IT Service Management Support for IT in Company X

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Title of report IT Service Management Support for IT in Company X	Number of report pages and attachment pages 33 +7
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The purpose of this thesis was to describe how the services of IT Service Management Support are provided and organized in Company X for IT organization itself supporting and delivering the IT services for the customer i.e. the business. Additionally there was practical work done by the author in the role of ITSM Support in Company X in fall 2013 to which the written thesis is based on. The thesis was carried out as follows: internet sources were used for the theory part. In addition, author's own experiences and opinions were reflected in the case study part as the thesis was made as an assignment for Company X. The thesis discusses shortly main concepts in IT Service Management area and presents the IT structure in Company X. The main part of the thesis describes the IT Service Management Support's support model and support organization and the different services it provides for IT in Company X. The thesis concludes that the services of IT Service Management Support differ depending on the organization and this thesis presents one way how to organize these services. In the end some development ideas are made for Company X for future development, for example an idea for them to consider the implementation of Service Management Office (SMO) concept.	
Keywords ITSM, IT Service Management, service, support	

Tekijä tai tekijät	**Ryhmätunnus tai aloitusvuosi**
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Opinnäytetyön tarkoituksena oli kuvata IT:lle tarjottavan IT-palvelunhallinnan tuen (IT Service Management Support) palvelut ja niiden organisointi Yrityksessä X

Opinnäytetyö perustuu käytännön työhön, jonka tekijä on toteuttanut Yritys X:ssä 'ITSM Supportin' roolissa syksyllä 2013.

Opinnäytetyö toteutettiin toimeksiantona Yritys X:lle. Teoriaosuudessa lähteinä käytettiin internet-lähteitä. Tämän lisäksi opinnäytetyö perustuu tekijän omaan kokemukseen ja tietoon, jonka hän sai työskennellessään Yritys X:ssä.

Opinnäytetyö käsittelee lyhyesti IT-palvelunhallinnan pääkäsitteistön teoriaa ja esittelee Yritys X:n IT:n rakenteen. Opinnäytetyön pääosa esittelee Yritys X:n IT-palvelunhallinnan tuen palvelumallin -ja organisaation sekä sen tarjoamat palvelut IT:lle.

Lopputuloksena opinnäytetyö osoittaa, että IT-palvelunhallinnan tuki ja sen tarjoamat palvelut eroavat organisaatioittain ja tämä opinnäytetyö kuvaa yhden tavan organisoida nämä palvelut. Lopuksi Yritys X:lle annetaan joitain tulevaisuuden kehitysideoita, kuten SMO (Service Management Office) konseptin käyttöönoton.

Asiasanat
ITSM, IT-palvelunhallinta, palvelu, tuki

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1   Introduction

This thesis is presenting the main purpose of IT Service Management Support; what it is for, to whom it is for, what services it provides and why it is needed in an organization. More precisely this thesis is focusing on IT Service Management Support for IT in Company X, the sponsor company of the thesis.

The sponsor of this thesis outsourced most of its IT services such as IT Service Desk and infrastructure services to a foreign vendor in the fall of 2012. At the same time the company implemented a new IT Service Management tool called ServiceNow. With this tool the company's IT organization is managing its all IT Service Management processes taken into use during 2012-2013 and master data related to those. All of these processes and the ServiceNow tool require support and trainings for the users as well as master data management – The services of IT Service Management Support.

What is IT Service Management?
IT Service Management, also referred as ITSM, is responsible for supporting the IT with the same tools and processes as the IT uses in their services to support the business and end users. ITSM is not a one clear tool or a practice but it is built of three factors; **people**, **processes** and **tools**. ITSM's target is to manage and deliver the IT services to business according to business' needs together with internal and external partners. ITSM includes for example 1) design of IT services in the organization, 2) management and development of the daily operation processes used e.g. in IT Service Desk and 3) management and monitoring of the changes in the IT environment.

Target
The target of this thesis is to describe how to organize the support for an IT organisation itself for how to run ITSM processes and use ITSM tool to deliver the IT services to the actual customer of IT; the business and the end users. More specifically the thesis is concentrating describing the ITSM Support in Company X.

This thesis does not describe how ITSM is used to support and deliver IT services for the business and end users although processes and tool are the same. The thesis does not either include detailed descriptions of each ITSM process nor ITIL.

Methods

Theory part is written based on Internet sources and my own knowledge explaining the main concepts in ITSM area. The case study part (chapters 3 and 4) is mainly based on my own knowledge and experience.

The practical part of the thesis work was done mainly in fall 2013 while I was doing the actual work in Company X providing the different services of ITSM Support as well as designed the "after project" responsibilities for ITSM Support services. Thereby especially the chapter 4 is mostly my own conceptions and knowledge based on the experience I achieved and learned in Company X.

Structure

The sponsor company and its suppliers are kept anonymous and thereby the two main parties are referred as Company X and Vendor Y in the content of this thesis. For this reason also the attachments are kept secret.

The beginning of the thesis is concentrating more on the theory of different concepts in this subject matter such as ITSM and ITIL in general. The rest of the thesis is on a way case study introducing and describing IT and the services of ITSM Support in Company X. However same kind of services and tasks are done one way or another in all organizations utilizing ITSM processes and tools. Therefore the thesis is not pure fact of what ITSM Support is and how it is done but more of a one view to its different services and how those are delivered and organized in the company in question. Lastly I will conclude my thoughts and conceptions of ITSM Support services and ponder what could be the future of ITSM Support. For example concepts like SMO and SIAM are becoming more familiar and popular ways of working and those could be something Company X should be heading towards as well.

2 Concepts

This chapter provides short descriptions of the main concepts/terms in ITSM area that are also used in this thesis.

2.1 ITSM

ITSM i.e. IT Service Management is a package of processes, people and their competences, tools (IT systems) and practices (ways of working) that together with the business maintain and provide the access and availability to IT systems, IT services and business processes for the customer. ITSM aims to reduce IT support costs and risks and improve the quality of IT services in an organization (Innovise 2014).

The ITSM processes tell you how different IT services are delivered and by whom (on a high-level), the tools helps to manage and monitor these processes and all data related to them and the IT organization uses these processes and tools in their work delivering the IT services to business and end users – the customers. In addition an ITSM team designs, maintains and develops these ITSM processes and tools and trains the IT organization to utilize them in the most efficient way.

As an example of ITSM processes I would mention Incident Management and Change Management. I would say these are probably the most known and used processes even without knowing the formal names.

