in all three areas, something which may come in conflict with the original purpose of dividing the roles between several persons.

Among a large group of people there is always a possibility that some persons will feel that the process is irrelevant to them. They are likely not to comply with the new mindset, as they may simply think in resignation "yet another management fad, what are they doing now?!" They will consequently not follow through on the process, as they do not think it is a good idea. This corresponds to the *apathy* phase of resistance, represented by the "Bend over, here it comes again" catchphrase. Interviewee1 had worked as a consultant for a company, where the employees realized the rationale of using ITIL, but they did not agree upon the operationalization of the processes. This kind of resistance can be categorized as what the theory describes as passive resistance, a type that is much easier to turn into something positive. The *passive resistance* was mainly caused by the fact that increasingly more power was moved from the line and over to the processes, a necessary step of ITIL, but risking to overrun the employees.

The challenge for our consultant and his project group in the case mentioned above was to realize that they had had too much focus on *processes and system*, and too little focus on the *organization*. People would continue to prioritize work towards the original performance measurements of the previous line structure. Ideally, the introduction of processes should be followed by also *changing what is measured* so that the new Key Performance Indicators (KPIs) and other metrics give relevant and valuable feedback that create the best incentives to increase the efficiency of the processes. Hence, with ITIL it is essential to evaluate

process activities and not only line activities. ITIL has recommendations and proposed measurements, aiming at process efficiency, and using the Balanced Scorecard perspective to get the necessary overall view on the organization.

By now we have realized that the organizational and people aspect of an ITIL implementation project often get downplayed. Our interviewees agree that it is challenging to get the employees to make process thinking an integral and natural part of their work day, and have them live up to the process-centered IT service approach. Interviewee2 said for instance that in her organization they should ideally start by drawing a process map, and then choose a tool, something which was often done in her early years with the company. However, after having chosen a tool, you could easily feel locked in, and feel limitations when it comes to developing new or redesigning existing processes because one has invested in a certain tool with certain capabilities. As business students we relate this to the concept of sunk cost. When the tool is bought and the company has invested in tool-specific training it will easily feel committed to continue using this software. Often you would then find yourself designing the processes more around the tool, than trying to develop the most purposeful process design in a more general sense, regardless of which tool is used to accommodate the process. In many cases process design can perhaps be done just as reasonable without the use of a certain specialized tool, which easily comes with high license, development, and/or training costs. The regular Office programs or equivalent already-acquired or freely available software may suffice in many situations.

Specialized software could put constraints on the design of the processes, i.e. the essential part of the system, and the software and processes could in turn be defining to the development of organization and people. Optimally one should focus on the coordination and development of all of them simultaneously. Interviewee2 admits that the soft side of an ITIL introduction often gets less attention, such as the aspects of attitude, behavior and culture. We believe that an essential part of successful process work should be working with peoples' attitudes throughout a change process, which is something we have found not always to be properly accommodated in the real world.

From his first project, Interviewee1 talked about experiences and insights learned there. This implementation project was difficult mainly because of the cultural factor, and resistance among the employees. The company focused narrowly on technology and not necessarily on delivering IT services of high quality. It was satisfied with the business-as-usual approach, which had worked well for so long. The introduction of processes based on ITIL in this organization progressed too fast for the people there to accept and adapt to the changes that were suggested. Being Interviewee1's first ITIL project, the cultural, organizational, and people perspectives were not emphasized enough by the external consultants. Due to the above mentioned problems, the project decided to take a break in the implementation. To make it work better at the second attempt, the project management decided to change the progress plan completely, planning for more time to root process thinking in the organization and allowing maturation of this concept with both the organization and its people.
Interviewee1 noted that the organizational structure habitually is not changed after ITIL, at least not in the beginning. Organizational change is associated with maturity and understanding the consequences of introducing process-oriented thinking. When you have introduced the processes you should start the work to highlight roles and responsibilities (ibid.). To define or redefine roles and responsibilities may also imply necessary changes to the organizational structure. However, changes to the organization are much harder to carry out, so the focus often remains on the pure work flow and implementing a tool. Such a focus is making life easier for the management, but may not necessarily be in the long-term interest of the organization.

Milestone planning is common for ITIL projects. However, the milestone planning is often focusing mainly on the technical development stages of process designs, implementation, software, etc. Hence, the system component of the project is often accommodated in the formal planning, whereas the Organization and the People components are under-emphasized. Interviewee2 mentioned that her organization uses employee appraisal meetings where the individual's competences and internal profile are updated. This supervisor-employee dialogue is, however, used as a general organizational way of dealing with its employees, and is not used for the ITIL project specifically. It is also our general impression that it is very uncommon to have milestones covering the whole range of the PSO perspective. We believe that such a broad perspective on the organization's milestone planning could make the structuring and management of the whole change project that an ITIL introduction represents easier and more predictable.

Let us sum up some of the aspects previously discussed that should be particularly relevant in relation to the PSO perspective. A pre-process-oriented regime often has a very hierarchic line structure when it comes to authorities and responsibilities. When the regime then becomes process-oriented, powers usually shift from the hierarchical line to the processes which often go across several (previous) command lines. This fundamental change in the design of service delivery is likely to affect all aspects of the PSO spectrum, and require them to be taken carefully into account. In many traditional organizations people are used to having one manager to answer for, and you are assessed on what you do for that particular manager. If one does not accompany the introduction of process thinking with the use of more process-oriented measures one will easily end up still measuring the work done in the line hierarchy, resulting in wrong incentives and a less successful ITIL alignment.

5.2.6 Participant Involvement and the Role of Consultants

As mentioned under the previous section, it is important to be humble and admit that it requires time to implement the ITIL processes and make people work according to them appropriately. Thus, the maturity process of the organization is not to be underestimated. There is no point in implementing ITIL just for the sake of the façade. The goal of an implementation is to create a stable and well-functioning organization both for the sake of the business and for the individual employee.

In ITIL implementations one may use a combination of broad participant involvement and/or a narrower specialist approach, as we discussed in theory under chapter 3.2 Projects and Project Management. Often, the process models are designed by a core team of the project members. It is common to hire one or two consultants to assist the organization in carrying out its ITIL alignment program. In addition one or to two internal people collaborate with the consultants within each process area. Even though the process development work may rest with the person(s) responsible for the process, not necessarily being the process owner, the development process and the pertaining milestone planning is often under the process owner's supervision. After process model suggestions have been developed they are tested or verified among a larger group of people, whether it is all the project members or the part of the organization that is going to be affected by the process introduction.

Our interviewees implied that the process development groups are rarely over five to six persons in total, a common size may be two to three persons. When that is said, these few developers have to have a good understanding of the base organization, either by being part of it and/or by acquiring the knowledge necessary about how the relevant parts of the organization work, and how the process could be adapted most expediently, also taking the people and organizational features, adaptations and preferences into account when designing the processes and choosing/developing pertaining software. The importance of including all affected people in the organization when the process is to be realized in the base organization is not to be underestimated. This is being thoroughly discussed under the PSO section.

Interviewee1 gave an example on how Incident Management could be introduced. The consultant would for instance be hired as project manager and be assisted by another experienced consultant, as well as the internal Incident manager and one or two internal employees from for example user support. These people would then work on developing the process, and at the same time plan for how it should be best aligned to the organization or how the organization could adapt to the process. During the course of the development there will be workshops and meetings with the involved parts of the organization, both at the stakeholder level, owner level, IT management level, and on the level of execution.

Common to all kind of projects is the challenge of freeing capacity from the base organization, and make it put aside sufficient manpower or other resources for, in our case, the ITIL project. The internal employees have to be involved to a significant extent, but not necessarily 100 percent in all phases. It varies a lot from situation to situation to which extent the employees are involved. It is important to create and root the ownership to the processes among the internal IT professionals, so that they become an internal driving force, often with the backing from external consultants.

Frequently, consultants are hired to *create progress*; to ensure that the models developed are meeting quality requirements and documentation requirements. As mentioned, projects often face difficulties in freeing people from the base organization to work on projects. Therefore, another reason for using consultants is lack of staff capacity. A third reason is that the IT organization itself lacks the knowledge about ITIL or process thinking, and wants to draw on the consultant's experiences from similar projects.

The role of the consultants is often to attend to and guide the implementation of several processes or process areas. In some projects the focus is more on the big picture or the adaptation to a very specific need that the company has articulated in relation to its ITIL alignment program. Besides, the consultants are often functioning as sparring partners to give the internal developers reality checks and feedback from someone with an outside-of-the-box perspective. The internal organization often has ingrained views on certain things, and Interviewee1 agreed that it can be very useful to have an external perspective on internal changes. In relation to the people or culture dimension, consultants who are not shaped by the political and informal power structures can be very helpful. By using external consultants one can avoid having internal employees of the perception that someone inside the organization with a personal interest or agenda, who may be accused of forcing their ideas through, favoring themselves or their part of the organization.

The consultants' participation usually decreases when and if the project reaches the phases of changing or adapting the organization. For the purpose of changing the organization, Interviewee1 believes that the internal project members should be the driving force. We find this to be a sensible approach since the internal people know the organization better and are the ones who shall live up to the ITIL adaptation once it has been developed.

Interviewee3 does not think it is more common to use consultants in SMBs. Interviewee2, on the other hand thinks it is more common for the SMB to use consultants. Even if the big organization has the premises to manage the ITIL implementation itself, still there is a cultural norm colloquially referred to as the Jante Law. In Scandinavian countries it is traditionally common to set a higher value on the achievements of the collective, while punishing those who stand out, by belittling and ridiculing the achievements of the individual. This social norm could make it particularly difficult for one or a few individuals in a large organization to stand out and single-handedly convince the organization that ITIL is a good idea. Then it may very well be worthwhile to hire external consultants. The consultant, who comes from the outside, is therefore easier respected as a knowledgeable expert, and not affected by the internal authority structures (informal as well as formal) and social norms, such as those of the Jante Law that often permeates organizations of a certain size. The impression from our literature study is that smaller organizations more often accept an individualistic and achievement-oriented culture. This SMB culture may even embrace

and welcome the initiatives of individuals that are not complying with the status quo, as the ability to constantly adapt to changes often is an essential property of the successful SMB.

Interviewee2 admits that a potential drawback of using consultants to a high degree is that it often is harder for an external person to create ownership to the processes. Initiatives originating from the consultant run the risk of being perceived as something that is forced upon the organization without including it properly, and without ensuring that the organization's people are consulted and given the opportunity to give meaningful feedback to the design of the processes. If such neglect of including the people and the organization happens, one will easily face internal resistance towards the change. Without including the people in the change process the ITIL project can become unnecessary challenging, possibly even a failure. Since we are of the impression that the perspective of including the organization and the people in the change process is often being neglected, we have chosen to emphasize it in our analysis under the PSO section.

Our empirical study shows that the organizations' resources will be spent quite evenly between the use of external consultants, ITIL software, and ITIL training (Appendix A, Q12). We consider this mix to be an encouraging picture of the reality, as it could be a promising, perhaps golden middle-way to divide efforts between investing in technical support systems, training the staff and getting outside perspectives from the consultant.

6. Conclusions

We have sought to provide the reader with an insight into some of the considerations that has to be taken into account when implementing ITIL in an organization, dealing with the adaptation of people, technology and the culture to the framework. Our focus has been to search for recommended practical implementation recommendations from IT professionals and ITIL users, seen in light of the theoretical background we have built up from reading organizational theory, project and change management theories, as well as the core ITIL literature.

We reciprocated the favor from the Norwegian ITSM practitioners who took part in our survey by updating them on the current status of ITIL and IT Service Management through preparing a few slides, to be presented for their annual conference at Oslo Airport in March 2010 (see Appendix B). Thus, we feel we have been able to share some interesting status and development features with our national ITSM community. In addition, we hope that our paper has contributed to the limited research on ITIL. It is indeed a widespread ITSM framework, but still there has been done very little research in the area so far.

Our thesis bears the subheading "Practice and Theory – An Empirical Study." We named it so because we wanted to do research on the framework both from a theoretical point of view, i.e. reading in the books, and from a practical point of view, i.e. looking at how the framework is actually used and interpreted in practice. Even though the OGC (2007a, p. 14) is aware of the possible "theory trap" as it states early on that an organization should *conform to* and *not comply* with ITIL. This is an often misunderstood difference, which may lead to an erroneous perception of ITIL. The major difference between the two is that a compliant follows the framework to the letter, while a conformant adapts the framework to realities. We and our interviewees (as well as the literature) recommend the latter; adapting the framework to the reality observed around the organization, and to adapt the methods by focusing on the actual value that ITIL can add in a certain situation. ITIL conformity is good only when done in a pragmatic and flexible way. An example of ITIL compliance is the use of an external ITSM standard. One of our interviewees said that her organization used ITIL as a means to achieve ISO 20000 standardization, something which seems a sensible

approach since this ISO standard is based on ITIL thinking, but represents a kind of mini version of the comprehensive ITIL framework. Eventually one can go beyond the minimum requirements of the standard, i.e. look at other elements of ITIL, when/if the ISO elements become well integrated and welcomed by the IT staff.

6.1 Answers to Research Questions

1. *How can ITIL be useful to organizations and IT departments, and how could it be introduced optimally to different organizations? In other words: Is there a universal introduction recipe?*

The answer to this research question should hereby be enlightened thoroughly through our analysis. ITIL is useful through giving a common frame of reference, or "tribal language," to work with, so that operations can be run more systematical, smoothly, predictable, traceable and analyzable. The benefit of the framework may be easier to realize for the relatively big organization with enough resources and staff to accommodate the relatively elaborate framework. However, also smaller organizations could benefit from the fundamental concepts of ITIL by for instance having standardized ways of working, such as defining incidents and problems differently and dealing with them accordingly. Nevertheless, ITIL needs adaptation and a pragmatic approach for it to work purposefully in a specific situation. In other words, there is no universal introduction recipe.

Nonetheless, there are ITIL-specific pitfalls that one can strive towards avoiding. One reason mentioned briefly already is the "reading the books without seeing the red thread" – implementing the ITIL processes without much attention to the philosophy of making the organization work smarter and quicker. ITIL is a sophisticated framework which needs a realistic time schedule and methodical introduction; it is not desirable and feasible to implement it quick and easy. Pre-introduction campaigns to prepare and involve the users for the implementation can aid the transition.

2. *How can one deal with the change process that ITIL initiates?*

A change process such as the one an ITIL project is likely to initiate will always be time-demanding and challenging. Besides, there is no "key recipe" to introduce ITIL successfully, since all organizations, people, business needs and circumstances may vary a lot. One essential aspect of managing a change successfully, however, is to focus on the whole spectrum of the PSO perspective. There is no doubt that many real-life ITIL projects focus too much on the technological aspects, whereas they could gain from a more balanced and simultaneous emphasis on changing the people and the organization that are going to be the users of the system. The cause is understandable, but not acceptable; the processes and methods in the ITIL literature are easier to intend to introduce since they are written down black-on-white. However, dealing with the vague and more intangible pertaining mission of changing and adapting the way the organization and its people think and behave is much harder. Yet these last "soft" aspects of the change process are of crucial importance to the success of any ITIL implementation. In any case, a gradual implementation is the commonly recommended approach, as ITSM thinking requires maturation in an organization. In addition, experts may ease the change process as they often view the organization differently than those who have worked there for a long time. With the help of consultants' experience, their out-of-the-box ideas and perspective the IT management may come up with a better way of implementing ITIL in a given situation.

6.2 Justifying Propositions

1. *Managing and improving processes becomes easier and more efficient with a sensible use of ITIL. The ITIL processes that are clearly related to the operational side of the organization are perceived easier to start with and commonly more well-developed in practice.*

This proposition builds upon chapter 2 where we give a brief, but to-the-point presentation of the academic field of IT Service Management, Process Management, and the core ITIL literature. The focus of this literature is that organizations could gain from thinking systematically about their IT service deliveries. Our empirical study has confirmed that there are undoubtedly potential gains from adhering to the current best-practice IT Service Management standard represented by ITIL. There were consensus among our interviewees about ITIL providing a useful structured and common framework which can spur coordination, efficiency and reliability of operations, as well as the long-term competitiveness of the company. Most real-life companies seem to prioritize to establish ITIL-compliant processes, whereas a structured approach to improving these processes is less frequently seen and/or comes with the maturation of the ITSM practices in the company. There are also ISO standards that are building upon the same principles as ITIL that can contribute to better management and improvement of processes. There is a clear trend that the operational processes of ITIL are commonly more developed in real-life organizations than other processes. It could even be a good idea to first introduce some operational ITIL elements to an organization since it quickly shows the benefit of the framework to those working in the IT department. Since the literature recommends first looking at the strategy of the company, then design the services, then make them ready for operation through transition, and finally review all the other processes through Continual Service Improvement processes, it could be a good pragmatic compromise to adapt the operations processes to the strategy (and the processes of Service Design and Transition) after Service Operation processes have been introduced as “quick-wins” early on. This is also discussed under proposition 4.

