Towards IT Service Management Excellence

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Abstract—A transition from a product or technology oriented software company to a service-oriented company with a systematic IT service management is a major change that causes headache for many quality managers. Unfortunately often, this change is seen as a massive tool project but customers and staff are forgotten during the change. In this study, we aim at creating a service management framework that would help IT service provider organizations to better take into account people-related issues during a journey towards a service organization. We shall explore what does a concept of excellence mean in the management of information and communication technology services. Additionally, the objective of our model is to decrease the change resistance related to adoption of IT service management processes and methods. Our framework is based on IT service management best practice framework IT Infrastructure Library (ITIL), IT service management standards as well as studies of service excellence. The research problem of this study is: How IT service management processes should be implemented by IT service provider organizations while supporting the concept of service excellence? The main contribution of this paper is to present a preliminary version of Service Management Excellence framework that combines process excellence, service excellence and project excellence into a unified approach.

Keywords—IT service management; organizational change; service excellence.

I. INTRODUCTION

IT service provider organizations need a systematic approach for continual improvement of IT services and IT service management processes. Continual improvement enables IT service provider organizations to reduce the number of unplanned service outages, decrease service operation and maintenance costs as well as increase the productivity of IT service management by removing the process bottlenecks. This shall increase the customer satisfaction on the provided IT services and increase the competitiveness of the service provider organization. The context of this study is IT service management. IT service management aims at providing customers with high quality IT services that fulfill customers business needs. In order to achieve this goal, skilled and motivated service personnel and reliable service infrastructure with supporting technologies is needed. The service management excellence can be approached from various perspectives.

The first potential perspective is continual service improvement. Previous studies on continual service improvement have focused, for example, on CSI challenges and automated process assessment. Heikkinen and Jäntti [1] have studied people-related, process-related and technology-related challenges from the perspective of continual service improvement. They report challenges such as high variation in working practices of managing improvements and ineffective reporting due to poor interoperability of systems. Shrestha et al. [2] highlight the role of regular process assessments to identify improvement opportunities. Effective and measurable IT service management enables an IT organization to improve the service quality, increase the performance and effectiveness of service management as well as to identify in early phase potential problems. The systematic continual service improvement creates a good basis for excellent services (service excellence) and excellence in service processes (process excellence).

The second potential perspective is change management. Continual improvement often requires implementation of changes through the change management process. Change management has been seen as a difficult process to implement by IT service provider organizations because changes may occur in various organizational levels. While launching large-scale ITSM programmes unplanned and ad-hoc, managers typically encounter a high amount of change resistance. Therefore, ITSM programme managers should pay attention to organizational change management methods such as identifying change agents [3] to promote the change within the organisation as well as ensuring that ITSM improvement project receive management commitment.

Tan, Cater-Steel and Toleman [4] report that the role of the committed senior management, the role of a project champion and the recognition of the need for an appropriate change management strategy play an important role in ITSM improvement project’s success. In order to achieve excellence in service management, major changes are typically needed to change the corporate culture and restructure the organization to serve customers effectively. These major changes require successfully implemented projects, for example, with the support of a project office (project excellence). An ITSM programme typically involves three types of change projects: an ITSM tool improvement project, a process improvement project and a competence management project to increase service management awareness of staff.

The main contribution of this study is to 1) explore how service management excellence is visible in ITSM programmes of IT service provider organizations, 2) study which critical success factors are related to implementing ITSM as an organizational change, and 3) establish a Service Management Excellence framework. As results, this study provides academia with new knowledge on the concept of service excellence and how it is visible in IT service providers’ business. The results of this study can be used by continual service improvement managers, quality managers and service managers to better identify the attributes of excellent service management. The
remainder of the paper is organized as follows. In Section 2, the research methods of this study are described. In Section 3, the results of the study are presented. The discussion and the conclusions are given in Section 4.