Incident Management is used for reporting issues. ITIL terminology defines an 'incident as following': An unplanned interruption to an IT service or reduction in the quality of an IT service. Failure of a configuration item that has not yet impacted service is also an incident, for example failure of one disk from a mirror set. (ITILFoundations 2014a.) In practice this means that when a user has an error in the program, e.g. in SAP, he contacts IT Service Desk to report the issue who then investigates the issue and eithers resolves it right away or delegates it to further IT experts of SAP. These experts will then provide a resolution to the user in agreed timing. This process requires e.g. information of the requester (master data), information of the issue and in-

formation of the provided service's (SAP) agreed service level agreements and support groups (master data). All this data is already existing and can be modified and processed in the ITSM tool, in this particular case of Company X, in ServiceNow.

Change Management is a process controlling the lifecycle of all changes in the IT environment. The main objective of it is to prevent risk of interruption to the IT service. All changes are recorded, reviewed, authorized, prioritized, planned, tested and implemented in a controlled environment. (Octobus Wiki 2013.) A change can be for example implementation of a new service and all applications, servers and other infrastructure related to that. Change can also be, and many times is, a smaller one like a monthly release to an application including bug fixes and enhancements. In Company X also all the changes in IT services are managed in ServiceNow.

2.2 ITIL

"ITIL (IT Infrastructure Library) is the most widely adopted approach for IT Service Management in the world. It provides a practical, no-nonsense framework for identifying, planning, delivering and supporting IT services to the business." (ITIL 2014.)

ITIL library contains five core "sections" and there is a book for each section:
- Service Strategy,
- Service Design,
- Service Transition,
- Service Operation and
- Continual Service Improvement.

These five sections each cover a stage of the Service Lifecycle for IT Service Management. (ITILFoundations 2014b.)

The ITIL processes are also the baseline for ITSM processes in use in the Company X, the sponsor company of this thesis.

2.3   Service

"A service is a means to delivering value to the customer by facilitating outcomes customers want to achieve, but without the ownership of costs and risks." (ITILFoundations 2014c.) Services are intangible acts, deeds and performances (FT Press 2013).

Service
- has a description what the service includes, what it costs and what is the delivery time (SLA).
- has the resources (infrastructure and people) to provide and support the service.
- can be listed in a service catalogue (e.g. Intranet, public website) where it can be ordered by the customer.

(University of California Santa Cruz 2012.)

An IT service can for example be a ready-for-use laptop delivered to the customer, a fix to an error in a program reported by the business user or it can be an answer to a "how-to" question asked by a user. The line organisation does not own laptops or licences to the programs but IT does. Service as a whole is a provision to use of these assets and support, maintenance and development related to them.

This thesis will concentrate on how ITSM Support can be organized as part of IT-EPR Service for all counterparties (suppliers, internal IT) who are providing the IT services for Company X's end users and business organisations. For example ITSM Support provides an answer to a "how-to" question "Who is the approver in certain step in Change Management process?" and does master data management related to the ITSM tool. More about the services of ITSM support in chapter 4.

SLA

SLA (Service Level Agreement) is the agreement between the service provider (IT) and customer (business). An SLA describes the service, documents service level targets and specifies the responsibilities of the IT Service Provider and the Customer (Cornell University 2012).

2.4 Customer

A customer is a party that receives and/or consumes products i.e. goods or services and has the ability to choose between different products and/or suppliers (Business-Dictionary.com).

For ITSM support services the main customer is the IT organization providing IT services to business by utilizing the ITSM processes and tools.

2.5 SMO

SMO (Service Management Office) can be compared to a PMO i.e. Project Management Office. Jayne Groll presents in ITSM Academy's (2013, 7) webinar that "the SMO is an internal team that is **accountable** for the quality of the service management program."

In other words SMO can be seen as a practice/function that centralizes and organizes the service management processes. It is also good to to note that SMO does not have to be a physical function but instead it can be more of a virtual one. SMO does not include the roles of actual performance i.e. "doing" but it is built on roles of managing the services and processes. For example SMO's responsibilities are to establish and govern policies and plans, manage communication and trainings as well as ensure process alignment and interfaces. (ITSM Academy 2013.)

2.6 SIAM

In short SIAM (Service Integration and Management) is overviewing everything over ITSM and SMO, including the suppliers.

SIAM has been growing in the last few years as a new discipline of IT Service Management i.e. ITSM. The purpose of SIAM is to better manage the multi supplier network of an organization. SIAM is two things; it is a **model** of how to manage multiple suppliers and services and it is also a **function**. (Sutinen T. 2013.)

SIAM **model** is the "glue" that supports the business in getting the most out of out-sourced services. In addition SIAM is the integrator, the **function** i.e. the people. SI-AM is concerned about the interfaces of people, processes, products and partners. The most importantly SIAM is outcome-based, not process-based. (Sutinen T. 2013.)

2.7   Conclusion

ITIL is not a guide to be followed word by word but instead it is one framework of best practices that helps to build the IT service design in an organization.

ITSM on the other hand is not a one clear tool or a process or people but instead it is a combination of those all. ITSM's purpose is to provide coherent ways of working and tools for IT (internal and external) to make the IT services available and accessible for the business with low costs and risk but still with quality.

In other words, ITSM is nothing without united processes and practices and ITIL is nothing without the people and tools but they all support and need each other.

In addition to ITSM there can also be the SMO, a function that manages the ITSM. And especially nowadays that companies are widely outsourcing their IT services to more than one supplier (internal or external), SIAM is above everything the model and approach that will help to maintain that supplier network.

3 IT's role in an Organization

Information Technology, or more familiarly known as IT, as a department in an organization is all the time changing more and more important factor in a company's strategy. IT is integrating more with business; on the other hand it is providing the basic IT services "invisibly" but at the same time IT has a big role in developing business. IT is no longer just supporting the business but instead it is seen more of as an enabler of business. (MarketVisio 2012.)

Due to this integration between business and IT there is a need for coherent processes to work with to develop and change the different IT tools, systems and processes used in the company. Here is where the IT Service Management comes to the picture. With ITSM processes, tool(s) and people both IT and business can work together using the same tools most efficient way.

3.1 IT in Company X

Company X's main business is in forest industry and thereby it is not providing any IT services to external clients but the importance of IT services internally is relevant.

IT services are mainly outsourced and IT's role in Company X is mainly to plan and manage projects, services and suppliers. Still some of the business applications related to development and support functions are inside the own organisation.

As mentioned earlier in the introduction part, the Company X outsourced most of its IT services such as IT Service Desk and infrastructure services to a one foreign vendor in the fall of 2012. This vendor is referred as Vendor Y in this thesis.