2. *Several reasons are triggering organizations to choose ITIL. However, the efficient IT management it can offer through providing a common ITSM frame of reference is pivotal and the fundament for these reasons. The initiative may come from an internal source or from an external party.*

This proposition is also based on our theoretical treatment of ITSM in chapter 2, as well as on our development of the survey in collaboration with Mr. Iden. We found both qualitative and quantitative backing of different motivations to implement ITIL. The fact that ITIL can give a standardized set of references for talking about and dealing with IT operations represents a major and fundamental benefit for the IT department that wants to control the quality, consistency and predictability of its services better. Even though the initiative may be coming from an external party it is important that the framework is internalized among the employees that are going to be object for the implementation. This is delved deeper into in the discussion of proposition 5.

3. *The pure volume of the ITIL literature and the number of roles it prescribes makes the framework appear more suitable and easier to adapt to the larger organization. ITIL has indeed become a very broad-reaching framework, but is in essence still a hands-on tool for delivering IT services.*

Based on our theoretical study of features of organization and communication in Chapter 3, as well as the ITIL literature we presented briefly in Chapter 2 we launch this proposition. Actually, the number of independent roles that ITIL prescribes makes it impossible to do a by-the-book implementation in an IT department with very few employees. We have indeed come to the understanding that it is probably easier for the larger IT department with more people and dedicated IT resources to start working with ITIL. However, few companies apply the whole framework, at least according to our survey, commonly one focuses on core processes or operational elements, at least as a starting point. The IT departments may also have their self-developed processes and working procedures side by side with ITIL, something which often may be complimentary and/or necessary.

Anyhow, there is much to gain also for small IT departments in looking to the best practices and common sense that ITIL is based upon, as long as one is able to wisely downsize the framework to fit the size of the department. We tried to present some guidelines on how to downsize ITIL, adapted from OGC (2009) in relation to the ITIL core literature presentation in Chapter 2. In any case, by now it should be clear that any company actually *must* adapt the framework to its own business needs and particular situation, regardless of size. ITIL has indeed developed its scope since version 1 and 2, but our understanding from talking to the interviewees and reading the ITIL literature ourselves is that it will probably not develop its scope much more beyond looking at the core of IT service delivery (and some related aspects). However, hopefully the OGC will make the literature more accessible to those being overwhelmed by the size of it today – either by publishing additional books serving as "ITIL for Dummies" literature or by reducing the scope of the current core literature (by for instance moving some parts to supplementary books instead). ITIL can suitably be complimented by other governance frameworks such as Six Sigma and Lean Management, and therefore there should be no need of extending ITIL's scope any more into the areas that these are covering.

4. *The success of an ITIL implementation depends on important inter-dependent factors such as management commitment, external consultants and accommodation of the PSO perspective.*

We base this proposition mainly on our work with the "ITSM Monitor 2010" survey, which in turn is based on Iden et al.'s (2007) adaptation of Cater-Steel and Tan's (2005) ITIL research in Australia. The hard part of ITIL is to understand to use it wisely without getting lost in the bureaucracy and be careful about the order and the speed of implementation. In our analysis we delved deeper into this issue, but still it is to be emphasized that all organizations are working with different tasks in a more or less systematical/purposeful way, or ITIL-compliant way, and hence differently prone to accepting changes an ITIL project would bring about. A common lesson from the practicing organizations is that it is probably easier to see the benefit and convince the employees of the usefulness of hands-on, i.e. the more operative, elements of ITIL, even though our experts recommend that it ideally probably would be beneficial to map the company strategy and the services delivered before implementing operative elements.

Some general hands-on implementation tips are worth mentioning: Include the users in the implementation at an early stage, promote the project and seek out driving forces within the organization who could become possible champions of promoting ITIL. Getting commitment from senior management lets the organization know that ITIL is a priority of the organization and is worth dedicating time and effort to learn. By introducing quick-wins such as the Service Desk and Incident Management, one could rapidly illustrate the potential positive effect to the operational stability, without too much organizational change in the beginning.

Although there is an ITIL certification system it does not necessarily mean that it suffices to get the IT staff certified. What matters is not how many test questions the IT staff has rehearsed for and gotten right, but it is how much of the ITIL philosophy one is able to realize in practice and adapt in a sensible way to the current situation. Besides, it would also be naïve to think that you are done when the implementation project has ended. Afterwards one should work on continuously improving the processes and be willing to change the way of working if conditions change or if one realizes even more potential of efficiency gain as the processes are run continuously and studied more carefully. A general lesson could be to introduce more of the Continual Service Improvement processes when the organization has implemented many of the other ITIL processes and they are working satisfactorily – our empirics show that the CSI processes are commonly undeveloped in the real world. It is probably caused by the fact that what seems to be working well is not worth changing. The long-run aim of ITIL introduction projects should be that each individual independently and together with colleagues is able reason, act and solve old and new problems within the ITIL framework's way of working and thinking. If this outcome occurs it is probably likely to materialize a long time after the implementation project itself has been finished.

5. *A project, such as an ITIL implementation project, that will affect the people and the organization can benefit from using the PSO perspective. Therefore ITIL implementation projects require a careful approach to organizational and individual change. All change management processes are different and require different approaches, but there are experiences from implementing ITIL in the real world that can be helpful to others who want to implement ITIL in their organization.*

We base this proposition on the project and change management literature of Chapter 3, particularly emphasizing the importance of applying a PSO perspective in change projects. The organizational literature review of Chapter 3.1 serves as background literature also here. As discussed under the answer to the second research question it is indeed a lengthy and demanding task to introduce ITIL successfully. Our interviews have confirmed that resistance is a common, and natural, reaction in many ITIL projects. However, as we deliberated in our analysis (and discussed in Chapter 3.3.2) resistance may be a (positive) expression of the employees caring about their firm just as much as stubbornness or inherent unwillingness. Most people do not like being managed into changing. A successful change is one where the individuals themselves want to change because they see the need and benefit from going through such a process. Most people like to develop their skills and improve their own and their organization's performance and effectiveness, so the resistance-to-change picture may not be as depressing as many change models assume.

Moreover, as mentioned also, all projects are different because they deal with different people, different organizations, at different points in time, and it is therefore hard to give concrete managerial recommendations besides focusing on developing and including the humans along with the more technical systems brought along with the project. Still, this is a very important realization that is overlooked in many situations, particularly when there is a strong technology focus in the organization from before. One concrete recommendation (that we originally found in Andersen et al. (2004), and was backed by our interviewees) to those organizations wanting to force themselves to pay enough attention to the whole PSO spectrum, is to define parallel-running milestone paths, with one path for each of the three aspects (as illustrated in Figure 5).

6. *An ITIL implementation project could benefit from broad participant involvement in some phases and a specialist approach in some phases, as suggested by the PSO perspective. The external view that a professional consultant can offer to the internal staff during an implementation project may be very valuable.*

This proposition is based on our literature review of ITIL and ITSM, and organizations and communication in Chapter 2 and 3 respectively. Specifically the project literature review of Chapter 3.2 (particularly Chapter 3.2.3) is very relevant for this proposition. During this read-through we came to the realization that many organizations are small worlds of their own. From our interviews we got the impression that most real-life development of ITIL process models are commonly being done in groups of limited sizes, often with no more than five to six members, of which one or two may be externally hired consultants. An ITIL project is dependent on the base organization granting it enough resources. At certain stages in the development it is recommended to test the models against the IT professionals that are going to use them to get relevant feedback along the way and improve the development progression. We learned from our expert interviewees that external consultants can be particularly useful in an early phase of introducing ITIL, and particularly when the internal employees has their own (perhaps biased) views on their own company's operations, one could positively be aided by external consultants, who are competent and can provide fresh ideas on how ITIL can be used in the best way for a certain business in a certain situation. The consultants are also likely to have their own developed methods for dealing with organizational changes, and they may also have worked on similar projects, thus serving as excellent sparring partners.

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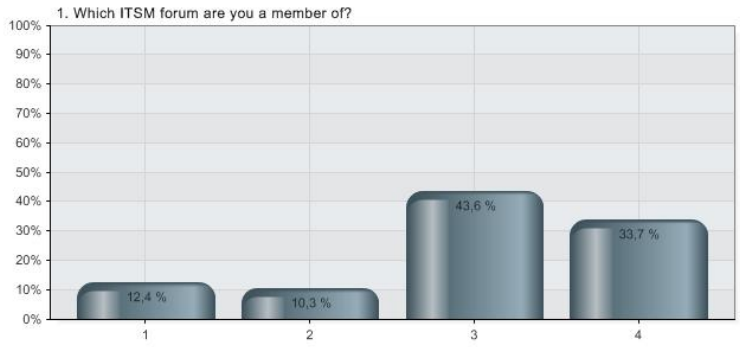
Appendix

Appendix A: The ITSM Monitor 2010

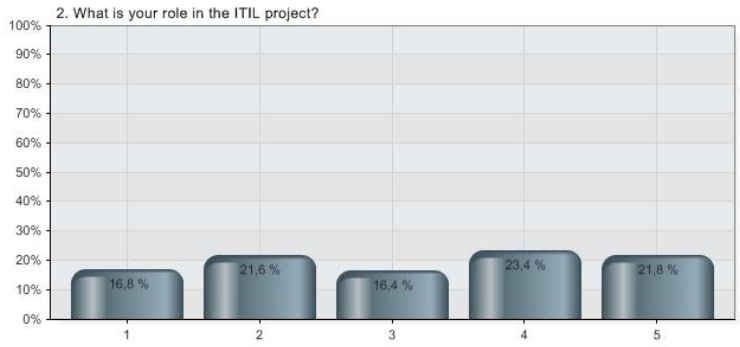
445 responses (445 unique)

1. Which ITSM forum are you a member of?



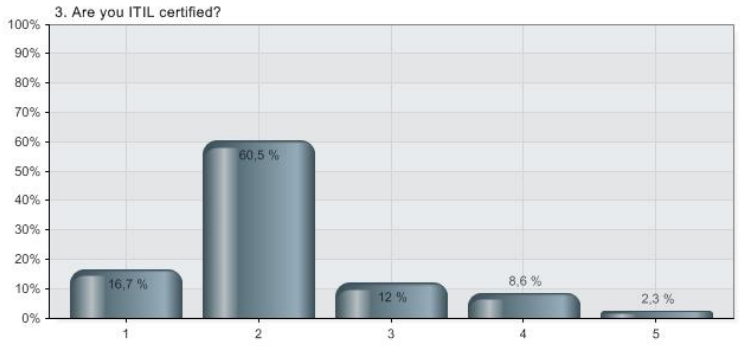
Alternatives	Percent	Value
1 itSMF Denmark	12,4 %	55
2 itSMF Finland	10,3 %	46
3 itSMF Norway	43,6 %	194
4 itSMF Sweden	33,7 %	150
Total		445

2. What is your role in the ITIL project?



Alternatives	Percent	Value
1 Project owner	16,8 %	74
2 Project manager	21,6 %	95
3 Process developer	16,4 %	72
4 Process owner	23,4 %	103
5 Project member	21,8 %	96
Total		440

3. Are you ITIL certified?

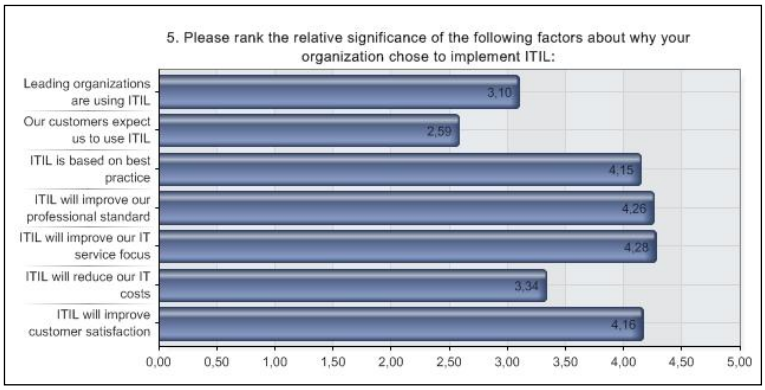


Alternatives	Percent	Value
1 No certification	16,7 %	74
2 ITIL Foundation Level	60,5 %	268
3 ITIL Intermediate Level	12,0 %	53
4 ITIL Expert	8,6 %	38
5 ITIL Master	2,3 %	10
Total		443

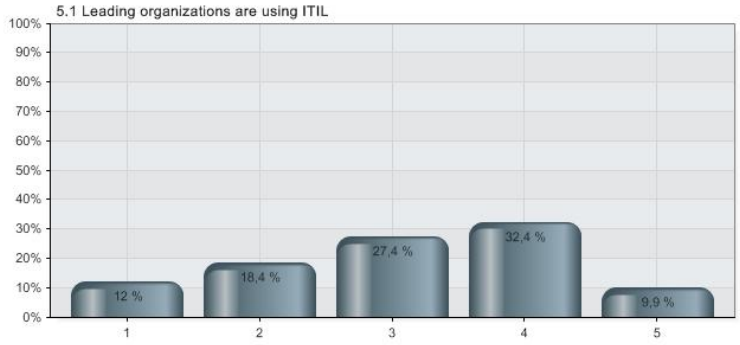
4. How many years have you been working with ITIL?

Average: 5 years.

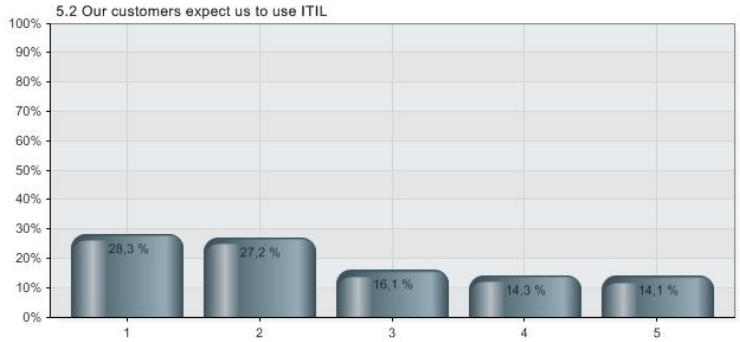
5. Please rank the relative significance of the following factors about why your organization chose to implement ITIL:



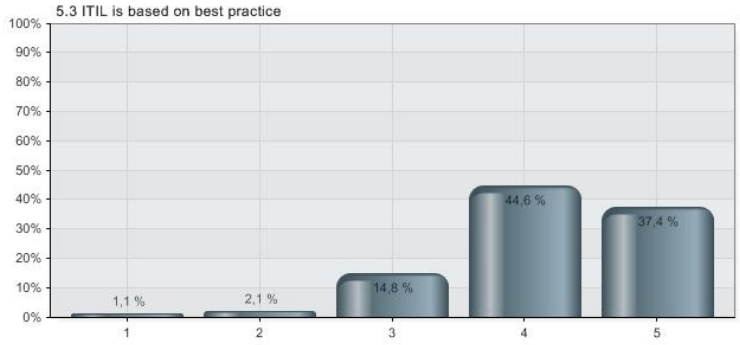
5.1 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - Leading organizations are using ITIL



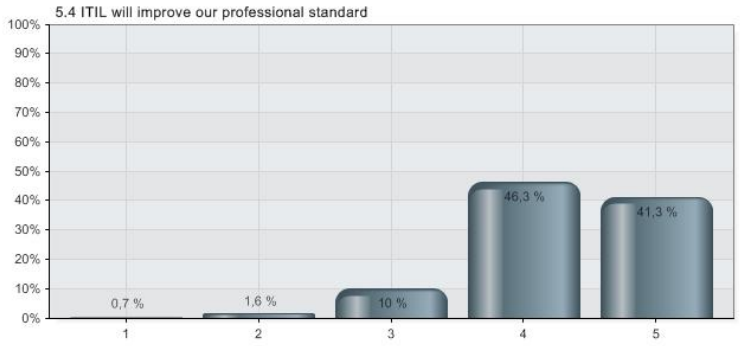
5.2 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - Our customers expect us to use ITIL