II. RESEARCH PROBLEM & METHODOLOGY

The research problem of this study is: How IT service management processes should be implemented by IT service provider organizations while supporting the concept of service excellence? The research problem was divided into the following research questions:

- How service excellence can be defined?
- Which critical success factors are related to implementing ITSM?
- How service management excellence is visible in ITSM programmes of IT service provider organization?

A. Data Collection Methods

In order to establish the service management excellence model, data was collected from 10 service provider organizations in Finland. In order to guarantee the anonymity of study objects (interviewees), we do not reveal the roles or organizations in Finland. In order to guarantee the anonymity of the results of the study are presented. The discussion and the conclusions are given in Section 4.

A. Data Collection Methods

In order to establish the service management excellence model, data was collected from 10 service provider organizations in Finland. In order to guarantee the anonymity of study objects (interviewees), we do not reveal the roles or connect the roles to our findings. These organisations were selected for this study because they were representative cases with easy access due to research partnership. The following data collection methods/sources were used during the study:

- Documentation (process descriptions, feedback summary)
- Archives (incident records, change request records, service request records, email records)
- Interviews/discussions (service managers, directors, development managers, sales directors, product/service managers, CSI managers)
- Participative observation (ITSM awareness training, project seminar presentations)
- Physical artefacts (organizations’ intranets, ITSM tools)

III. RESULTS

The results of this study have been presented in the following order. First, we discuss which elements or characteristics are related to the concept of service excellence. Second, we show evidence how Finnish IT service provider organisations implement ITSM processes as an organizational change and identify success factors of ITSM implementation projects. Third, we present a preliminary version of our Service Management Excellence framework.

A. How service excellence can be defined?

According to Johnston [5], service excellence comprises of four main elements: 1) delivering the promise, 2) providing a personal touch, 3) going the extra mile and 4) dealing well with problems and queries. Cheng, Spohrer and Lalescu [6] have identified three important factors to sustain service excellence: value co-creation concept in the service system, the balancing of innovation and commoditization dynamics, and the configuration of core resources in the service system (e.g. people, technology, organization, and shared information). Service excellence is closely related to continual service improvement.

Spector and McCarthy [7] discuss Nordstroms way to reach excellent customer service. They mention a concept of service heroics: meaning story telling about situations where colleagues have provided excellent customer service to their customers. Inghilleri and Solomon [8] state that customer satisfaction is based on four key factors: The first factor is **Perfect product**. The product or the service needs to be designed in a way that it works perfectly with some predefined conditions and designers should avoid designed to fail functions. The second factor is **Delivered by a caring, friendly person**. The perfect product requires caring and friendly people to deliver it to customers. The third factor is **In a timely fashion with**. Timely fashion refers to on-time delivery standards and avoiding too long resolution times. The final factor is an **Effective problem management process**. If a customer’s problem is solved effectively, the customer might become more loyal than in a situation without problems.

Zeithaml, Parasuraman and Berry [9] have presented a widely adopted SERVQUAL model that describes ten dimensions of service quality: tangibles, reliability, responsiveness, understanding/knowing customers, access, communication, credibility, security, competence and courtesy. Next, we provide few examples on these dimensions. In an IT service provider’s case tangibles could mean appearance of physical service desk facilities, equipment such as computers and tablets, personnel (service desk and support staff) and communication materials (e.g., handbooks, printed manuals). Reliability would refer to the IT service provider’s ability to perform the promised IT service dependably and accurately. Responsiveness would mean the willingness of service desk teams to help customers and provide prompt service. Competence in the IT service management context would refer to required skills and knowledge to perform the IT services. Courtesy would be measured by how polite, respectful, and friendly the contact personnel are for their customers.

Brown [10] discusses the concept of breakthrough customer service. He reports that breakthrough customer service is giving differentiated service, managing the customer relationship, is a long term journey, using best practices, changing the organizational culture from top down, and being an organization that is easy to do business with.