IT-ERP / ITSM
The Company X talks in their IT services development plans about so called IT-ERP (IT Enterprise Resource Planning). This IT-ERP includes the **Customer** *(*Business*),* the **Service Provider** *(*IT*)* and in between are the tool and the processes, the **IT-ERP**

or ITSM, however you prefer to call it. Pictures of this can be seen in the attachments 1 and 2.

In attachment 1 it is shown that there are two kind of requests from business or end users; **Demand** or **Service**. IT responds to the Demand with **Build** and to the Service with **Run**. Build is seen as development, smaller or bigger projects whereas the Run is the daily support and fixes. In between there is **Direction,** all the enablers of this communication, demand and delivery between business and IT.

In attachment 2 the first picture is opened up more. Picture clarifies in more detail who are these **requesters** and who are the **providers** and what exactly is in the middle.

The requester is either the business to whom the service providers are IT Experts or a single end user to whom the service provider is IT Service Desk. In between there is the IT-ERP/ITSM; the tools, processes and people that enable the reporting, management and monitoring of all what is happening in between the business and IT.

3.2   ITSM in Company X

When Company X outsourced big part of its IT services to Vendor Y, they also took new ITSM tool 'ServiceNow' into use and started to implement somewhat 12 new ITSM processes for Company X. The same Vendor Y is also the ServiceNow's vendor for Company X meaning they provide the service as a cloud service while they also develop the tool and the processes together with Company X.

Implementing the new ITSM tool and processes all in all took a little over 1,5 years (4/2012-12/2013) with a transformation project full of experts from Company X, Vendor Y and some other vendors. I was working for Company X from May 2012 until end of the project in December 2013 and got to be a part of the team developing, testing, implementing and supporting the ServiceNow tool and the processes.

Implementation of ITSM Processes and Tools

Pictures from Company X's IT-ERP story in attachments 3-6 are indicating the development of company's IT-ERP and ITSM processes starting from 2011 always up to future plans.

Until September 2012 Company X had only a few ITSM processes (Change Management, Incident Management) in use and the process maturity in total was low; process descriptions were existing but their implementation was inadequate. Also the used tool had complex ITSM architecture with integration to another tool.

In summer 2012 when also I became part of the team, Company X with Vendor Y were preparing the implementation of the new **ITSM tool ServiceNow**, also referred as **SNow** in Company X. Also development and testing for first two ITIL processes Incident Management and Change Management were ongoing. The summer we worked long days to collect needed master data and developed and tested the processes and the SNow tool itself. At the same time a new shared email 'itsm@companyX.com' was taken into use that ended up to be the main support channel for users during the 1,5 years in the project. I my self was one of the main readers and respondents of this email box.

On 1 Sep 2012 the first two processes went live and ServiceNow tool was opened to the users. The support and trainings for the new tool and new processes started right away not forgetting that at the same time development, testing and implementation of other new processes such as Service Request Management, Knowledge Management and Release Management continued.

As the new processes were implemented and SNow as a tool kept on changing and developing, also the need of ITSM Support became more important. Users needed support and trainings, old and new processes as well as SNow needed developing and testing and master data management became more and more important to keep the tool and processes operating correctly. Slowly much of this work started to be in many

parts my responsibility and my role generated to ITSM Support – of course with the help and support of other team members when and where needed.

In the end of November 2013 the final and at the same time biggest change to SNow was implemented when Company X successfully took CMDB (Configuration Management Database[1]) into use together with new processes Configuration Management, Demand Management, Service Portfolio and Service Catalogue Management.

Although the project ended in December 2013, the work with ITSM processes and SNow tool does not end. The development of CMDB, ITSM processes and SNow tool continue on daily basis as continuous service improvement. And all this requires also the different services of ITSM Support described in chapter 4. How the support is organized now and in the future does not really matter as the services are the same.

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[1] Configuration Management Database is a logical model stored into a database which contains relevant information about the components (CIs) of the information systems used in IT services.

4 ITSM Support in Company X

ITSM Support in Company X includes the day-to-day support to users ("how-to" questions), master data management related to ITSM processes and ServiceNow tool, training material compiling and also participating to the development and testing of new enhancements or fixes for the processes in ServiceNow tool. Many times the "how-to" questions from users require troubleshooting in the tool before a resolution can be provided. As the user's questions can be just about anything; more about the theory of a process or the practical part of the process or the ServiceNow tool in general, the people in ITSM Support are required to know well each process in use and how the tool is used.

4.1 Support Organization

During the ~1,5 year project there were quite many people doing the process and tool development in theory and in practice as well as at the same time providing the support and trainings to the users – including me myself.

IT Processes and Tools team i.e. ITSM team of Company X is the team owning the ITSM processes and ServiceNow tool and they are responsible for maintaining and developing the ITSM processes and tools. Starting 1 Jan 2014 the team includes one ITSM Architect and one Chief Process Manager and their team manager. In addition there might be some external(s) working to bring their knowledge and expertise in some particular area. In addition Vendor Y is responsible for the development and maintenance of ServiceNow tool especially from technical point of view and is also responsible for part of the services included in ITSM Support.

4.2 ITSM tool ServiceNow

As mentioned already earlier, Company X took an ITSM tool ServiceNow (more familiarly known as SNow in Company X) into use in fall 2012. Company X's SNow includes already a lot of master data, process modules and their workflows and thousands of records from different processes. Thereby it could very well be called IT-ERP

as well as it is the tool with what IT is planning, recording, managing and reporting all different events in IT services.

What is ServiceNow?

ServiceNow is a cloud service developed and provided by a company called Service-Now. ServiceNow automates IT and business operations and it has two interfaces; a **standard user interface** meant for IT users and a **custom user interface** e.g. a self-service portal for end users. An organization using ServiceNow can take just parts of ServiceNow's applications into use or just a subset of those, according to the need. (ServiceNow wiki 2013.)

To Company X the ServiceNow service is provided by Vendor Y. Together with Vendor Y's development team Company X's IT Processes and Tools team designs, develops and implements the processes and the tool itself in use in Company X.

Company X has three different environments for their ServiceNow:
- Production (PROD),
- Testing (QA) and
- Development (DEV).

ITSM Support needs mostly the PROD and QA environments while troubleshooting and resolving possible issues and testing new developments in the tool. The DEV environment is meant for Vendor Y's technical development team providing, building and maintaining the service. All environments includes two interfaces;
1) SNow i.e. standard user interface for IT users
2) IT Self Service Portal for end users.