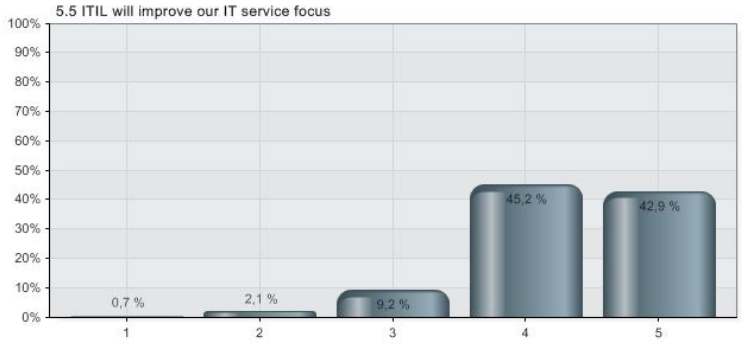
5.3 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - ITIL is based on best practice



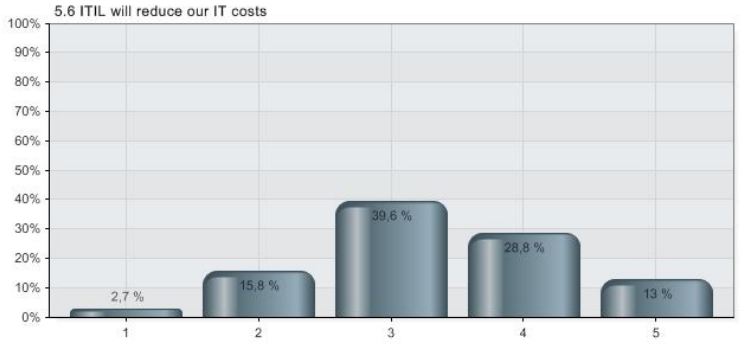
5.4 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - ITIL will improve our professional standard



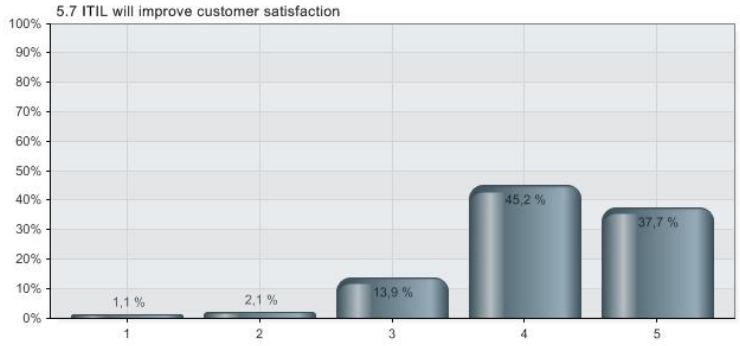
5.5 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - ITIL will improve our IT service focus



5.6 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - ITIL will reduce our IT costs



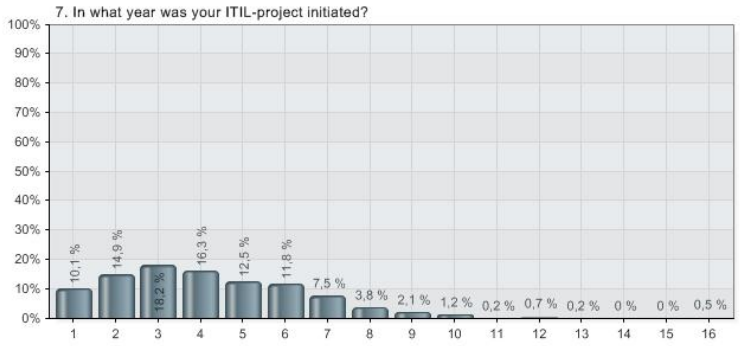
5.7 Please rank the relative significance of the following factors about why your organization chose to implement ITIL: - ITIL will improve customer satisfaction



6. Who took the initiative to introduce ITIL in your organization?

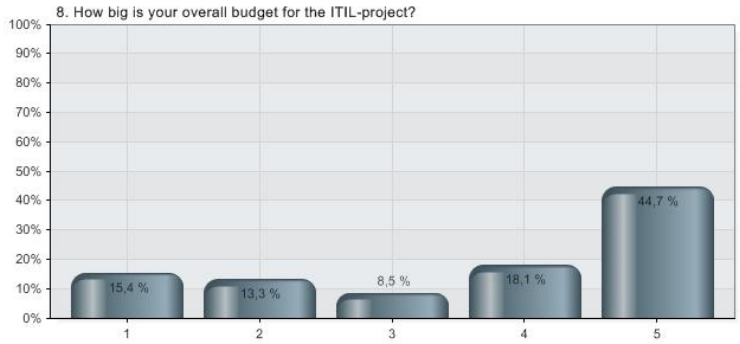
Alternatives	Percent	Value
1 CIO / IT top manager	43,1 %	188
2 IT Operation manager	29,4 %	128
3 Member of the staff	10,1 %	44
4 A process owner	6,2 %	27
5 Business relationship manager	1,6 %	7
6 Quality / process management department	7,1 %	31
7 External consultant	2,5 %	11
Total		436

7. In what year was your ITIL-project initiated?



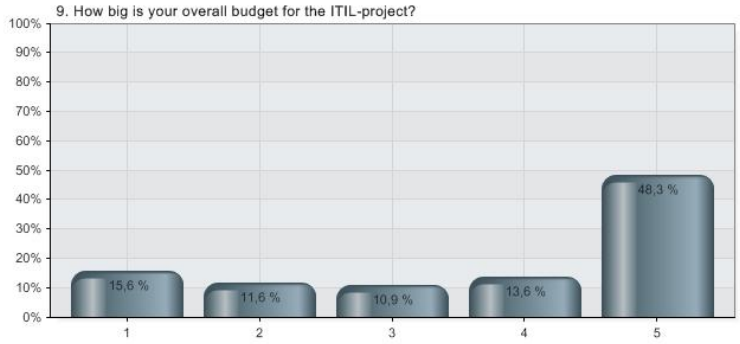
Alternatives	Percent	Value
1 2009	10,1 %	43
2 2008	14,9 %	63
3 2007	18,2 %	77
4 2006	16,3 %	69
5 2005	12,5 %	53
6 2004	11,8 %	50
7 2003	7,5 %	32
8 2002	3,8 %	16
9 2001	2,1 %	9
10 2000	1,2 %	5
11 1999	0,2 %	1
12 1998	0,7 %	3
13 1997	0,2 %	1
14 1996	0,0 %	0
15 1995	0,0 %	0
16 1994 or earlier	0,5 %	2
Total		424

8. How big is your overall budget for the ITIL-project?



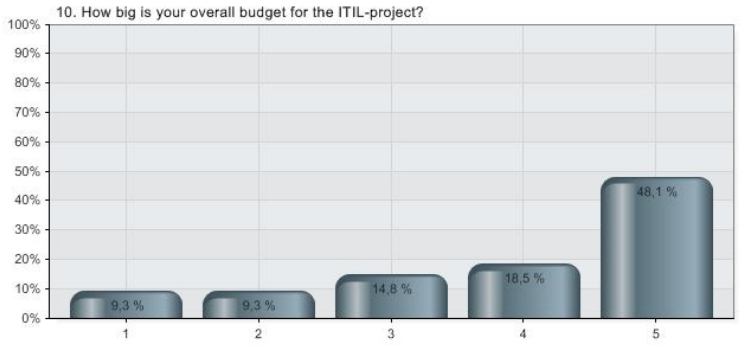
Alternatives		Percent	Value
1	Less than 500.000 NOK	15,4 %	29
2	500.000–1.000.000 NOK	13,3 %	25
3	1.000.000–3.000.000 NOK	8,5 %	16
4	More than 3.000.000 NOK	18,1 %	34
5	No specific budget	44,7 %	84
Total			188

9. How big is your overall budget for the ITIL-project?



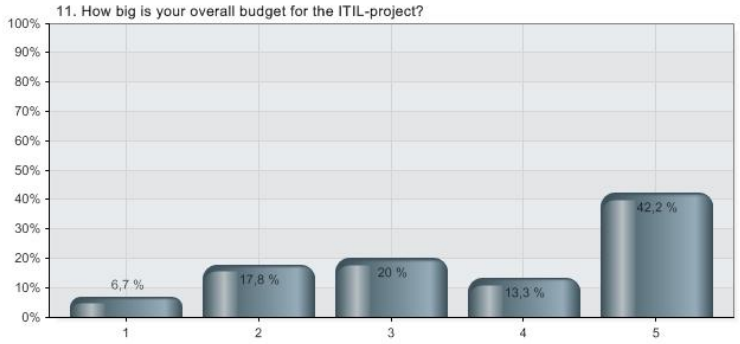
Alternatives		Percent	Value
1	Less than 500.000 SEK	15,6 %	23
2	500.000–1.000.000 SEK	11,6 %	17
3	1.000.000–3.000.000 SEK	10,9 %	16
4	More than 3.000.000 SEK	13,6 %	20
5	No specific budget	48,3 %	71
Total			147

10. How big is your overall budget for the ITIL-project?



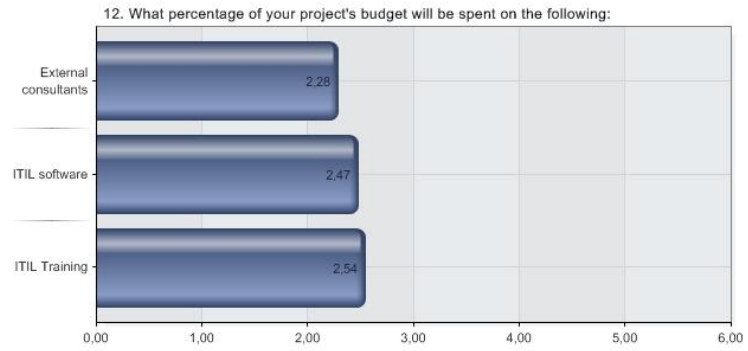
Alternatives	Percent	Value
1 Less than 500.000 DKK	9,3 %	5
2 500.000–1.000.000 DKK	9,3 %	5
3 1.000.000–3.000.000 DKK	14,8 %	8
4 More than 3.000.000 DKK	18,5 %	10
5 No specific budget	48,1 %	26
Total		54

11. How big is your overall budget for the ITIL-project?

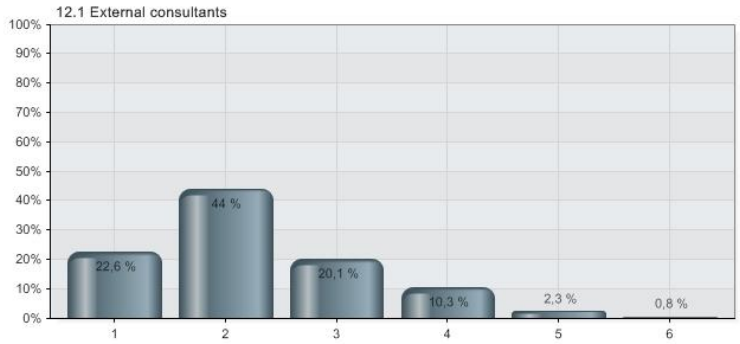


Alternatives	Percent	Value
1 Less than 50.000 EUR	6,7 %	3
2 50.000–100.000 EUR	17,8 %	8
3 100.000–300.000 EUR	20,0 %	9
4 More than 300.000 EUR	13,3 %	6
5 No specific budget	42,2 %	19
Total		45

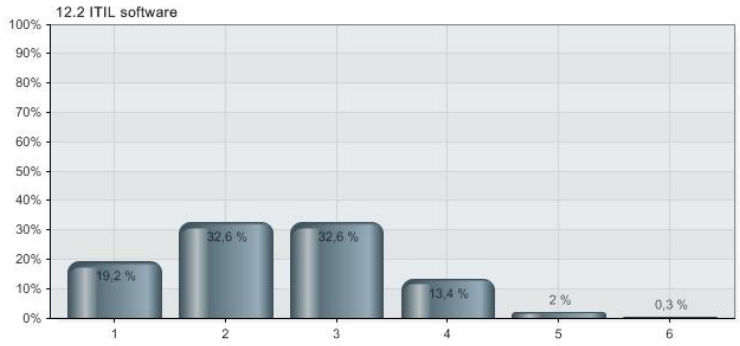
12. What percentage of your project's budget will be spent on the following:



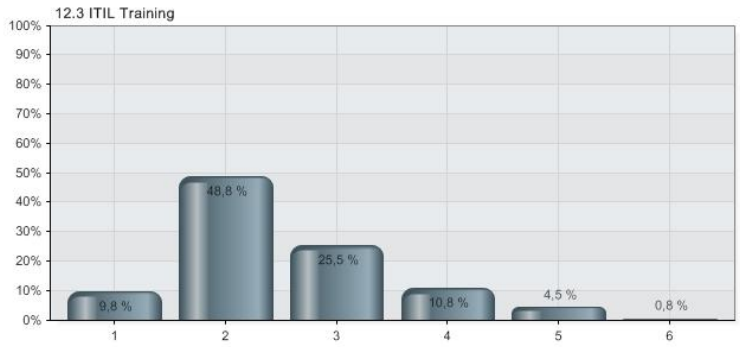
12.1 What percentage of your project's budget will be spent on the following: - External consultants



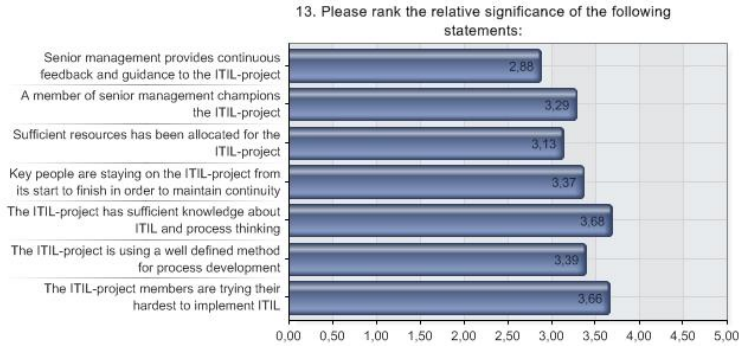
12.2 What percentage of your project's budget will be spent on the following: - ITIL software



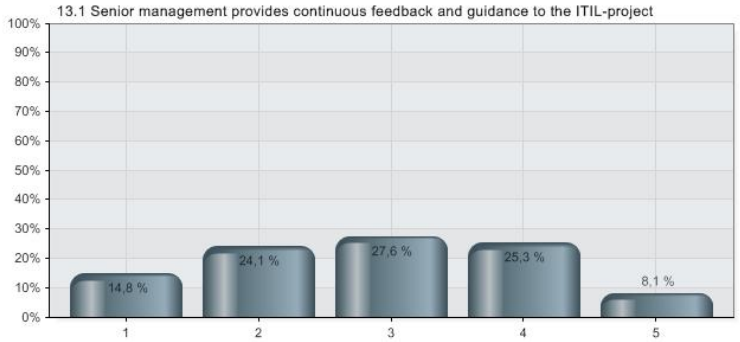
12.3 What percentage of your project's budget will be spent on the following: - ITIL Training



13. Please rank the relative significance of the following statements:



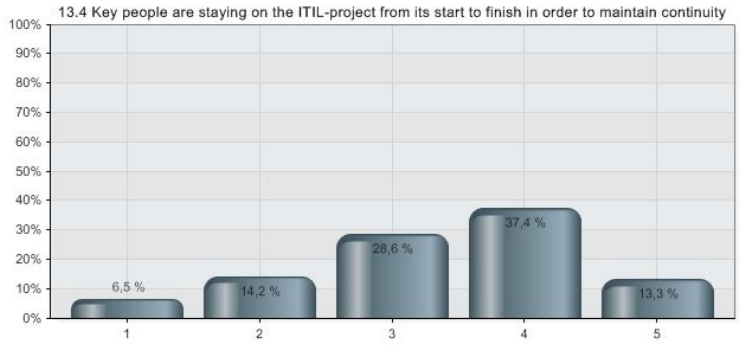
13.1 Please rank the relative significance of the following statements: - Senior management provides continuous feedback and guidance to the ITIL-project



13.2 Please rank the relative significance of the following statements: - A member of senior management champions the ITIL-project