Furthermore, Thomas and Applegate [11] present characteristics of customer friendly service delivery systems and report that services should be accessible (ensuring multiple ways to reach the company), accurate (all the information that is accessible to customers must be accurate), integrated providing one source for all the information channels, open (easy, consistent and knowledgeable channels), customer driven (the customer is able to understand and use the information, systems and options easily), fast (provide instant communication, for example, customers can use social media to submit problems), and totally transparent but hide details of complex service delivery activities).
In order to demonstrate what is an excellent service in the context of ICT support services, we analyzed customer feedback records from case organizations. Next, we show how these selected feedback sentences reflect the service excellence elements by Johnston [5] (delivering the promise, providing a personal touch, going the extra mile and dealing well with problems and queries) and Inghilleri and Solomon [8] (perfect product, delivered by a caring friendly person, in a timely fashion with..., effective problem management).

- “Fine and fast service, perfect score! I received a new computer and managed to participate in the meeting.” Perfect product
- “I received a very good and friendly service. Thank you xxx. It was a really good first time impression on service desk based on this call.” Delivered by a caring friendly person
- “I received service immediately. My issue was processed peacefully onsite and in a detailed level. There were some alternative options that were resolved in a way that made sense. Additionally, they provided me with help for future concrete situation if necessary.” Going the extra mile
- “I got instructions how to resolve my issue.” Effective problem management
- “Fast and friendly service, thank you.” Effective problem management, Delivered by a caring friendly person
- “The service desk specialist received my incident report and local support resolved the case fast and effectively.” Effective problem management
- “I was connected to the right person that resolved my case.” Delivering the promise
- “The support specialist xyz receives 10 points because he resolved also many other users’ phone settings while he had a field visit.” Going the extra mile

**B. Which critical success factors are related to implementing ITSM?**

The second research question aimed at exploring which issues IT service provider organizations consider important while implementing IT service management processes. As data sources related to this research question, we used case organizations’ presentations in project seminars, interviews and participative observation in the meetings between a research team and case organizations. Table I shows the critical success factors that organizations had identified while implementing ITSM.

<table>
<thead>
<tr>
<th>Case</th>
<th>Category</th>
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<tbody>
<tr>
<td>Motivating employees why the process is important</td>
<td>Motivation</td>
</tr>
<tr>
<td>Short general overview on ISO/IEC 20000 and ITIL</td>
<td>Training</td>
</tr>
<tr>
<td>Showing the scope of the concepts in the organization</td>
<td>Scope</td>
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<tr>
<td>Training employees to identify ITSM concepts in real life</td>
<td>Training</td>
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<tr>
<td>Publish roles and responsible persons</td>
<td>Roles</td>
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<tr>
<td>Launch the functions (CAI) related to the process</td>
<td>Functions</td>
</tr>
<tr>
<td>Set schedule, goals and monitoring for processes</td>
<td>Goals, Monitoring</td>
</tr>
<tr>
<td>ITSM theories and frameworks hidden in background</td>
<td>Practical</td>
</tr>
<tr>
<td>Improvement areas were identified from daily work</td>
<td>Practical</td>
</tr>
<tr>
<td>Process management goals mapped to organizational goals</td>
<td>Goals</td>
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<tr>
<td>Consistent HRM in the background of ITSM</td>
<td>HRM</td>
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<tr>
<td>Change implementation in understandable pieces</td>
<td>Change</td>
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<tr>
<td>Setting metrics and dashboards</td>
<td>Monitoring</td>
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</table>

Our study is congruent with the findings of previous studies [4], [12] that emphasize the role of the committed senior management and the role of a project champion. Especially, the role of management in informing employees of process benefits clearly was considered important. Some of the studied organizations had provided employees short awareness-level training on ITIL/ITSM before official ITIL Foundation courses. The scope of the concepts refers to classification of core concepts within ITSM, such as major incidents and major changes. An organization has to create definitions for these and rules that help employees to establish these records. Another issue related to concepts is to provide employees enough real examples of incidents, service requests, requests for change and problems during training sessions. Ideally, examples should be taken from the organization’s own service desk records.