Via IT Self Service Portal basic end users in business are able to report incidents and order things (e.g. laptop, a new application installation) and follow the statuses of the same.

4.3   Support Model

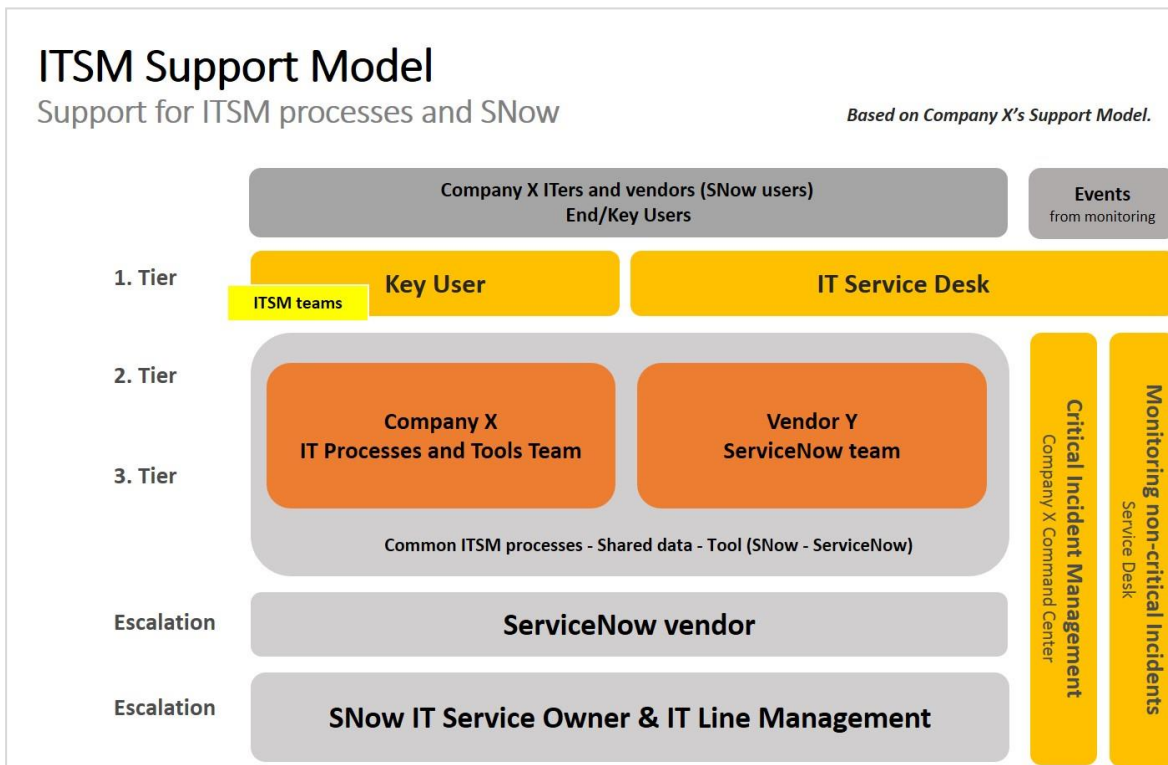The ITSM Support model is based on the Company X's general support model used in IT (Figure 1).

Figure 1.ITSM Support model in Company X.

Requester

The main requesters for ITSM Support are the IT users, internal and external, the users using the ITSM processes and ServiceNow tool. In addition there are also some business users utilizing the same processes and end users utilizing the IT Self Service Portal part of SNow.

Key User

In this context the role of Key User is referring to the ITSM Support. During the project this role was done mainly by me and one other member of the project team in Company X. After the project this role is handled together by Company X's and Vendor Y's ITSM Support teams.

ITSM Support responds to the basic support questions like how to do something in the tool, and works on basic master data management related requests.

Support

The first tier support is given by the Key User or IT Service Desk. If a requester contacts first IT Service Desk with an ITSM related question, they will re-assign the ticket onwards to a team responsible for the issue/request; Vendor Y's ITSM Support team or Company X's ITSM Team.

The second/third tier support is given by Company X's IT Processes and Tools team and Company X's ServiceNow team. In both, Company X and Vendor Y, the members are mainly the same as in previous tier but in this tier there might also be some additional members such as team management or technical experts included. In this tier all the possible reported bigger issues/changes/development suggestions based on the requester's request are discussed, planned, built and implemented.

Escalation

In addition to the support tiers there are the escalation parties that include ServiceNow vendor, Company X's IT service owner for ServiceNow and IT Line Management. These parties come to the picture in case there is e.g. a technical issue in ServiceNow that cannot be fixed by Vendor Y or some kind of issue is requiring management's decisions.

4.4 Service Channels

During the transformation project ITSM Support's main contact channel was a shared email itsm@companyX.com (Figure 2). This was used highly by IT (and business) users needing support using the ITSM processes or SNow tool. In addition also SNow itself was used for processing incidents and requests coming via IT Service Desk. In the fall 2013 we also started to implement a few generic master data requests for SNow in SNow that were made available for all IT users. This way we were able to automate repeatedly coming requests (e.g. SNow group data management) and transfer the requests from the shared email box to SNow tool itself. All the support channels and

assignments during the project and after the project i.e. current status are presented in Figures 2 and 3.