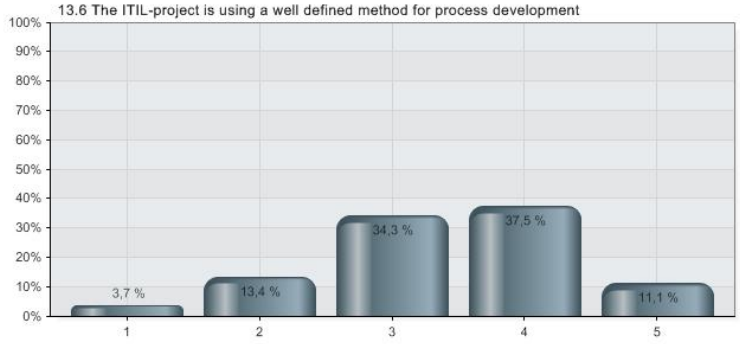
13.3 Please rank the relative significance of the following statements: - Sufficient resources has been allocated for the ITIL-project

13.4 Please rank the relative significance of the following statements: - Key people are staying on the ITIL-project from its start to finish in order to maintain continuity

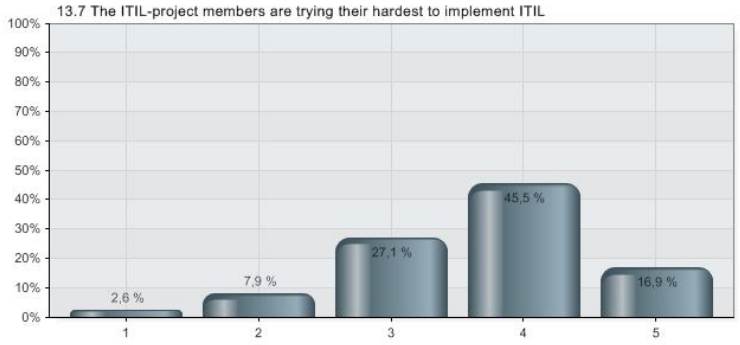


13.5 Please rank the relative significance of the following statements: - The ITIL-project has sufficient knowledge about ITIL and process thinking

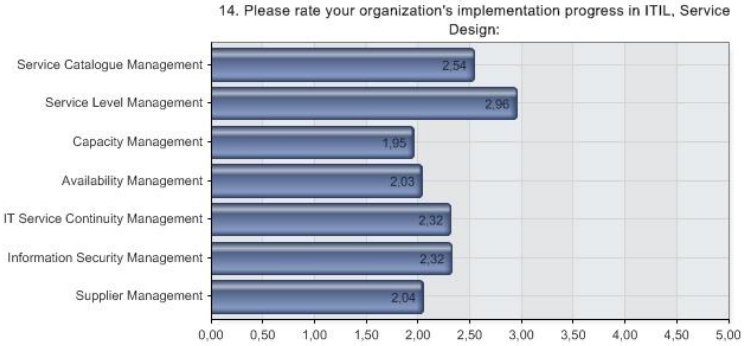
13.6 Please rank the relative significance of the following statements: - The ITIL-project is using a well defined method for process development



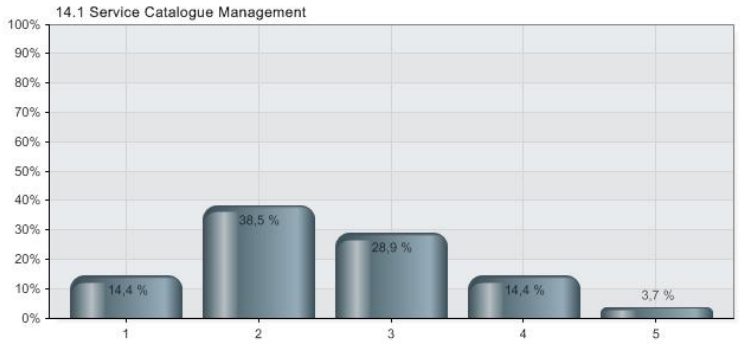
13.7 Please rank the relative significance of the following statements: - The ITIL-project members are trying their hardest to implement ITIL



14. Please rate your organization's implementation progress in ITIL, Service Design:

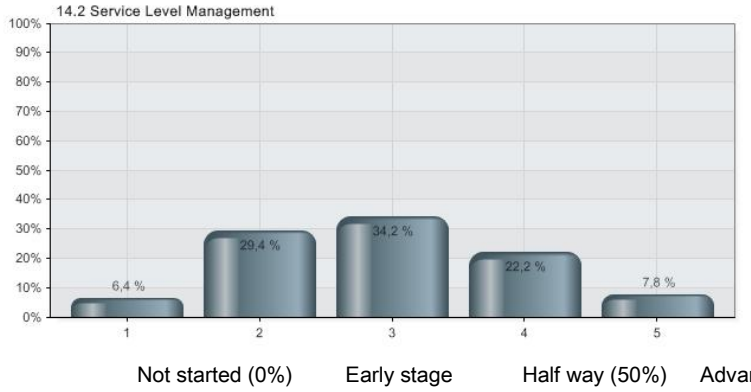


14.1 Please rate your organization's implementation progress in ITIL, Service Design: - Service Catalogue Management

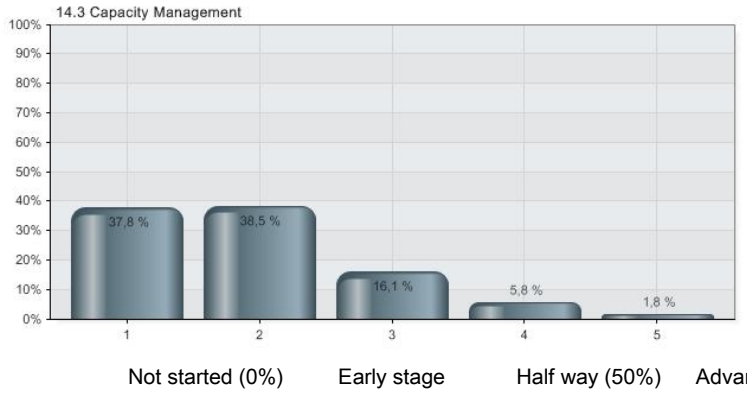


Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

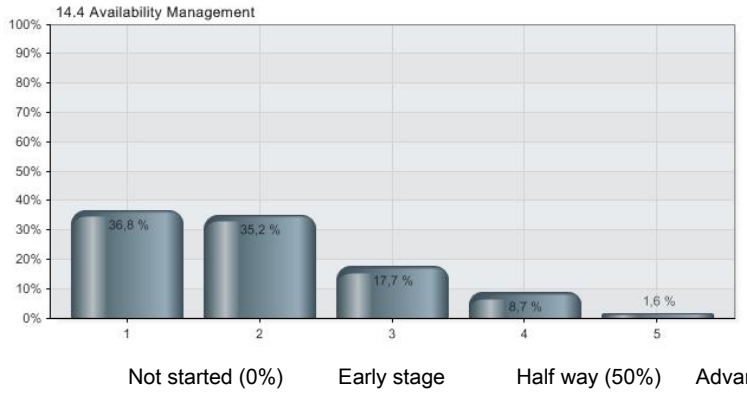
14.2 Please rate your organization's implementation progress in ITIL, Service Design: - Service Level Management



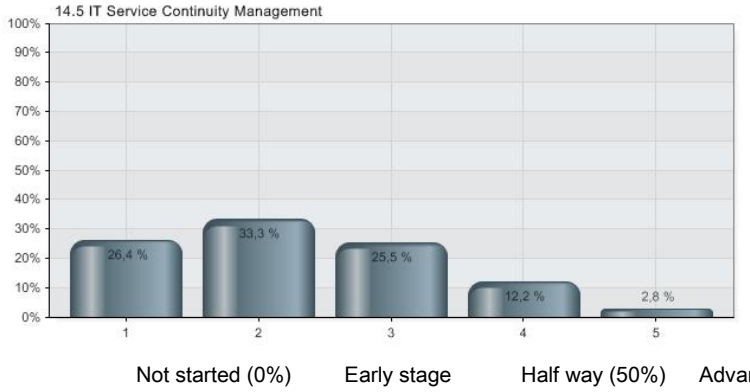
14.3 Please rate your organization's implementation progress in ITIL, Service Design: - Capacity Management



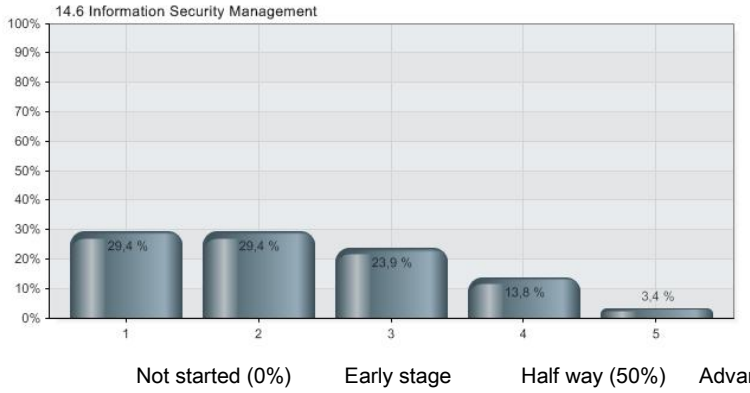
14.4 Please rate your organization's implementation progress in ITIL, Service Design: - Availability Management



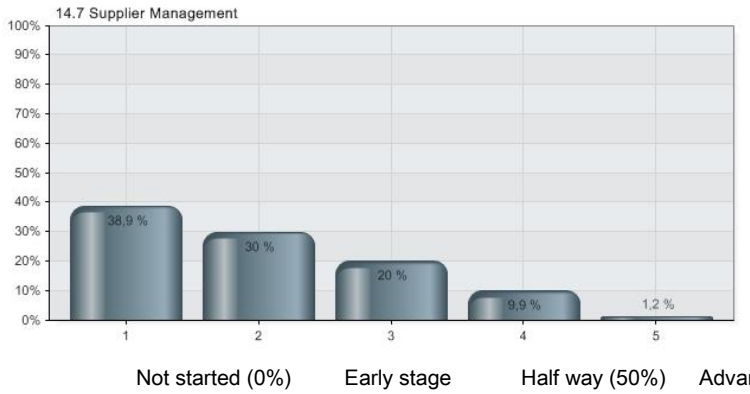
14.5 Please rate your organization's implementation progress in ITIL, Service Design: - IT Service Continuity Management



14.6 Please rate your organization's implementation progress in ITIL, Service Design: - Information Security Management

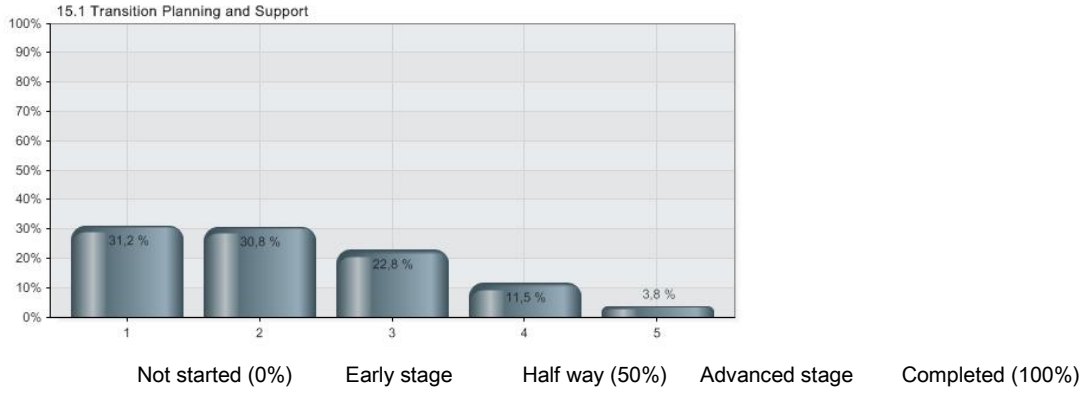


14.7 Please rate your organization's implementation progress in ITIL, Service Design: - Supplier Management

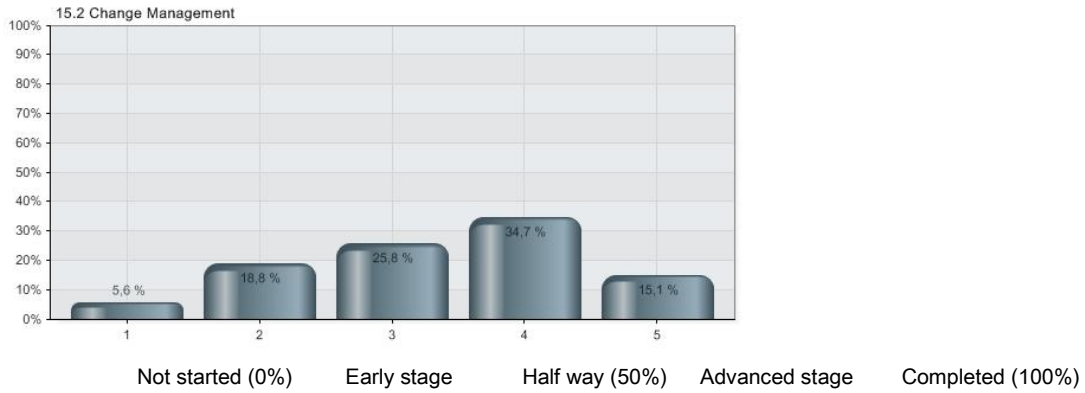


15. Please rate your organization's implementation progress in ITIL, Service Transition

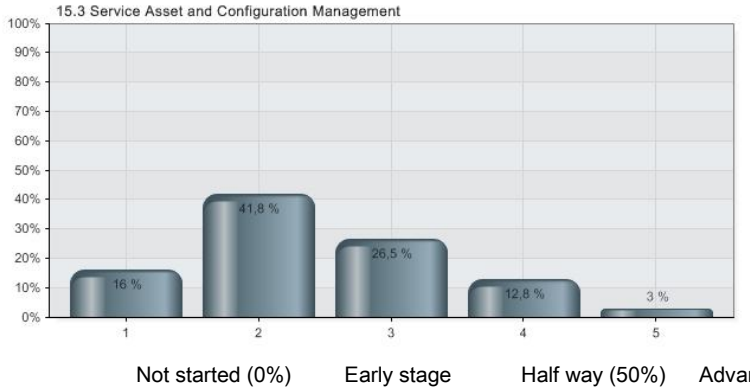
15.1 Please rate your organization's implementation progress in ITIL, Service Transition - Transition Planning and Support



15.2 Please rate your organization's implementation progress in ITIL, Service Transition - Change Management

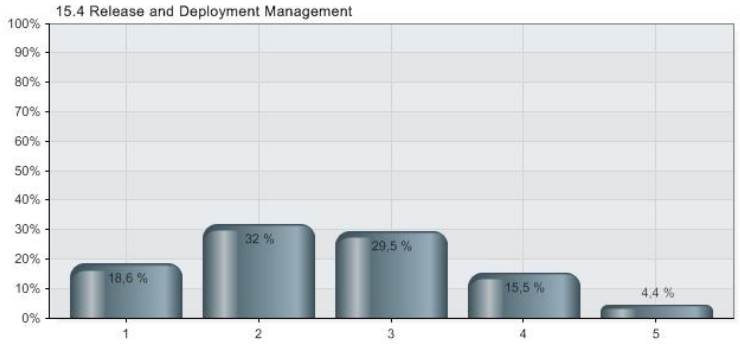


15.3 Please rate your organization's implementation progress in ITIL, Service Transition - Service Asset and Configuration Management



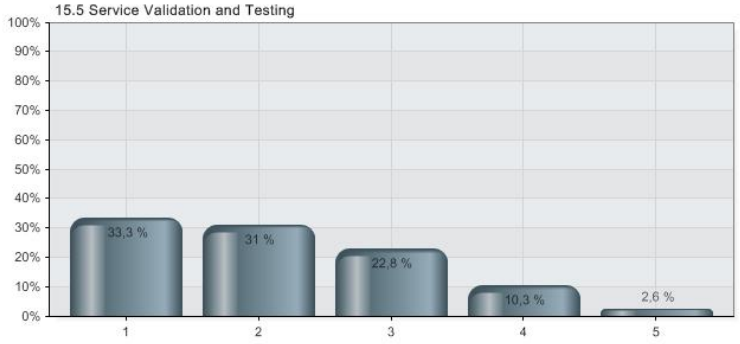
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

15.4 Please rate your organization's implementation progress in ITIL, Service Transition - Release and Deployment Management