IT service provider organizations should pay attention to identification of highly motivated and skilled service employees to act in process manager roles. Without a responsible person, there is nobody responsible for design, implementation and marketing the process inside the organization. Roles should include a list of responsibilities (activities that the process manager should operate daily, weekly, monthly and annually). Implementation of ITSM should be systematic and led like a project (although implementation and improvement of ITSM does not have a clear end like projects). The systematic approach involves scheduling the work on describing processes and services as well as creating service catalogues and configuring and introducing ITSM tools. Setting achievable and realistic goals and understandable metrics is important from the monitoring perspective.

One of the studied organizations (an ICT department of a government organization) had guided ITSM improvement team to take a practical approach on ITSM instead of theoretical concepts. This affected how the concepts were visible in tools. For example, a team mapped organization’s legacy concepts with new ITSM concepts in drop down menus of an ITSM tool (Failure - Incident). Additionally, ITSM improvement was linked to the organization’s annual goals and strategic objectives. Employees were encouraged to suggest improvement areas and engaged in process improvement work to work for a common good purpose.

One of the IS managers mentioned the role of consistent human relationship management (competence management, recruitment, identification of training needs) in supporting the change. Three organizations stated clearly that it is critical to implement ITSM in understandable phases or stages. One of the studied organizations had divided ITSM improvement into 3 projects with different goals: process improvement, tool improvement, and customer service improvement. An ICT department of a government organization had limited the improvement scope on incident and problem management despite the needs to involve service level management and configuration management. Finally, all the studied organizations addressed the need for setting appropriate performance metrics and monitoring them. Two organizations were planning...
an ITSM dashboard for monitoring processes more effectively.

C. Service Management Excellence Framework

Figure 1 shows the structure of the Service Management Excellence framework.

![Service Management Excellence framework](image)

From the perspective of balanced scorecard, operational excellence has influence on the excellence of service operations. The successful delivery of IT services and projects requires, for example, effective and efficient incident management, change management, asset and configuration management, and release and deployment management [13]. Continual Service Improvement is an important part of service lifecycle in IT service management frameworks (ITIL, COBIT, ICT Governance Model) and standards (ISO/IEC 20000-1, ISO/IEC 15504-8).

We propose that service management excellence requires the existence of three types of excellence: service excellence, process excellence and project excellence. Together with these types of excellence, service management excellence benefits from two supporting modes: 1) continual service improvement and 2) proactive service management. Continual Service Improvement (CSI) mode may be targeted into three different areas in IT service management: IT Service Management processes, IT services and service lifecycle. In many organizations, process-related challenges and bottlenecks exist especially in change management, incident management and problem management. Immaturity of these processes may lead to too reactive IT service management which results in increase in the number of failed changes, incorrectly assigned incidents and extra work due to resolution efforts of repeating incidents. CSI related to IT services can be started by identifying those services that suffer from frequent service level breaches or SLA breach warnings.

Proactive service management mode is important because in many ICT provider organizations current service operation activities, methods and procedures are mainly focused on reactive problem solving rather than proactive efforts to prevent the occurrence of service outages. Proactive mode is not limited to problem management only but can be applied for a wide variety of ITSM processes such as capacity management, availability management and IT continuity management.

Finally, we have identified three supporting views: Business relationship management view (customer view), social and knowledge management view and change management view that affect how customers and staff see the evolution of service management excellence. Business relationship management aims at understanding better customers and their business needs as well as establishing and maintaining sustainable business relationships with customers. Additionally, the goal is to identify customers needs and ensure that the service provider is able to match these changing needs. Business relationship management includes the following methods and functions: customer portfolio, customer contract portfolio, measurement of customer satisfaction and user satisfaction, identifying service requirements and dealing with complaints and compliments.