Support Channels – During the Project

As Figure 2 shows, the main contact during the project 2012-2013 for ITSM Support services was the email (itsm@companyx.com). Main of the support was given by Company X and Vendor Y was mainly responsible for more of the technical issues. At times after some investigation the basic "how-to" question from a user ended up to be a bug in the tool. These bugs were then reported as Incidents in ServiceNow to be managed and solved by Vendor Y's ServiceNow team inside Incident Management process.
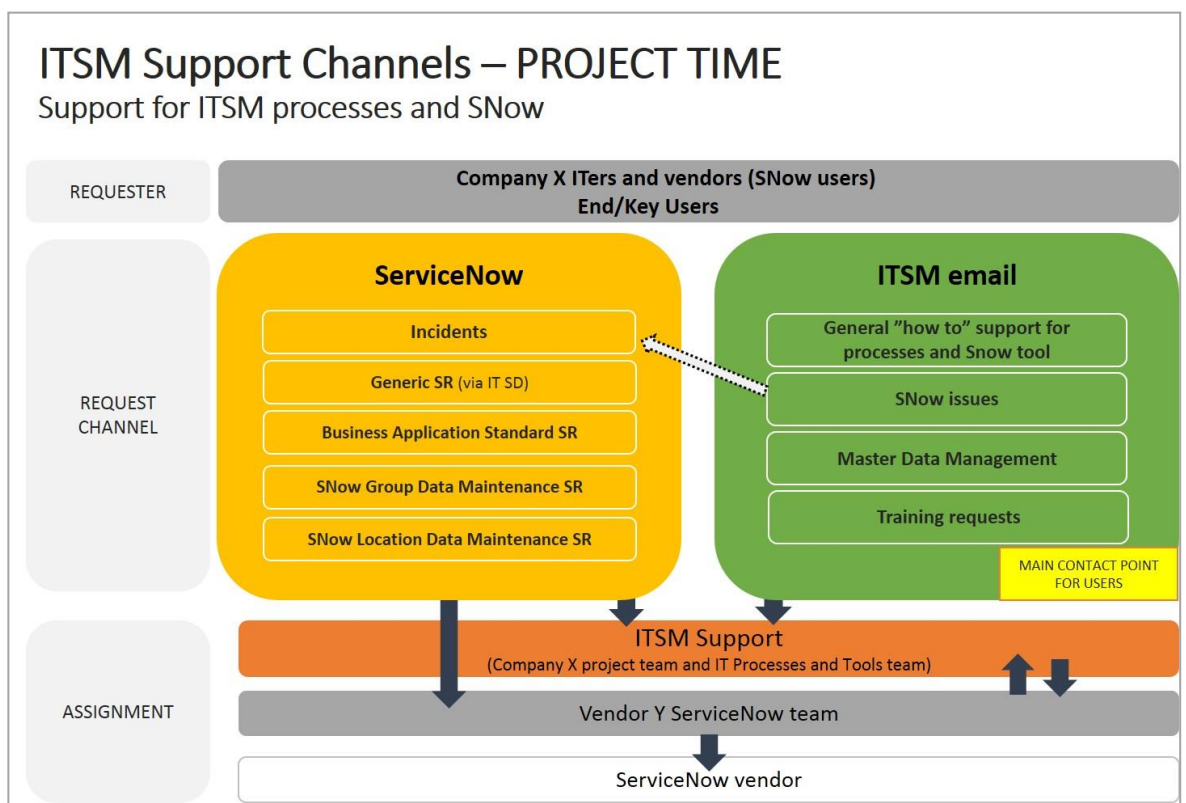

Figure 2. ITSM Support Channels during the project.

Support Channels – Current Status

The Figure 3 shows the slight change in the service channels and the assignments after the project i.e. the current status. The email is no longer used for incoming email but instead there is a standard service request "ITSM Support" in ServiceNow used for the same services given via email during the project. This service request is auto-assigned

to Vendor Y, them being the new main responsible for the "how-to" support as well as part of the master data management, and as before, for all the issues/bugs in SNow tool. So currently ServiceNow is the main channel for requesting all types of ITSM Support; incident reporting, "how-to" support, development and SNow master data management.
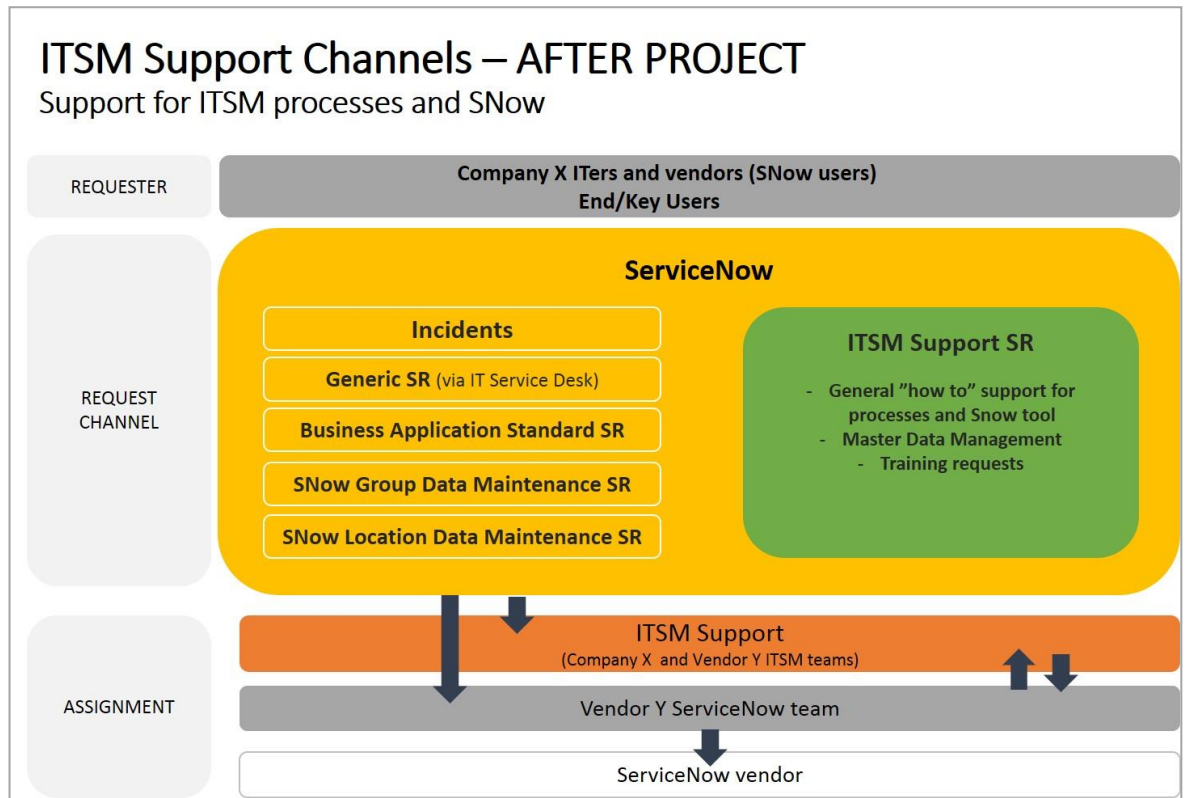

Figure 3. ITSM Support channels after the project i.e. current status.

ITSM Email

I and two of my colleagues in the project team were the main readers and responders to the shared email box. When needed, the emails were forwarded for example to a process owner to respond or was otherwise discussed before we were able to provide a reply.