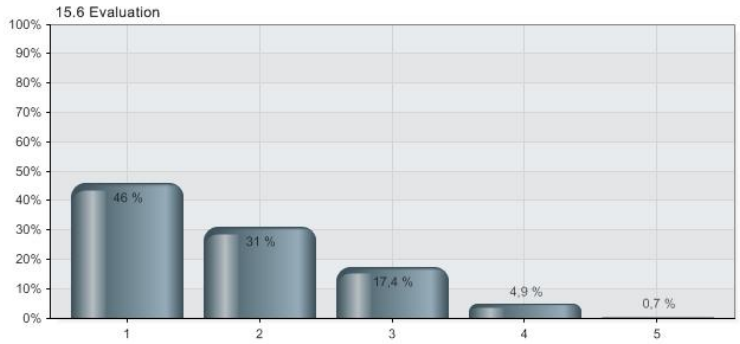
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

15.5 Please rate your organization's implementation progress in ITIL, Service Transition - Service Validation and Testing



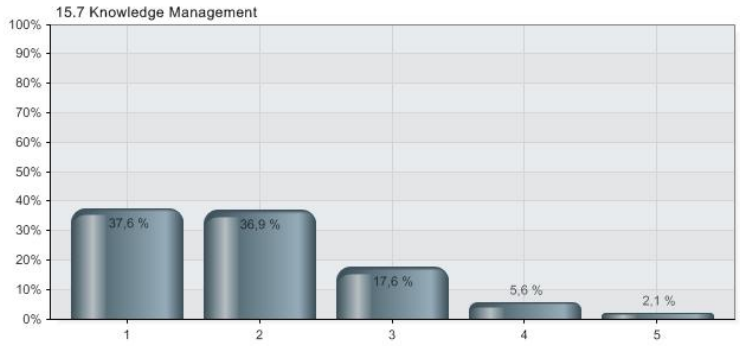
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

15.6 Please rate your organization's implementation progress in ITIL, Service Transition - Evaluation



Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

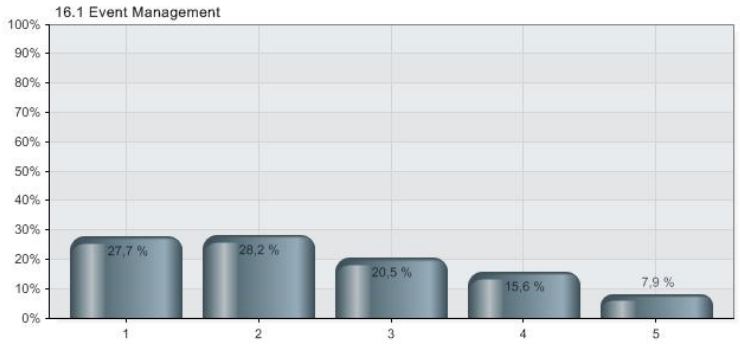
15.7 Please rate your organization's implementation progress in ITIL, Service Transition - Knowledge Management



Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

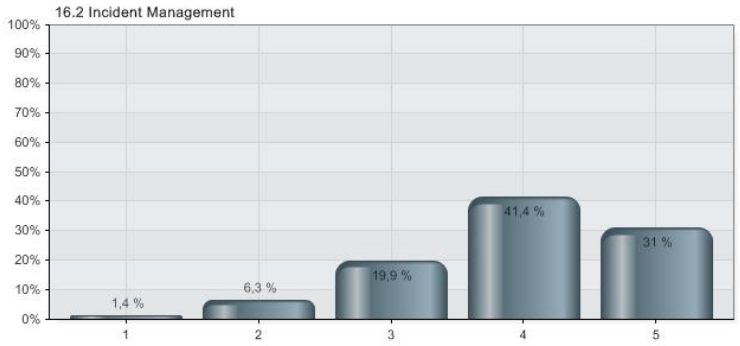
16. Please rate your organization's implementation progress in ITIL, Service Operation

16.1 Please rate your organization's implementation progress in ITIL, Service Operation - Event Management



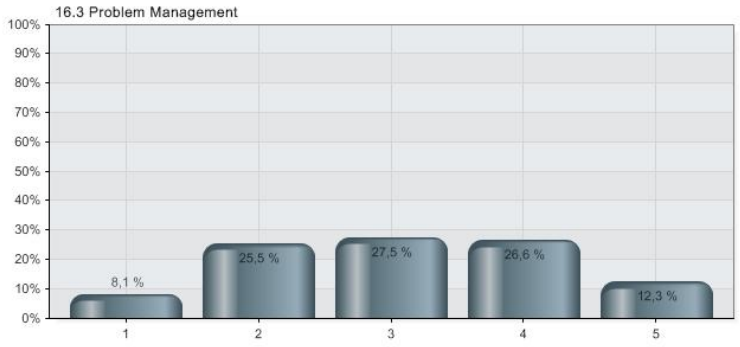
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

16.2 Please rate your organization's implementation progress in ITIL, Service Operation - Incident Management



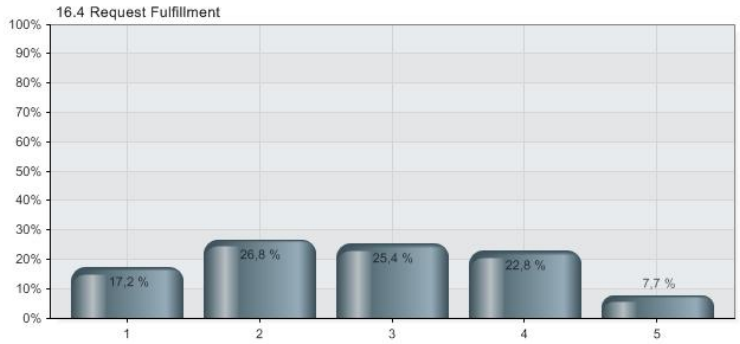
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

16.3 Please rate your organization's implementation progress in ITIL, Service Operation - Problem Management



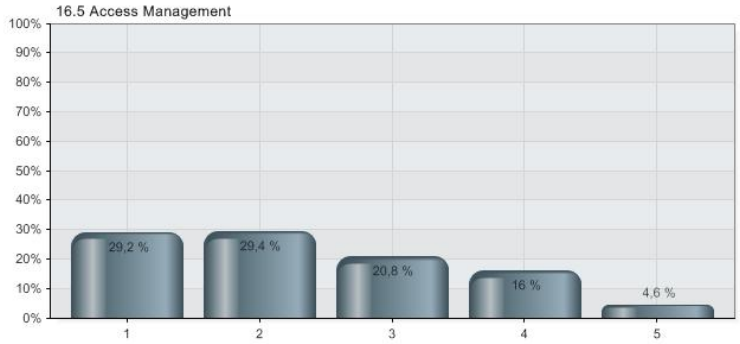
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

16.4 Please rate your organization's implementation progress in ITIL, Service Operation - Request Fulfillment



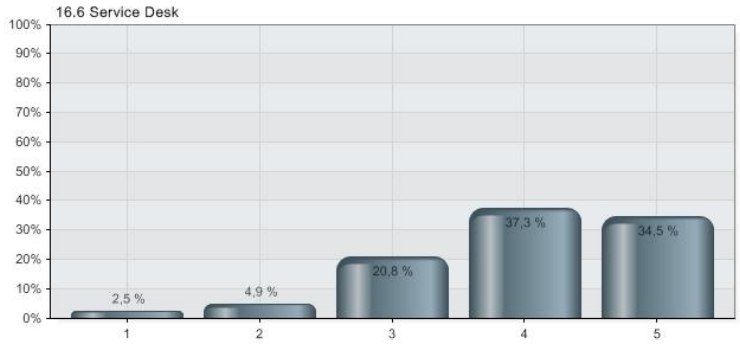
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

16.5 Please rate your organization's implementation progress in ITIL, Service Operation - Access Management



Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

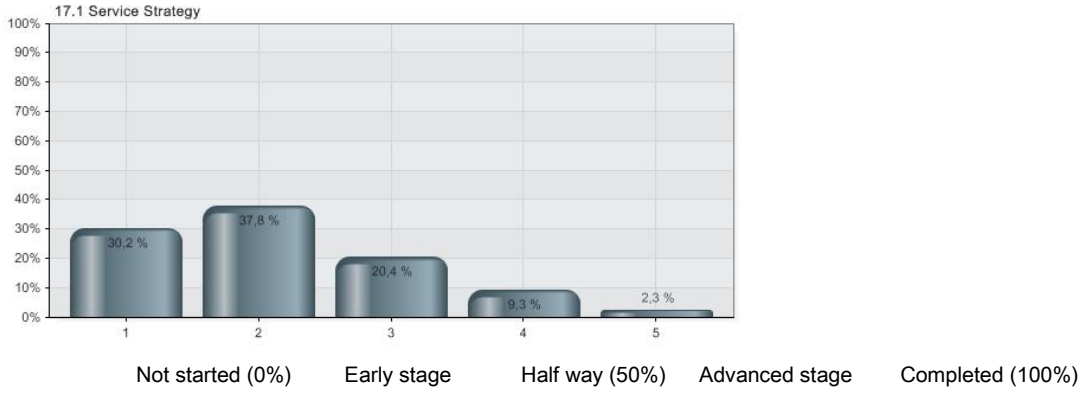
16.6 Please rate your organization's implementation progress in ITIL, Service Operation - Service Desk



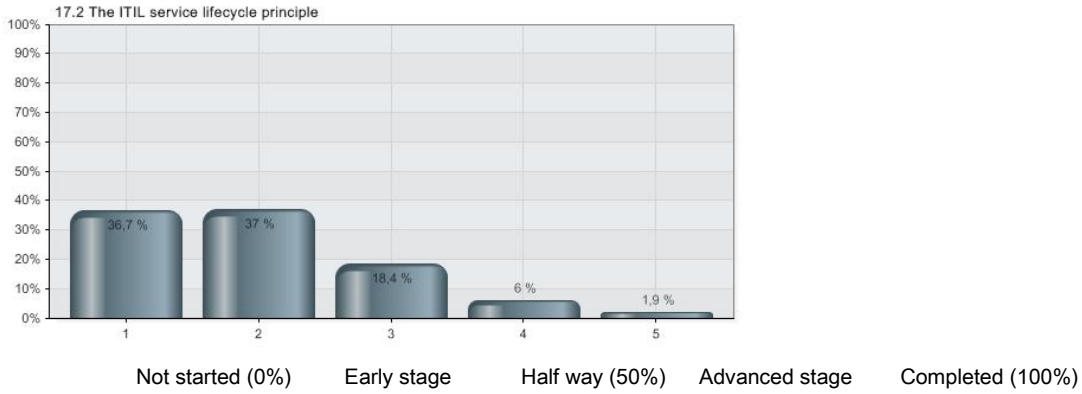
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

17. Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement

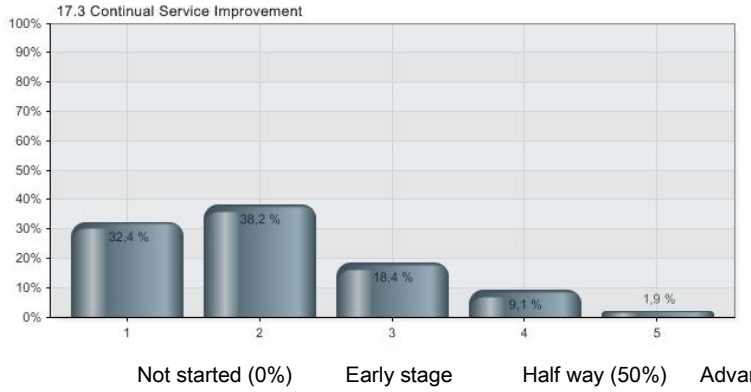
17.1 Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement - Service Strategy



17.2 Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement - The ITIL service lifecycle principle

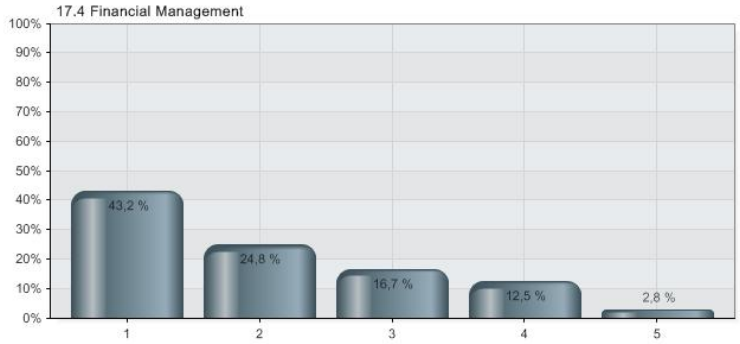


17.3 Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement - Continual Service Improvement



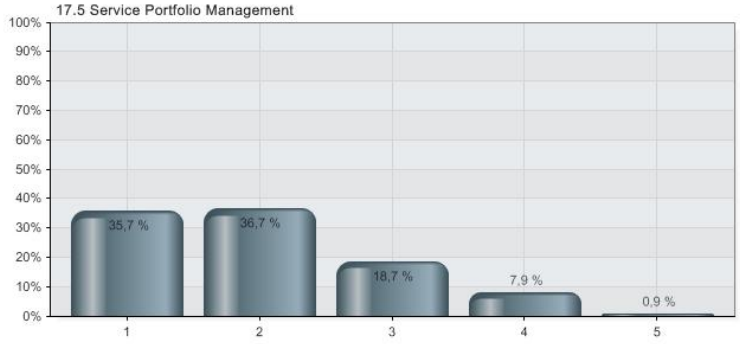
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

17.4 Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement - Financial Management



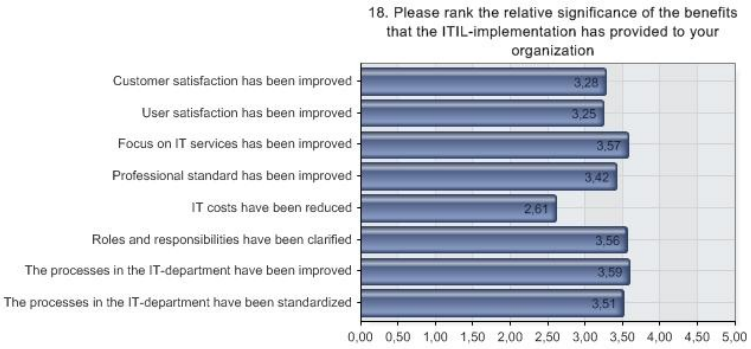
Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

17.5 Please rate your organization's implementation progress in ITIL, Service Strategy and Continual Service Improvement - Service Portfolio Management

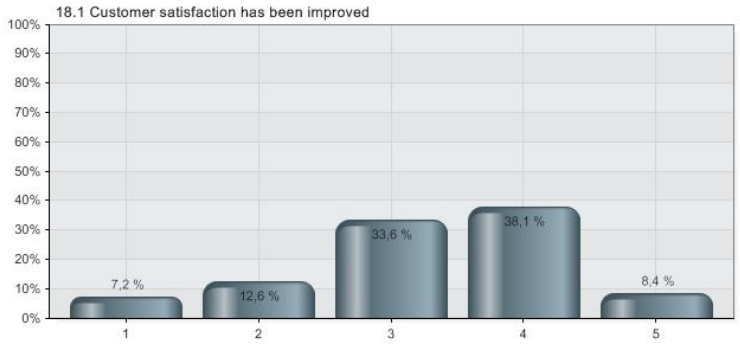


Not started (0%) Early stage Half way (50%) Advanced stage Completed (100%)

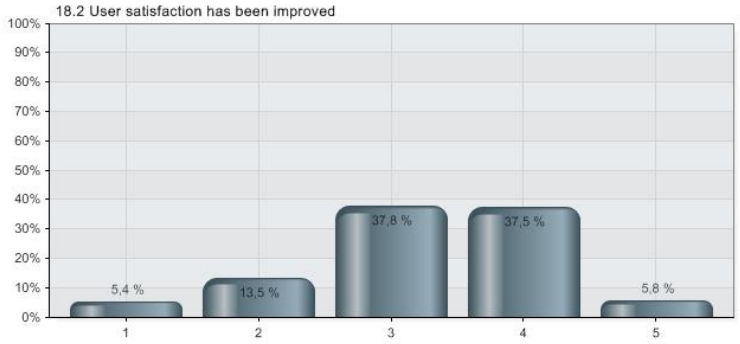
18. Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization



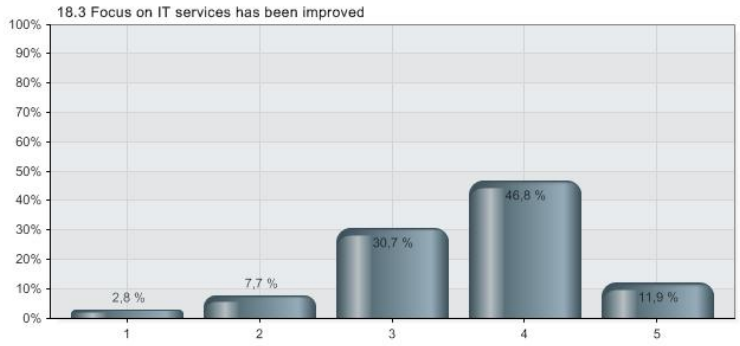
18.1 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - Customer satisfaction has been improved



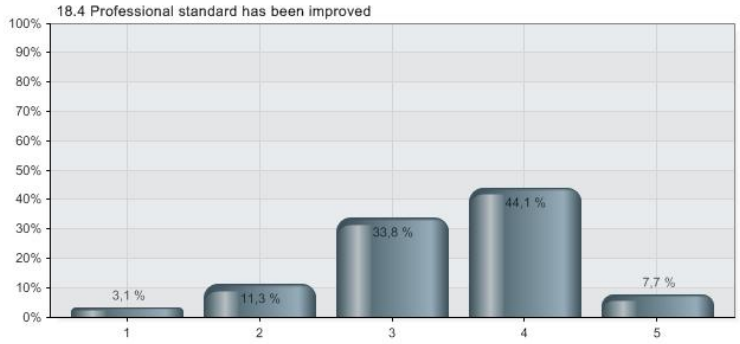
18.2 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - User satisfaction has been improved



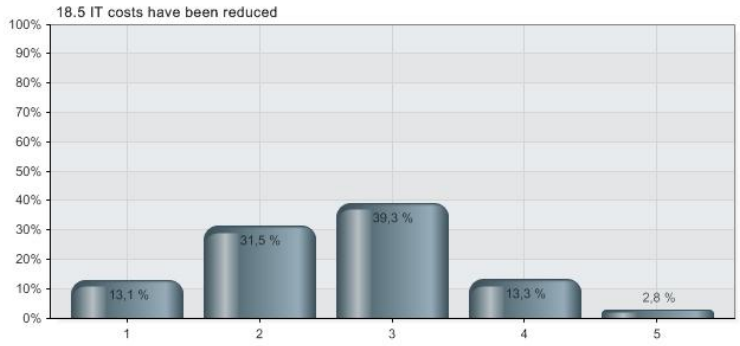
18.3 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - Focus on IT services has been improved



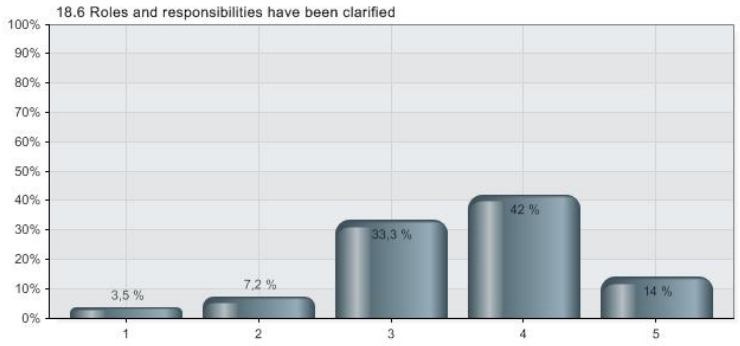
18.4 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - Professional standard has been improved



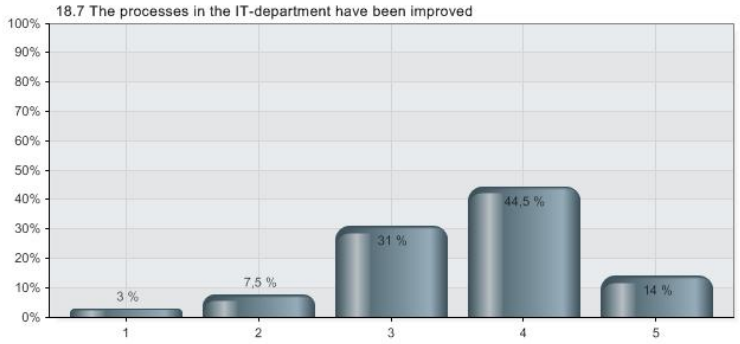
18.5 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - IT costs have been reduced



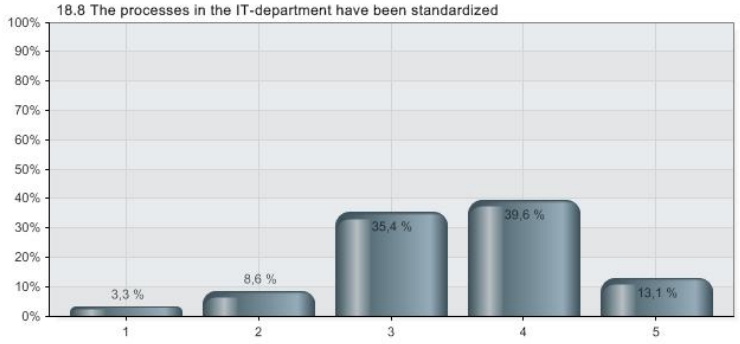
18.6 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - Roles and responsibilities have been clarified



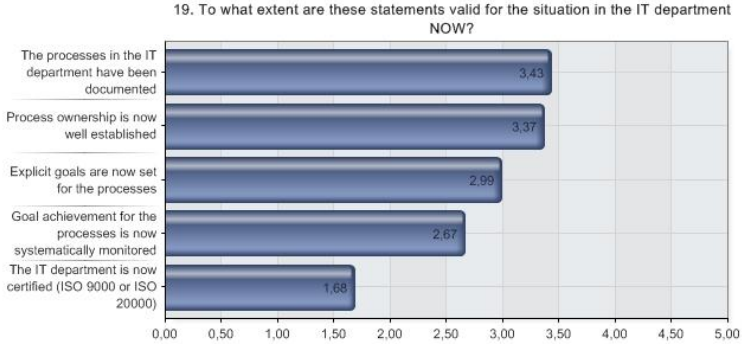
18.7 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - The processes in the IT-department have been improved



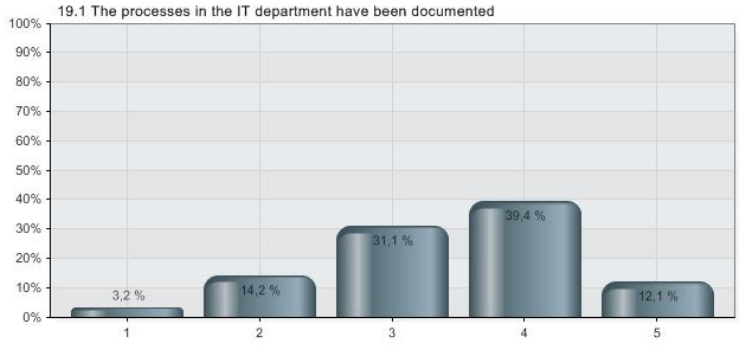
18.8 Please rank the relative significance of the benefits that the ITIL-implementation has provided to your organization - The processes in the IT-department have been standardized



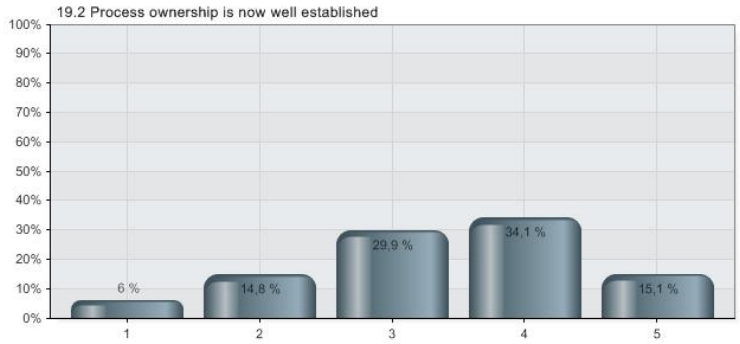
19. To what extent are these statements valid for the situation in the IT department NOW?



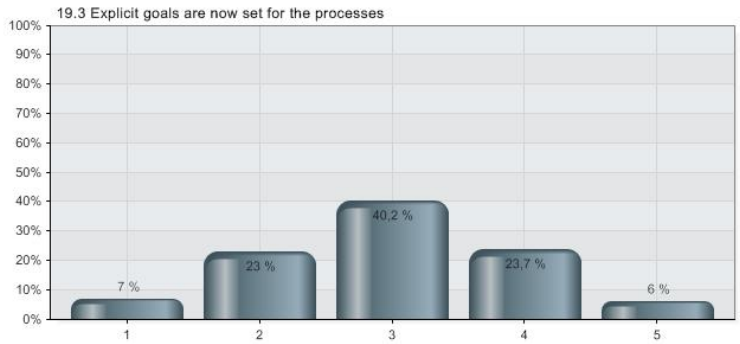
19.1 To what extent are these statements valid for the situation in the IT department NOW? - The processes in the IT department have been documented



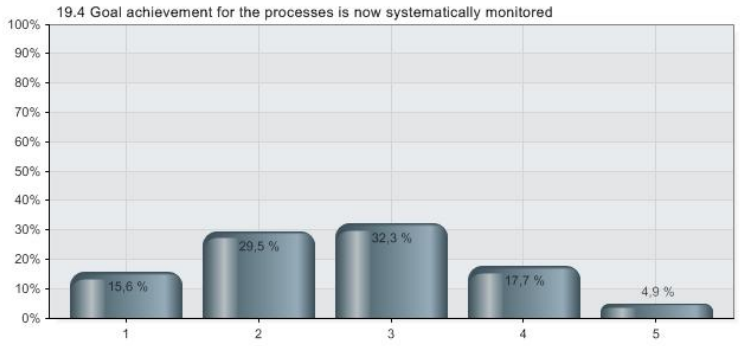
19.2 To what extent are these statements valid for the situation in the IT department NOW? - Process ownership is now well established



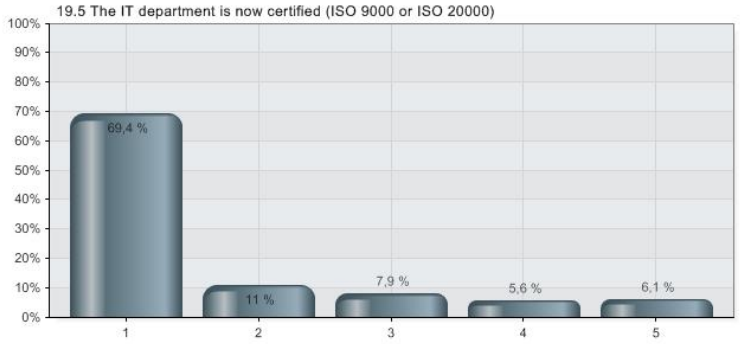
19.3 To what extent are these statements valid for the situation in the IT department NOW? - Explicit goals are now set for the processes



19.4 To what extent are these statements valid for the situation in the IT department NOW? - Goal achievement for the processes is now systematically monitored

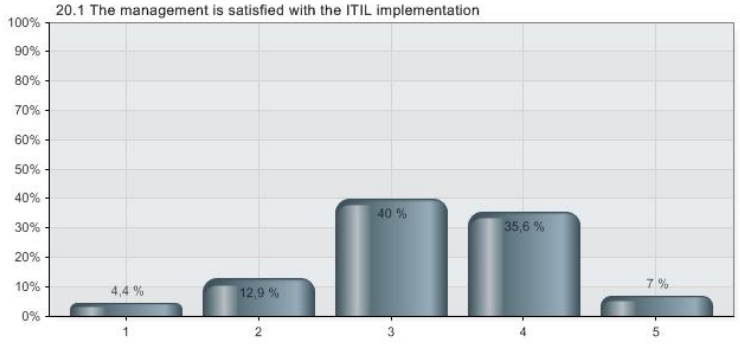


19.5 To what extent are these statements valid for the situation in the IT department NOW? - The IT department is now certified (ISO 9000 or ISO 20000)



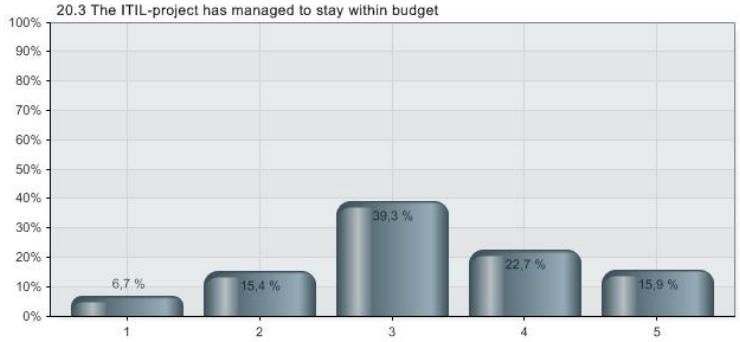
20. To what extent are these statements valid for your organization?

20.1 To what extent are these statements valid for your organization? - The management is satisfied with the ITIL implementation

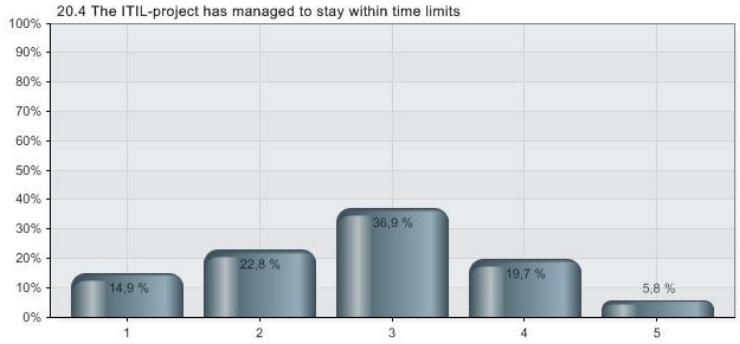


20.2 To what extent are these statements valid for your organization? - The IT staff is satisfied with the ITIL implementation

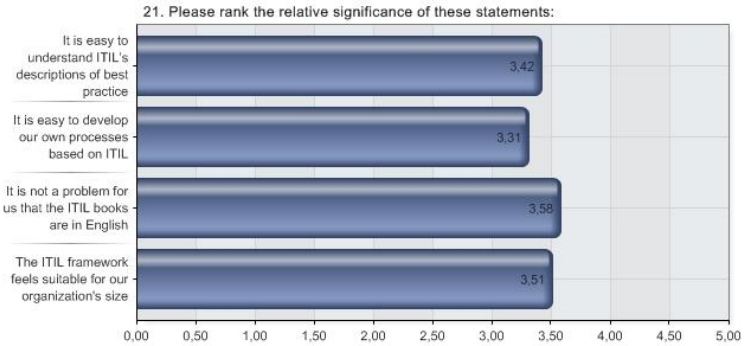
20.3 To what extent are these statements valid for your organization? - The ITIL-project has managed to stay within budget



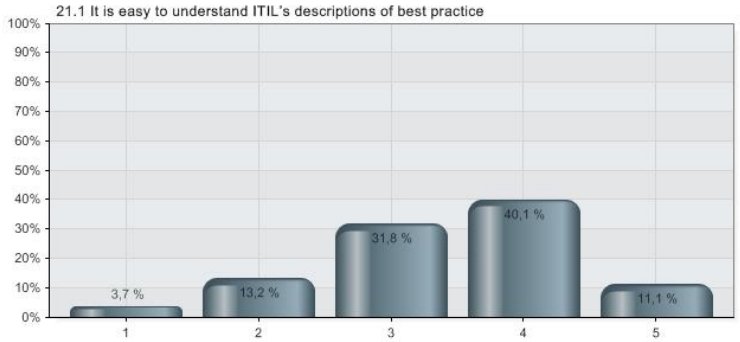
20.4 To what extent are these statements valid for your organization? - The ITIL-project has managed to stay within time limits



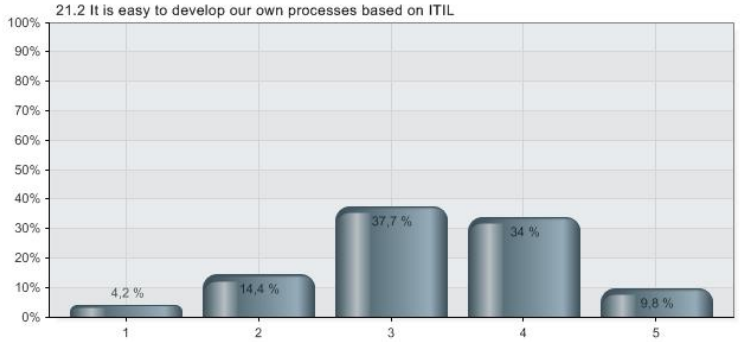
21. Please rank the relative significance of these statements:



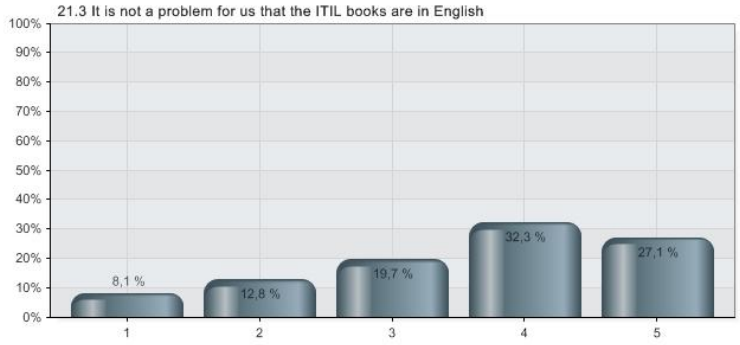
21.1 Please rank the relative significance of these statements: - It is easy to understand ITIL's descriptions of best practice



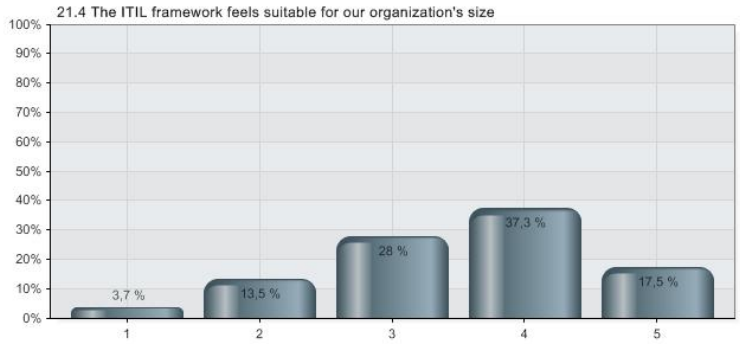
21.2 Please rank the relative significance of these statements: - It is easy to develop our own processes based on ITIL



21.3 Please rank the relative significance of these statements: - It is not a problem for us that the ITIL books are in English



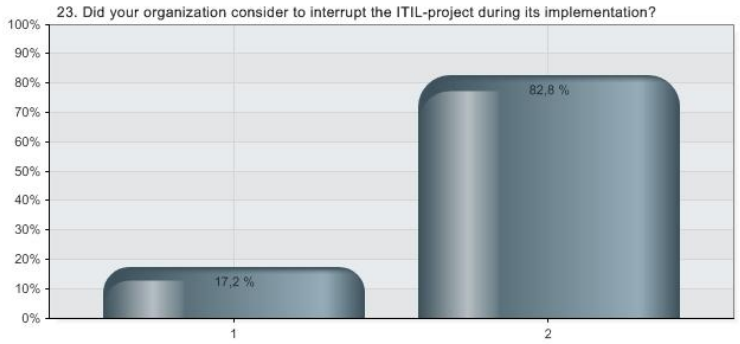
21.4 Please rank the relative significance of these statements: - The ITIL framework feels suitable for our organization's size



22. To what extend has ITIL met the expectations of your organization?

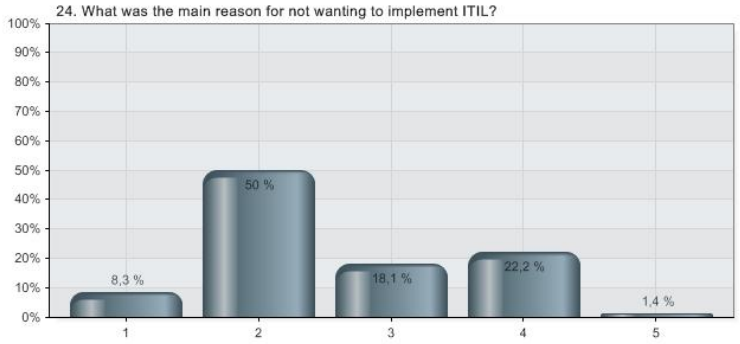
Alternatives	Percent	Value
1 Not sure	10,9 %	47
2 Disappointed with	5,8 %	25
3 It met expectations	53,5 %	231
4 Exceeded expectations	9,3 %	40
5 Too early to tell	20,6 %	89
Total		432

23. Did your organization consider to interrupt the ITIL-project during its implementation?



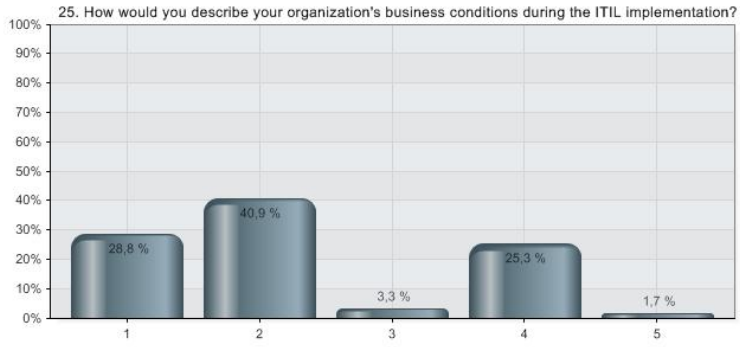
Alternatives	Percent	Value
1 Yes	17,2 %	73
2 No	82,8 %	351
Total		424

24. What was the main reason for not wanting to implement ITIL?



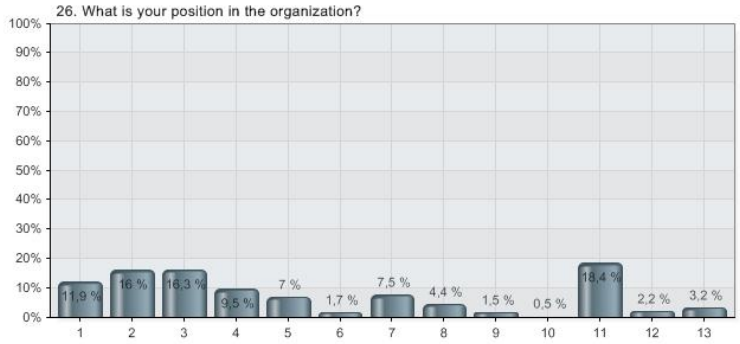
Alternatives	Percent	Value
1 Size of your organization	8,3 %	6
2 Taking resources from core operations	50,0 %	36
3 Lack of knowledge	18,1 %	13
4 Hard to see the benefits	22,2 %	16
5 Hard to choose ITSM technology	1,4 %	1
Total		72

25. How would you describe your organization's business conditions during the ITIL implementation?



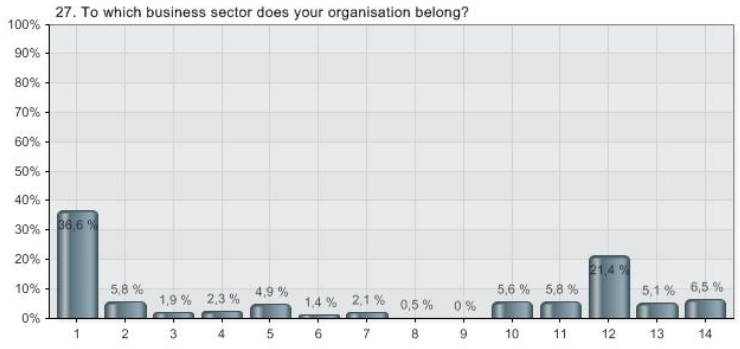
Alternatives	Percent	Value
1 Stable	28,8 %	122
2 Increased workload	40,9 %	173
3 Downsizing	3,3 %	14
4 Restructuring of organization	25,3 %	107
5 Other, please specify:	1,7 %	7
Total		423

26. What is your position in the organization?



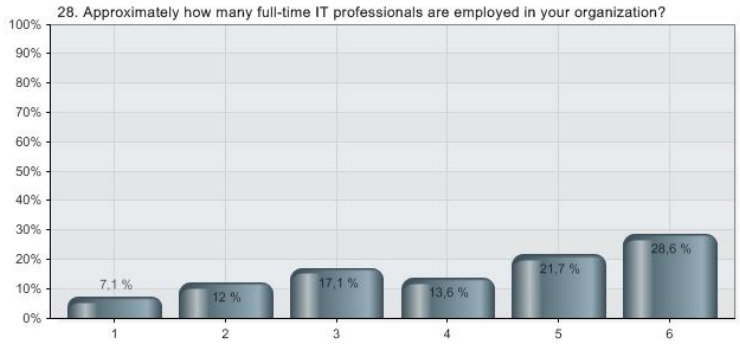
Alternatives	Percent	Value
1 CIO / IT top manager	11,9 %	49
2 IT operation manager	16,0 %	66
3 Process owner	16,3 %	67
4 Service manager	9,5 %	39
5 Change manager	7,0 %	29
6 Configuration manager	1,7 %	7
7 Service Desk manager	7,5 %	31
8 Problem manager	4,4 %	18
9 Supplier / contract manager	1,5 %	6
10 IT finance manager	0,5 %	2
11 Project manager	18,4 %	76
12 Service level manager	2,2 %	9
13 Business relationship manager	3,2 %	13
Total		412

27. To which business sector does your organisation belong?



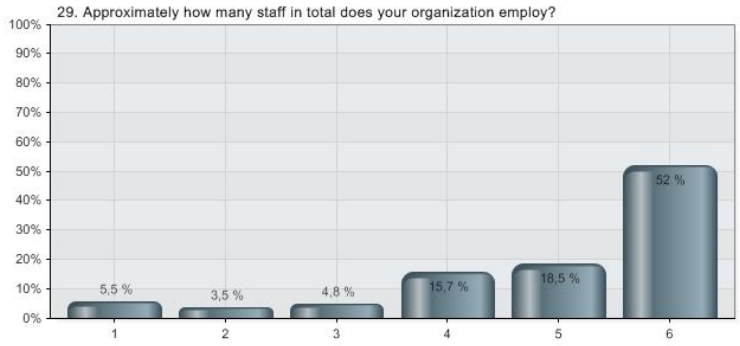
Alternatives	Percent	Value
1 IT	36,6 %	157
2 Telecommunication	5,8 %	25
3 Oil and gas	1,9 %	8
4 Consultancy	2,3 %	10
5 Industry	4,9 %	21
6 Energy and water	1,4 %	6
7 Construction and building	2,1 %	9
8 Commodity trade	0,5 %	2
9 Hotel and restaurant	0,0 %	0
10 Transport and logistics	5,6 %	24
11 Finance and insurance	5,8 %	25
12 Public government	21,4 %	92
13 Education and research	5,1 %	22
14 Health and social affairs	6,5 %	28
Total		429

28. Approximately how many full-time IT professionals are employed in your organization?



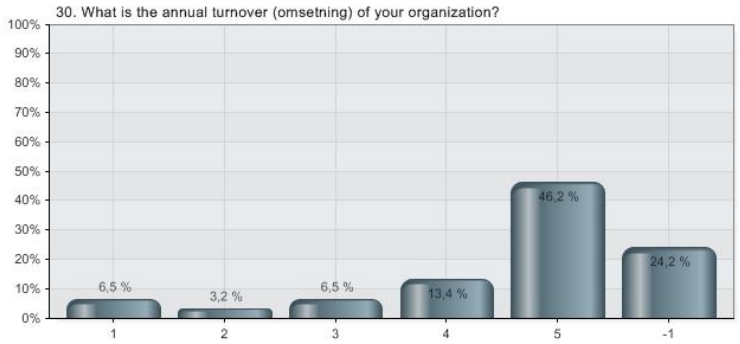
Alternatives		Percent	Value
1	Less than 10	7,1 %	31
2	10 – 24	12,0 %	52
3	25 – 49	17,1 %	74
4	50 – 99	13,6 %	59
5	100 – 300	21,7 %	94
6	More than 300	28,6 %	124
Total			434

29. Approximately how many staff in total does your organization employ?



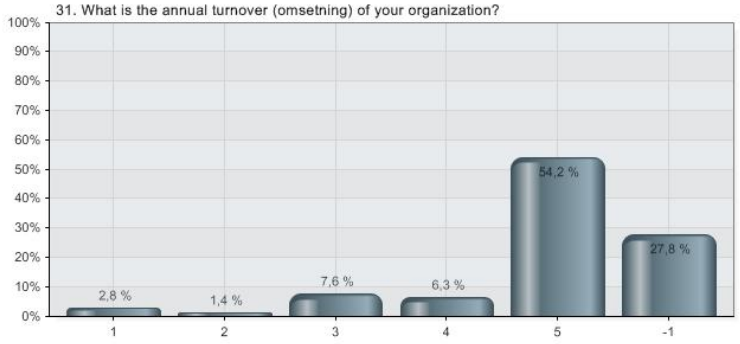
Alternatives		Percent	Value
1	Less than 25	5,5 %	24
2	25 – 49	3,5 %	15
3	50 – 99	4,8 %	21
4	100 – 499	15,7 %	68
5	500 – 2000	18,5 %	80
6	More than 2000	52,0 %	225
Total			433

30. What is the annual turnover (omsetning) of your organization?



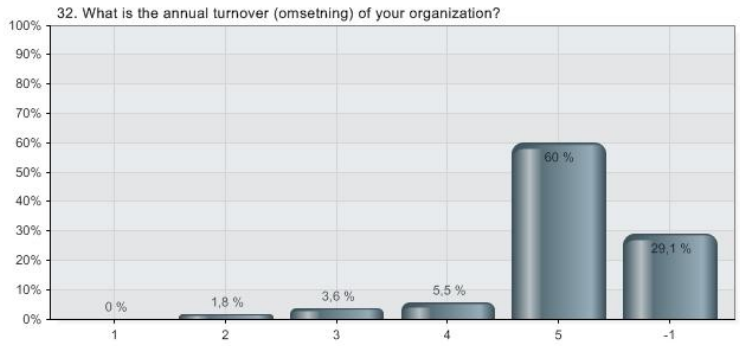
Alternatives	Percent	Value
1 Less than 25 million NOK	6,5 %	12
2 25 – 50 million NOK	3,2 %	6
3 50 - 150 million NOK	6,5 %	12
4 150 - 500 million NOK	13,4 %	25
5 More than 500 million NOK	46,2 %	86
-1 Don't know	24,2 %	45
Total		186

31. What is the annual turnover (omsetning) of your organization?



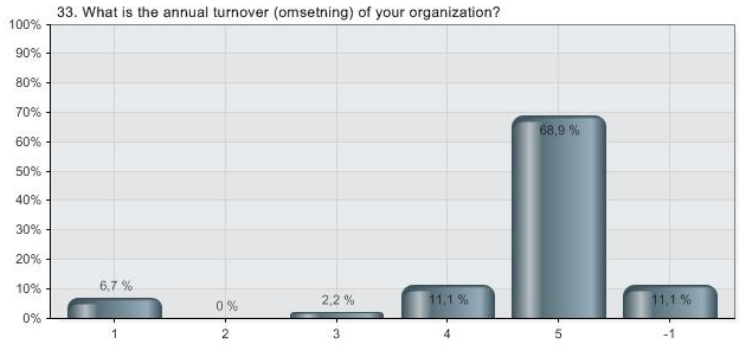
Alternatives	Percent	Value
1 Less than 25 million SEK	2,8 %	4
2 25 – 50 million SEK	1,4 %	2
3 50 - 150 million SEK	7,6 %	11
4 150 - 500 million SEK	6,3 %	9
5 More than 500 million SEK	54,2 %	78
-1 Don't know	27,8 %	40
Total		144

32. What is the annual turnover (omsetning) of your organization?



Alternatives	Percent	Value
1 Less than 25 million DKK	0,0 %	0
2 25 – 50 million DKK	1,8 %	1
3 50 - 150 million DKK	3,6 %	2
4 150 - 500 million DKK	5,5 %	3
5 More than 500 million DKK	60,0 %	33
-1 Don't know	29,1 %	16
Total		55

33. What is the annual turnover (omsetning) of your organization?



Alternatives	Percent	Value
1 Less than 2.5 million EUR	6,7 %	3
2 2.5 – 5 million EUR	0,0 %	0
3 5 - 15 million EUR	2,2 %	1
4 15 - 50 million EUR	11,1 %	5
5 More than 50 million EUR	68,9 %	31
-1 Don't know	11,1 %	5
Total		45

Appendix B: itSMF 2010 Presentation

Presented at the annual itSMF conference 2010 in Norway: "**Modenhet og trender i ITIL-Norge -** *Ved Sigrun Grutle Nygård, seniorrådgiver og Arild Justnes, seniorrådgiver, Steria AS*"

NHH itSMF Norge

Oppdatert status omkring IT Service Management i Norge

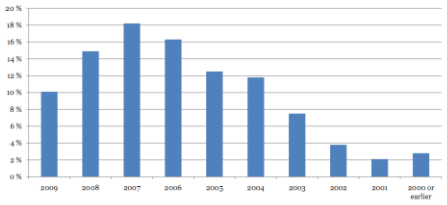
The ITSM Monitor 2010

Jon Iden
Torje Hirth
Lars Arild Melander
Norges Handelshøyskole
Institutt for strategi og ledelse

Norges Handelshøyskole

NHH itSMF Norge

Når ble ITIL-arbeidet påbegynt



Norges Handelshøyskole

NHH itSMF Norge

Involverer ledelsen seg?