Regarding the change management view, there must be a well-functioning connection between change management and project management because part of the changes (major changes and many normal changes) shall be implemented by project management. In the MARS project research, we shall establish a bridge between IT service change management, project management and change leadership because these factors essentially affect the improvement of services and the lack of one of these factors or non-effective performance of factors shall cause delay in handling improvement ideas or may stop the handling totally.

We shall also exploit the three step model of change of Lewin (unfreezing, change and refreezing) to prepare service staff and management to better meet organizational changes such as IT service outsourcing. The unfreezing phase focuses on presenting why change is needed, what are the benefits of change, how urgency of change should be communicated to employees and managers of the IT organization and how to use change agents to assist ITSM programmes.

Social and knowledge management view refers to the fact that IT service business could utilize significantly more the opportunities of social media. Modern ITSM tools enable creating so-called queues into the instant messaging system. The users from the customer-side can request support by opening a Help Desk Chat, when their request is directed to these queues. The users from the service providers side in turn see the queues in their instant messaging applications and are able to respond to users requests. Based on the discussion, a user from a service providers side may perform various activities such as create a new service request. Additionally, social media enables the usage of live feeds in IT service management. Users are able to write messages to this forum, respond to other users messages, attach files and hyperlinks to the messages and rank and tag the messages. Social media could be used by security management to increase awareness of IT security, by incident management to log incidents and by many other ITSM processes.

D. Plan how to evaluate the impact of service management excellence framework

The Service Management Excellence framework belongs to the results of Management Roadmap for Service Innovation.
and Excellence project (funded by European Social Fund). The main objective of MARS project is to increase productivity and wellbeing at work in the service organizations of Northern Savo region through competence of service management and service innovation. There is a significant need for the project because many companies in Northern Savo are transitioning from technology-oriented or industrial-oriented business to service oriented business which is a major structural change for these companies. This change often causes uncertainty, stress and decreased wellbeing at work.

MARS project supports the structural change by establishing methods, models and knowhow on change leadership, service innovation and improving wellbeing at work, customized for service organizations. In the end of the project, each project participant shall get a survey that measures how well the project achieved the following goals.

- The project has improved the management and leadership at workplace
- The project has improved the organizing of work and work practises are more effective
- The knowledge and competence of personnel have been improved
- Work safety and related practices have been improved
- Coping with workload has been improved at workplace
- Work atmosphere has been improved at workplace
- Engagement and possibilities to affect one’s own work have been improved
- Communication and communication practises have been improved
- Flexible ways of working have been increased in order to align work and freetime

The challenge is how to include above mentioned perspectives into project training events, seminars and workshops from the very beginning of the project. Our plan is to create a training course catalogue that shows how these issues are addressed by each course.

IV. CONCLUSION AND FUTURE WORK

This study aimed at answering the research problem: How IT service management processes should be implemented by IT service provider organizations while supporting the concept of service excellence? The research problem was divided into three research questions. Regarding the first question (How service excellence can be defined?), we showed that definitions of service excellence addressed among other things delivering the promise, providing a personal touch, going the extra mile and dealing well with problems and queries, perfect product, delivered by a caring friendly person, in a timely fashion with., and effective problem management.

Regarding the second research question (How IT service provider organizations implement ITSM processes as an organizational change?), we observed that organizations emphasized issues such as motivation, setting objectives, practical level approach of implementing ITSM and establishing metrics. Concerning the last research question (How service management excellence is visible in ITSM programmes of IT service provider organization) we presented the first version of Service Management Excellence framework. We shall continue the validation of the framework with our project partners.

There are certain limitations related to our study. First, data were collected from ten IT service provider organizations in Finland during a relatively short period of time. Second, our contact persons in case organizations were typically on managerial level in organizational hierarchy. More interviews could have been conducted on employee level in case organizations to get a richer view on ITSM adoption and its challenges. Third, case study research method has received regular criticism that results from case studies cannot be generalized to other organizations. However, we are able to extend the theory of IT service management and service excellence. Further research could be related to combining Lean and Continuous Service Improvement approaches together.

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