Target was to answer an email on average maximum two days after it was sent but mostly response was provided during the same day. Response time differed based on the difficulty of the question (e.g. information from the Vendor Y's technical team was required) or if there were other more urgent tasks such as user acceptance tests going on for a new process. Never the less the email was quite easy and a quick way for users

to contact ITSM team and for us to provide them help and support. On average ITSM Support received 100 emails per month where the go-live weeks of most used processes increased the incoming emails temporarily. The email statistics of 2,5 months in fall 2013 are shown in the Figure 4 below.
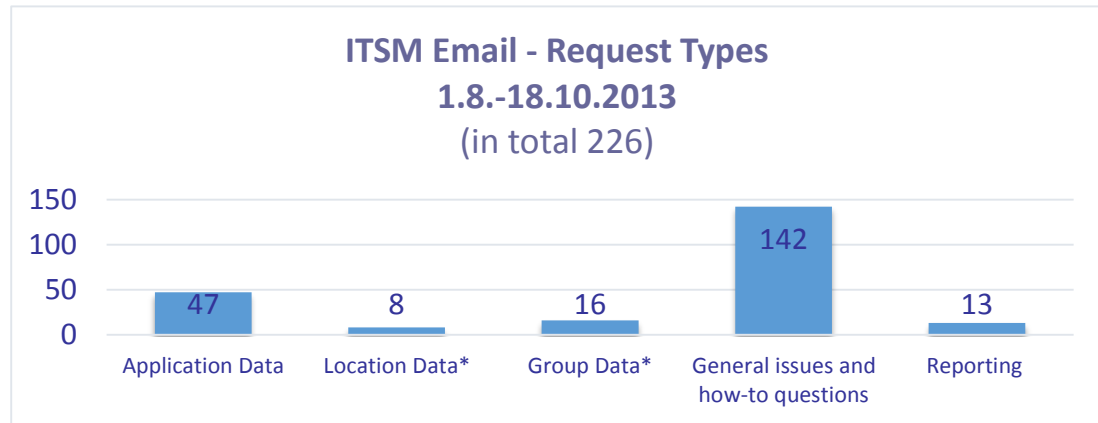

Figure 4. ITSM email statistics.

* Most of group and location data management requests came via SNow Generic Service Request and are not included in this chart.

As the Figure 4 shows, the "how-to" questions were the main type of contact. This can be explained by the implementations of several new processes during the project and questions related to those. Presumably this type of support will be decreasing more and more as the processes and SNow tool becomes more familiar to the users. But of course there will always be some changes that raises questions or new users that need support. More about this type of support in chapter 4.5.

The same email was also utilized for training invitations and schedules that were kept during the project of each new process. The trainings were organized and managed by a few other members in the project team and are not dealt in detail in this thesis.

The shared email was set to out-of-office mode in the end of December 2013 when project ended and is no longer used for incoming emails i.e. support requests. Instead the support moved completely to a SNow standard service request that was implemented in December 2013. More about this matter in chapter 4.5.2. However the

email account is still active and the Company X can use it for outgoing email such as sending the ITSM Newsletter or other informative emails.

ServiceNow

As already mentioned earlier, in addition to the email also SNow tool itself was and is used for providing support for SNow and the processes. In SNow the users i.e. requesters can utilize either Incident Management (IM) or Service Request Management (SR) processes to get ITSM support. More about the services in chapters 4.5-4.7.

ITSM Newsletter

When the implementation of ServiceNow and ITSM process started, we also started to send more or less a weekly newsletter to all ServiceNow users. The idea and purpose of this newsletter was to inform users of all new developments and changes in the processes and in SNow tool. Each letter included a short introduction, an editorial, referring to what is going on in the project and what are the most visible changes affecting the users. Each letter had news for example about a change done in a process workflow in SNow or about a new process implementation of Configuration Management and to whom it might concern.

The newsletter was sent on Fridays by the same people responsible for the main ITSM Support during the project. An example of one newsletter can be seen in the attachment 7. The newsletter delivery will continue also after the project by Company X's ITSM team but most probably more on monthly basis.

4.5 Service: Support

ITSM Support's basic support services in Company X can be divided into two; Incident and "how-to" support. Incidents are managed inside Incident Management process in SNow. The "how-to" support is more of a direct conversation with the user providing them assistance with the ITSM processes and the SNow tool.

4.5.1 Incidents

Incident reporting is meant to be used if there is a technical issue i.e. interruption to the usage of service, in this case an issue in ServiceNow tool. The target resolution to an incident is restoration of the service to the state it was or alternatively a workaround to the issue that will make it possible to continue using the service. For example an issue can be in a process workflow that is not working as it should (e.g. approval is skipped in Change Management workflow) or a user is not able to access ServiceNow but instead gets only the IT Self Service Portal[2] view.

With Incident Management it is possible to monitor and report e.g. the ticket's assignments and their resolution times, SLAs and if they are breached and review the reported issues by a service or an application.

Reporting an Incident

A user can report an incident either via 1) IT Self Service Portal or SNow interface or 2) by contacting IT Service Desk via phone, chat or email. During the project part of the contacts made to the itsm@companyX.xom email were also clearly incidents. Depending on the case, we in ITSM Support were able to resolve the issue ourselves. Alternatively the user was instructed to report a SNow incident about the issue so that it can be investigated and solved by another team, e.g. ServiceNow technical team from Vendor Y. After the project as the email is no longer in use, all the incidents are reported via SNow incident management.

Assignments and Resolution

When an incident ticket is created in ServiceNow, the user is forced to define the affected CI (Configuration Item) into the Incident form. In this case the CI is "Service-Now" that will automatically define also the default support group as well as the SLA for the ticket. This master data is already existing in the tool. More about master data and its management in chapter 4.7.

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[2] Accessible by all Company X's internal and external users having user credentials. User is auto-navigated to this view if they do not have a required group membership to access SNow i.e. standard user interface.

In Company X all incident tickets related to SNow are by default assigned to Vendor Y's technical team who can re-assign the ticket if needed for example to Company X's ITSM team.

Once the reported issue is resolved, the ticket status is updated in SNow by the IT assignee and resolution information will be automatically informed to the user. User may also be contacted via SNow during the issue solving process if additional information is required. Once the issue is resolved, the user can review the ticket resolution and reject it if the issue still exists.

Input to Development

Especially during the transformation project it was good that the users contacted many times the ITSM Support via email instead of using SNow incident process. Due to this we got to know quickly if something really was not working correctly and were able to take actions and make developments fast. At times also the resolution to an incident reported via SNow may require bigger change(s) to tool configurations and thus they trigger either Release or Change Management process. More about the development and its process in chapter 4.6.

4.5.2 "How-to" support

During the project the shared email itsm@companyx.com was used greatly for ITSM Support services and it was the main contact point for users requesting support for the processes, reporting or the SNow tool.