Ledelsens involvering	2008	2010
Et medlem av ledergruppen fronter ITIL-prosjektet	3.48	3.18
Ledelsen følger kontinuerlig opp ITIL-prosjektet	2.88	2.90

Relative significance : Low 1, 2, 3, 4, 5 High

Norges Handelshøyskole

NHH itSMF Norge

Forplikter organisasjonen seg?

Organisatorisk forpliktelse	2008	2010
Tilstrekkelig med ressurser er tildelt ITIL-prosjektet	3.07	3.16

Relative significance : Low 1, 2, 3, 4, 5 High

Norges Handelshøyskole

NHH itSMF Norge

Har prosjektgruppen nok kvalifikasjoner?

Kvalifikasjoner	2008	2010
ITIL-prosjektet har nok kunnskaper om ITIL	4.00	
ITIL-prosjektet har nok kunnskaper om ITIL og prosesser		3.74
ITIL-prosjektet har nok kunnskaper om prosesser	3.64	
ITIL-prosjektet bruker en veldefinert metode for utvikling av prosesser	3.10	3.44

Relative significance : Low 1, 2, 3, 4, 5 High

Norges Handelshøyskole

NHH itSMF Norge

Hva er status på Service Design?

Prosess	2008	2010
Service Catalogue Management		2.49
Service Level Management	2.69	2.91
Capacity Management	1.50	1.90
Availability Management	1.43	1.89
IT Service Continuity Management	1.69	2.16
Information Security Management		2.21
Supplier Management		1.93

Not started: 1, Early: 2, Half way: 3, Advanced: 4, Completed: 5

Norges Handelshøyskole

NHH itSMF Norge

Hva er status på Service Operation?

Prosess	2008	2010
Event management		2.45
Incident Management	3.52	3.88
Problem Management	2.64	2.81
Request Fulfillment		2.76
Access Management		2.24
Service Desk	3.74	3.83

Not started: 1, Early: 2, Half way: 3, Advanced: 4, Completed: 5

Norges Handelshøyskole

NHH itSMF Norge

Hva er status på Service Transition?

Prosess	2008	2010
Transition Planning and Support		2.23
Change Management	2.86	3.31
Service Asset and *Configuration* Management	2.55	2.38
Release and Deployment Management	2.12	2.48
Service Validation and Testing	1.69	2.11
Evaluation		1.79
Knowledge Management		1.83

Not started: 1, Early: 2, Half way: 3, Advanced: 4, Completed: 5

Norges Handelshøyskole

NHH itSMF Norge

Hvilke resultater har man oppnådd?

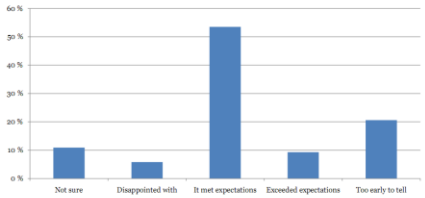
Resultater	2008	2010
Prosessene i IT avdelingen har blitt forbedret	3.62	3.55
Prosesseierskap er etablert	3.31	3.30
Det er satt mål for prosessene	2.81	2.96
Oppnåelse av mål følges opp	2.57	2.70
IT avdelingen er sertifisert (ISO 9000 or ISO 20000)	1.50	1.63

Statements valid: Low 1, 2, 3, 4, 5 High

Norges Handelshøyskole

NHH itSMF Norge

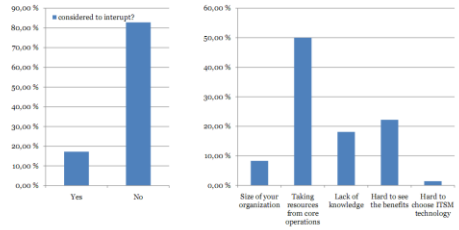
Innfrielse av forventninger



Norges Handelshøyskole

NHH itSMF Norge

Hvorfor vurderes avbrytelse?



Norges Handelshøyskole

NHH itSMF Norge

THE ITSM MONITOR 2010

itSMF The IT Service Management Forum

NHH

Norges Handelshøyskole

NHH

Appendix C: Interview guide

This interview guide was used with all our three semi-structured interviewees. Our interviewees got a very brief version of this guide in advance to be prepared for the content of the interview. Only small changes were made to the guide after each interview, this guide should therefore still be representative of what we covered during the interviews. The responses to all questions were not used in the final analysis. Our comments to the interview guide are written in italics. It should be noted that the structure of our interviews was very free and that we focused on discussing the areas where we found the specific interviewee to be particularly knowledgeable to give us the best results possible for our further analysis.

Background information

- Experience with ITIL projects (year, number of projects)?
- Are you ITIL certified?
- Best knowledge of V3 or V2?
- Have you taken the ITSM Monitor 2010 survey?
    - If yes: thoughts on this, things you were puzzled over or that you took notice of?

We made this section to get to know the interviewees and their relation to ITIL, and to map their knowledge about the ITIL literature. This would also underline their expertise knowledge, and if we could use them for our expert panel, drawing on their tacit information.

Introduction

- The main reasons for companies to introduce ITIL?
    - Who is the most common initiator?
    - Why do you think companies are using external consultants?
- Training of employees in relation to the ITIL framework (People)
- Adoption of ITIL software (System)
- Organizational Adaptation (relationship, responsibility, authority - Organization)
- Do you think it is more common for large or small companies to use consultants? Why?
- Do you think ITIL will be beneficial to implement for most companies?

- What reasons do you think are most common for companies to cancel (or plan to abort) an ITIL implementation?
    - Size of organization
    - Taking resources from the core business
    - Lack of knowledge
    - Difficult to see the benefits
    - Difficult to choose ITSM technology
- Has general business conditions normally impact on IITL implementations?
    - Business situations such as restructuring, increased workload, downsizing makes an ITIL implementation difficult?

In this section we draw on the literature study from our literature chapter concerning the features of organization and communication (3.1), from the project and project management chapter (3.2), from our interpretation of the general ITIL and ITSM literature and from our work with the ITSM Monitor 2010 survey. This section gave us useful responses concerning most of our propositions, in particular our propositions on the benefit of using the PSO perspective.

Are there any differences between large and small?

- Is it common for small businesses to use a broad participant involvement, while in large companies is more common to use mainly experts / specialists?
- Do you have knowledge about differences between small and large companies' introduction?
- Specific budgets in small, less specified in large?
- Do you think small companies are more likely to use external consultants?
- The literature makes us believe that small companies introduce fewer elements of ITIL? Is this the case? (Large/complex framework that requires many people to all roles or other reasons.)
- How can the small IT department deal with the many roles of ITIL? Is it problematic that the small IT department has to merge (too) many roles?
- Do you think that it is generally easier to sell an ITIL introduction to people in a small business (less resistance to change)? (Due to closer

communication/collaboration between all employees, increasing ownership to the organization among the relatively few employees in the small organization.)

In our search of getting a discussion on the subject of differences between large and small IT departments' implementation of ITIL we looked towards OGC (2009) and the topics pointed out there. The difference between small and big IT organizations was also attempted enlightened in the chapter of features of organization and communication (3.1). Originally we wanted to have a main focus on the difference between small and big IT organizations. However, it ended up being more of a side track in studying the overall aspects of implementing ITIL in real-life organizations. This part of our questionnaire did not turn out as fruitful as we had hoped, as our interviewees had limited experience with ITIL in small IT organizations, and since the differences between small and big organizations when it comes to working with ITIL is not big or interesting enough for a whole master's thesis. However, this section of our interview guide gave interesting discussions and digressions to discussing issues relevant not only for proposition 3, but many of the other propositions as well.

Satisfaction

- What factors do you think are important for ITIL-introduction success (support/follow-up from management, champion, enough resources, key personnel through the project, knowledge about ITIL and process thinking, members' commitment?)

The part about success factors is purely based on the questions from the ITSM Monitor surveys, which builds on Cater-Steel, Aileen and Tan, Wui-Gee (2005). Our proposition 4 deals with this theme: "The success of an ITIL implementation depends on important inter-dependent factors such as management commitment…"

ITIL - generally

- Do you mean that ITIL covers too wide / large in the new V3? (Not only IT-specific best-practice, but more comprehensive organization-oriented best-practices)
- Which parts of ITIL do you think it would be appropriate for a company to begin with?
- Are these parts more related to core business (tangible/operative parts), and will there be enough to simply implement these in a small business? (Many emphasize the

benefits of comprehensive ITIL introduction, what is the loss in case of partial introduction?)

We were curious about how version 3 was assessed in comparison to version 2, was it merely a positive development and what could be adjusted/suspected to come in a new version? This part of the interview guide particularly helped us answering proposition 1 and 3. However, the structure of our interviews were very flexible and of a digressional nature. Therefore it is generally hard to allocate from which part we got the material to answer our specific propositions.

Appendix D: ITIL Definition List

This appendix contains an alphabetical listing of keywords and concepts that we have used from the ITIL framework as they are defined by OGC (2007b). In every core book there is a final chapter containing a list of acronyms and definitions. In this adapted list many definitions are referring to other terms defined in a particular way by ITIL. Only the most relevant terms for our thesis are included in this appendix. For completeness and a full reference list, see the original source (OGC 2007b).

Activity - A set of actions designed to achieve a particular result. Activities are usually defined as part of Processes or Plans, and are documented in Procedures.

Best Practice - Proven Activities or Processes that have been successfully used by multiple Organizations. ITIL is an example of Best Practice.

Certification - Issuing a certificate to confirm Compliance to a Standard. Certification includes a formal Audit by an independent and Accredited body. The term Certification is also used to mean awarding a certificate to verify that a person has achieved a qualification.

Change Management - (Service Transition) The Process responsible for controlling the Lifecycle of all Changes. The primary objective of Change Management is to enable beneficial Changes to be made, with minimum disruption to IT Services.

COBIT – "Control Objectives for Information and related Technology" provides guidance and Best Practice for the management of IT Processes.

Configuration Item (CI) - (Service Transition) Any Component that needs to be managed in order to deliver an IT Service. Information about each CI is recorded in a Configuration Record within the Configuration Management System and is maintained throughout its Lifecycle by Configuration Management. CIs are under the control of Change Management. CIs typically include IT Services, hardware, software, buildings, people, and formal documentation such as Process documentation and SLAs.

Continual Service Improvement (CSI) - (Continual Service Improvement) A stage in the Lifecycle of an IT Service and the title of one of the Core ITIL publications. Continual Service Improvement is responsible for managing improvements to IT Service Management Processes and IT Services. The Performance of the IT Service Provider is continually measured and improvements are made to Processes, IT Services and IT Infrastructure in order to increase Efficiency, Effectiveness, and Cost Effectiveness. See Plan-Do-Check-Act.

Customer - Someone who buys goods or Services. The Customer of an IT Service provider is the person or group that defines and agrees the Service level targets.

Effectiveness - (Continual Service Improvement) A measure of whether the Objectives of a Process, Service or Activity have been achieved. An Effective Process or activity is one that achieves its agreed Objectives. See also KPI.

Efficiency - (Continual Service Improvement) A measure of whether the right amount of resources has been used to deliver a Process, Service or Activity. An Efficient Process achieves its Objectives with the minimum amount of time, money, people or other resources. See also KPI.

Event - (Service Operation) A change of state which has significance for the management of a Configuration Item or IT Service. The term Event is also used to mean an Alert or notification created by any IT Service, Configuration Item or Monitoring tool. Events typically require IT Operations personnel to take actions, and often lead to Incidents being logged.

Event Management - (Service Operation) The Process responsible for managing Events throughout their Lifecycle. Event Management is one of the main Activities of IT Operations.

Incident management - (Service Operation) The Process responsible for managing the Lifecycle of all Incidents. The primary Objective of Incident Management is to return the IT Service to Customers as quickly as possible.

ISO 20000 - International Standards Organization. ISO Specification and Code of Practice for IT Service Management. ISO/IEC 20000 is aligned with ITIL Best Practice.

ITIL - Information Technology Infrastructure Library. A set of Best Practice guidance for IT Service Management information.

ITSM - Information Technology Service Management. The implementation and management of Quality IT Services that meet the needs of the Business.

IT Service - A Service provided to one or more Customers by an IT Service provider. An IT Service is based on the use of Information Technology and supports the Customer's Business Processes. An IT Service is made up from a combination of people, Processes and technology and should be defined in a Service Level Agreement.

KPI - Key Performance Indicator. A Metric that is used to help manage a Process, IT Service or Activity. Many Metrics may be measured, but only the most important of these are defined as KPIs.

Lifecycle - The various stages in the life of an IT Service, Configuration Item, Incident, Problem, Change etc.

Live - (Service Transition) Refers to an IT Service or Configuration Item that is being used to deliver Service to a Customer.

Metric - (Continual Service Improvement) Something that is measured and reported to help manage a Process, IT Service or Activity.

OGC - Office of Government Commerce. OGC owns the ITIL brand (copyright and trademark). OGC is a UK Government department.

Plan–Do–Check–Act (Continual Service Improvement) - A four-stage cycle for Process management, attributed to Edward Deming. Plan–Do–Check–Act is also called the Deming Cycle.

PLAN: Design or revise Processes that support the IT Services.

DO: Implement the Plan and manage the Processes.

CHECK: Measure the Processes and IT Services, compare with Objectives and produce reports.

ACT: Plan and implement Changes to improve the Processes.

Problem Management - (Service Operation) The Process responsible for managing the Lifecycle of all Problems. The primary objectives of Problem Management are to prevent Incidents from happening, and to minimize the Impact of Incidents that cannot be prevented.

Process - A structured set of Activities designed to accomplish a specific objective. A Process may include any of the Roles, responsibilities, tools and management Controls required to reliably deliver the outputs.

Quality - The ability of a product, Service, or Process to provide the intended value. For example, a hardware Component can be considered to be of high Quality if it performs as expected and delivers the required Reliability. Process Quality also requires an ability to monitor Effectiveness and Efficiency, and to improve them if necessary.

Role - A set of responsibilities, Activities and authorities granted to a person or team. A Role is defined in a Process. One person or team may have multiple Roles, for example the Roles of Configuration Manager and Change Manager may be carried out by a single person.

Service Catalogue - (Service Design) A database or structured Document with information about all Live IT Services, including those available for Deployment. The Service Catalogue is the only part of the Service Portfolio published to Customers, and is used to support the sale and delivery of IT Services. The Service Catalogue includes information about deliverables, prices, contact points, ordering and request Processes.

Service Culture - A Customer oriented Culture. The major Objectives of a Service Culture are Customer satisfaction and helping the Customer to achieve their Business Objectives.

Service Desk - (Service Operation) The Single Point of Contact between the Service provider and the Users. A typical Service Desk manages Incidents and Service requests, and also handles communication with the Users.

Service level - Measured and reported achievement against one or more Service level targets. The term Service level is sometimes used informally to mean Service level target.

Service Level Agreement - (Service Design) (Continual Service Improvement) An Agreement between an IT Service provider and a Customer. The SLA describes the IT Service, documents Service level targets, and specifies the responsibilities of the IT Service provider and the Customer. A single SLA may cover multiple IT Services or multiple customers.

Service Portfolio - (Service Strategy) The complete set of Services that are managed by a Service Provider. The Service Portfolio is used to manage the entire Lifecycle of all Services.

Transition - (Service Transition) A change in state, corresponding to a movement of an IT Service or other Configuration Item from one Lifecycle status to the next.

User - A person who uses the IT Service on a day-to-day basis. Users are distinct from Customers, as some Customers do not use the IT Service directly.