After the project the email is no longer used but instead a Service Request[3] called "ITSM Support" was implemented into SNow via what a user can request support regarding any ITSM process, reporting or the SNow tool itself.

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[3] "A formal request from a user for something to be provided – for example, a request for information or advice; to reset a password; or to install a workstation for a new user. Service requests are managed by the request fulfilment process, usually in conjunction with the service desk." (AXELOS Limited 2011, 73.)

Question Types

User may have a question regarding a process workflow or how to create a certain kind of report in SNow or how the SNow tool works. Also requests for training are typical. Examples of questions/issues users many times ask:

- Who are the approvers for Major Change?
- Who should/can initiate the Change process?
- Why the SLA escalation email notification was sent?
- I am not able to create a Feature for a Release – can you give me the rights for that?
- Why I am not able to access SNow?
- How to create a report of incidents inside certain assignment group(s) created between certain time frame?

As mentioned already in chapter 4.4. , above listed question types were the main reason for contacting ITSM Support during the project. This can be explained by the new tool being unfamiliar and by the all changes and developments done to the processes and the tool itself. But now as the tool is already been used over 1,5 years and it is becoming more and more familiar and there are no recurring bigger changes, the need for this type of support most probably decreases but certainly does not end. For example a new employee, internal or external, always needs some level of support for the processes in use in Company X.

Assignments

During the project most of the emails were responded/resolved inside our own team but at times more technical knowledge was required from Vendor Y.

After the project the service request "ITSM Support" is in use in SNow and it is always auto-assigned to Vendor Y as handover of "how-to" support was done to them. However there are certain support questions that were agreed to be handled always by Company X as they require more understanding and knowledge of the core business and the organization structure. For example Release Management related requests are this kind of support where it is important to understand what the user is actually re-

questing and what the product/service is about before actually implementing a Release Management for them.

Resolution

As listed earlier in 'Question Types' part, the questions users ask can be about any process or the tool itself. To be able to respond to the user, ITSM Support assignee is required to know each process in use well. In other words you need to know at least the basics of each process workflow (in theory and in practice in the tool), the different master data and how it is maintained and how it all affects the processes and the tool and of course you need to know SNow; how it can be accessed, how to navigate in it etc.

At times the resolution to a user's questions requires the basic knowledge of the process. For example a response we offered via email might have been that there is no actual issue or bug in the tool with a screen shot attached from SNow explaining shortly why the workflow status is what it is. But many times user's question needs more clarification either from the user or alternatively from the ITSM Support assignee. This means that you might need to investigate the issue yourself in the tool, review some other tickets of the same process in question, maybe create some test cases to QA environment and try to find the reason and a resolution to the issue/question. Troubleshooting certainly is a big part of this work.

Trainings

One part of "how-to" support is training. During the project each and every ITSM process was trained to entire IT organization and the training material was uploaded to SNow Knowledge Base for self-learning purposes. At times users (e.g. team managers) might also request some additional training for their team for a specific process and how it should be utilized inside their team. These kind of trainings are provided by Company X's IT Processes and Tools team upon a request.

4.6   Service: Development

Such as any IT service, also the ITSM processes and the ITSM tool in use require maintenance and development i.e. enhancements to be done on regular basis.

What is an Enhancement?

An enhancement differs from a bug fix i.e. incident as it is something new, it is a change on existing. An enhancement may be a small or big improvement to the existing whereas an incident is an interruption in the service and the resolution is the restoration of the service to the state it was. At times also the resolution to an incident may require a change (enhancement) to be designed and implemented via Release and/or Change Management process.

An enhancement is always a **change** to the existing and the implementation is always done via Change Management process to ensure the implementation in a controlled environment to manage the risks. Depending on the change type and its urgency, it can be designed, developed, tested and implemented either via Release Management process or directly via Change Management process. Release Management process is a method to manage the product's development lifecycle and one release can include many changes (i.e. features) that are implemented in one Change via Change Management.

A reason behind an enhancement for ITSM tool (SNow) and/or processes can be for example in the changes in the organization's structure or it might be noticed in the line organization that the tool is not supporting the process in use correctly.

Requesting an Enhancement

In the case of ITSM the requester for an enhancement many times is someone from IT or even inside the ITSM team. However the requester can also be an end user from business as the request process is the same for all.

All SNow related changes must be requested using an application related standard service request via SNow having pre-designed workflows with auto-assignments and approvals that will differ based on the selected values on the request form.

Once a request is sent it is auto-assigned to Vendor Y's ServiceNow team for review. If the request is more of a change in the configuration rather than just a simple master data change, the team will create a Feature of it to a dummy Release to start the actual development process.

Development Process and Roles

In Company X all development ideas i.e. enhancements for SNow tool and the processes are developed inside Release Management. This process includes roles like release owner, IT service owner (product owner), development team, tester(s) and implementation team.

First the features are collected to a dummy release from where they are scheduled to actual releases to be implemented based on their urgency and dependency with each other. There is a weekly meeting where the release manager with the development team agrees the content for upcoming releases and schedules. All features are approved by different roles such as technical team and depending on the change type there can be an approval for IT Service Owner.

Once the content for a release is agreed, the detailed design and the development of the changes will start. After the design is done, Vendor Y's development team will start to build the change to DEV environment. When the change is ready for testing, it is moved to QA environment where it will be user acceptance tested (UAT). Tester of the change is mainly the change requester but depending on the change also some additional testers might be required. Once the test is approved, the change i.e. feature is ready for implementation and it will be deployed to PROD environment inside the agreed release.

All these steps of feature development are managed and reported in SNow inside Release Management and once the release is ready for implementation, it will be managed inside Change Management.

4.7 Service: Master Data Management

Master data is the core data playing a key role in the core operation of a business (Webopedia). In this case master data it is all the data inside SNow tool utilized for the process workflows and/or providing more information.

The core competencies and knowledge of Company X's processes and master data management is always in Company X. Therefor even as part of the actual data maintenance might be done by Vendor Y, there is always an approval done by Company X's ITSM team.

SNow master data is for example:
- **Group data** utilized for providing users the itil-role and access to SNow and defining assignment and approval groups and their memberships for different process workflows.
- **Location data** utilized in user data and for defining e.g. assets' locations.
- **Application and Service data** utilized most probably in all process workflows in SNow to define what the ticket in case is about and to fetch other data from (e.g. Application's SLA, support group, IT Service Owner, approval groups etc).

Most of the master data is in SNow itself but also other systems like Active Directory (AD) includes data utilized in SNow. Thereby the part of master data is maintained in other systems as well.

Development of SNow Master Data
In the beginning of the transformation project in 2012 the main master data we maintained in ITSM Support was the Application data. This data was collected from previous ITSM tool in the beginning of summer 2012 and was harmonized during the summer before SNow go-live. We needed to collect more data from IT Service Own-

ers related to each application to obtain all the necessary information needed in SNow. Once SNow and the data was in use, the maintenance of the data continued in the tool itself.

In addition to Application data SNow had from the start information for example of all users and locations that are integrated from AD. This data is also very important to the functionality of SNow and its process workflows and requires development and maintenance.

In the end of the project in 2013 Company X implemented successfully CMDB that includes thousands of CIs[4] (e.g. Applications, Services, Assets such as servers and printers and organizational information). Each CI includes additional information and possible relations to another CIs. The CMDB with its thousands of CIs requires daily maintenance and development and it can be described as the "heart" of IT-ERP and the ITSM processes in the ServiceNow tool.

Master Data Management Responsibilities
Part of SNow master data is maintained by ITSM teams and part by the users themselves.

During the project all master data change requests (e.g. Application data and SNow group data) came via the ITSM email box and the maintenance was done by ITSM Support. Already during the project in fall of 2013 we implemented a few SNow standard service requests for part of the master data that are most often requiring changes. In addition there is a generic application standard request to be used to request other master data changes. Part of the master data is maintained by Company X and part by Vendor Y. However even as for example the SNow group data maintenance was assigned to Vendor Y's ITSM team, there is always an approval made by Company X's ITSM team for the request before actual changes are done.

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[4] A Configuration Item (CI) can be any IT component e.g. software, hardware, documentation and personnel.

After the CMDB go-live the Service and Application data maintenance became IT Service Owners' and Application Owners' responsibility. However CMDB is a complex set of CIs and is still new and requires continual improvement. Thereby particularly now in the beginning Company X's ITSM team with an external expert is there to guide the users closely to the usage and maintenance of CMDB.

Importance of Data Integrity

The importance of different SNow master data being up to date really became apparent also to all SNow users quite quickly as the data actually has an effect on the workflows.

For example Application data contains information like SLA, support group, change management group, technical approval group, business impact etc. Part of this information is utilized in different process workflows; Incident Management utilizes the SLA and support group information and Change Management workflow utilizes the change management group and technical approval group information, just to mention a few examples. If the data is wrong or not existing, the workflow might skip an approval or get stuck entirely.

SNow group data is another very important master data as it is the data providing users the access to SNow and at the same time defining the memberships for assignment/approval groups. This data must be maintained with accuracy as if it is not maintained correctly, users might lose their access to the groups they need to be a member in to be able to provide support or even to SNow entirely. Maintaining group data requires good understanding of its complexity as maintaining the data requires using SNow, Active Directory and Access Management System in correct way and order. There are different types of SNow groups with different roles, requests for new groups and removal of old groups etc. There is also a detailed step-by-step procedure compiled by me for group data maintenance in Company X. I created this document for guidance and as an overview of all the steps and logic behind the group data maintenance for Vendor Y's ITSM team, or whomever maintaining the group data in the future.

5 Discussion

In this final chapter I will conclude my thoughts about the ITSM Support and ponder a bit how Company X could develop their IT Service Management in general as well as the support part of it.

5.1 Summary

The target of this thesis was to describe how to organize the support for IT organisation itself for how to run ITSM processes and use ITSM tool to deliver the IT services to the actual customer of IT; the business and the end users. This description was written based on the practical work of the thesis; the work of ITSM Support I did in Company X.

The practical work was done in Company X during fall 2013 as I worked in the role of ITSM Support providing the different services of the support. I also designed the two standard service requests to SNow for SNow master data management and the new service request for the "how-to" support as a part of developing the ITSM Support. In addition I designed, planned and did the handover of the ITSM Support tasks when the project ended.

This written thesis describes all those ITSM Support services and the orgazational structure from Company X's point of view. But as mentioned already in the introduction, depending on the organization, the services and organizational structure of ITSM Support differ and this thesis presents only one way how it can be done – as the target was. The services of ITSM Support were mainly built up as the transformation project progressed and Company X developed and implemented their IT Service Management; the new processes and tool. This thesis brings out this development and presents the current status of Company X's IT Service Management and it support.

5.2   Development ideas

This thesis describes how the IT Service Management and its support developed inside the transformation project and what are the services currently in Company X. Without a doubt the IT Service Management; the processes, the tool and the data keeps on developing and changing and so will the support and the services it provides.

As the outsourcing of IT services is all the time increasing and happening already also in Company X, the concepts SMO (Service Management Office) and SIAM (Service Integration and Management) are something the Company X could start to utilize as well to develop their IT Service Management.

The written information of these two concepts is still quite low but is all the time increasing and more and more companies are utlizing and marketing SMO and/or SIAM to help them better to manage both the internal and external IT organization. Both concepts are described shortly in chapter 2.

With SMO also Company X could separate the actual doing of IT Service Management (the development and the support) from the management roles (e.g. process managers and owners). This would among other things increase and ensure process alignment and interfaces through out the Company X's IT organization and also the communicaton between the business and IT would be easier. SMO would also help assigning the ownerships as Company X's IT organization with one big external supplier and some smaller external suppliers is all the time developing and changing and the roles and ownerships might not be that clear. (ITSM Academy 2013.)

SIAM on the other hand is a "tool", a method, that helps to manage the network of multiple suppliers. There is no clear model or one correct way how to build up a SIAM but there is quite a lot information out there (blogs, webinars, articles, concultants) that provides examples how it could be done and what would be the benefits. As an example there is blog by Stephen Mann (2013) in ServiceNow Community explaining shortly what SIAM is about (https://community.servicenow.com/community/learn/blog/2013/11/14/1354).

5.3   Learning Experiences

The actual learning process for me happened already while working in the transformation project in Company X rather than during the writing process of this thesis. In that year and half time I learned what is IT Service Management and ITIL; The "language" of those concepts, one way to design, develop and implement the different processes and the usage of one ITSM tool, ServiceNow. The entire world of ITSM was a totally new thing to me and writing this all down also reminded me of the valuable experience I got to have. As an outcome from this working experince I got a spark to the world of ITSM but even more importantly I got interested to the development of a service, any service. I got interested to the development of customer service. Ultimately I got interested to see and learn more different possibilities and ways for service development.

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Attachments

Attachments are kept secret and are not included in the public version.