

Master's Thesis

Platform service offering in service integrator model

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<p>Company X outsourced 70% of IT services and personnel using new outsource model called service integrator. Data Center platform service management was part of the outsourced services.</p> <p>The goal of this thesis is to define Data Center platform service offering value position in the ITIL based end-to-end service management process within the three layer model of the service integrator. This study investigates if Data Center platform service offering still creates business value, brings efficiency and cost savings to customer after the outsourcing took place. One of the study targets is also to get customer feedback about current Data Center platform service offering and information about improvement areas.</p> <p>Data was collected using a research method called survey research which involves questionnaires and interviews. The interview type was semi-structured with room for open discussion. In addition company internal material like contracts, process handbook and process training material were used.</p> <p>Key finding proved by questionnaire result is that most of the customers know Data Center platform services' business case and reason for existence well. Main idea related to cost efficiency and standardization is visible from answers. However there is room for improvement in sharing the existing information wider for example via customer info sessions and newsletters.</p> <p>Study shows that an important activity, consultancy of application requirements integration into standard infrastructure components and modules, is missing at the moment from end-to-end service management process. This activity is crucial in achieving comprehensive end-to-end service deployment plan and execution.</p> <p>Another important finding is that current end-to-end service management process with its three layer model has some gaps and overlapping in roles and responsibilities. In some process areas there is room for streamlining as well.</p>	
Keywords Service integrator, Data Center platform, service, ITIL, life cycle	

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Abbreviations

ADM	Application Development Management
ASM	Application Service Manager
BSM	Business Service Manager
CCM	Capability Cluster Manager
CCP	Common Computing Platform
CDP	Common Database Platform
CSI	Continual Service Improvement
CWAP	Common Web and Application Platform
DC	Data Center
DevOps	A portmanteau of Development and Operations
GMB	Global Maintenance Break
IT	Information technology
ITIL	The Information Technology Infrastructure Library
KPI	Key Performance Indicator
SLM	Service Level Management
RACI	Responsibility Assignment Matrix
WAH	Windows Application Hosting platform

1 Introduction

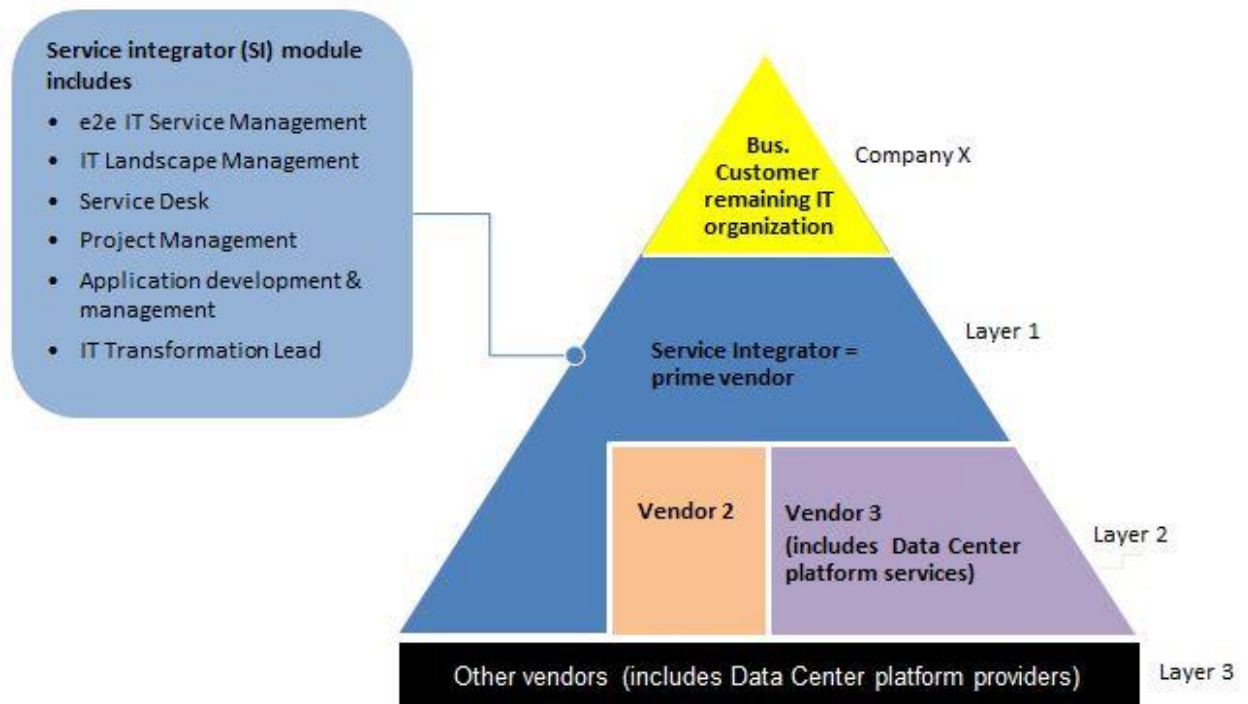
I have heard many times lately : “What you are really doing?” “What the Data Center platforms are?” “Why Data Center platform services exist?” “What are Data Center platform service offerings?” “Why you do not offer what we as customer need?”

These questions have arisen because we faced a big organization change. Our old mother company’s (called as Company X and business customer later in this thesis) IT Transformation program outcome was that 70% of IT personnel, including service management roles, were moved to other IT companies as a one form of outsourcing called system integration model. Data Center platform team was also outsourced as a part of the service management area. In company X Data Center platforms were well known, because those were IT standards to be used. If business application did not want to use Data Center platform services, they needed to request exception from IT architecture team. IT standard definitions were lost or forgotten in the change.

In general outsourcing means contract between two parties. Contract defines high-level responsibilities, which may not always be in line with the real customer expectation of services. We need to obey the contract but in the other hand we need to point out possible issues and improvement areas in the contract. Outsourcing triggered changes in roles and responsibilities. Many people changed their role and new people came to take new role in this area. Data Center platform services as IT standard was not obvious to everyone anymore. Silent information was lost. Data Center platform services’ purpose and approach may not be understood. Data Center platform services’ business value is not clear to everyone anymore. We need to be able to show our business value again or we are in danger to be eliminated. Now it is even more important as we work in service provider role, not as internal IT service unit.

In this case used outsourcing model is service integrator model, which is quite new way of co-operation. In the picture 1. the yellow box is the remaining 30% of IT department personnel in company X. All other parts were outsourced. Service

integrator is the single point of contact to company X= business customer, taking care of all underlying service providers.



Picture 1. Service integrator 3 layer model

The end-to-end service management model (picture 1) is a three-layer approach where:

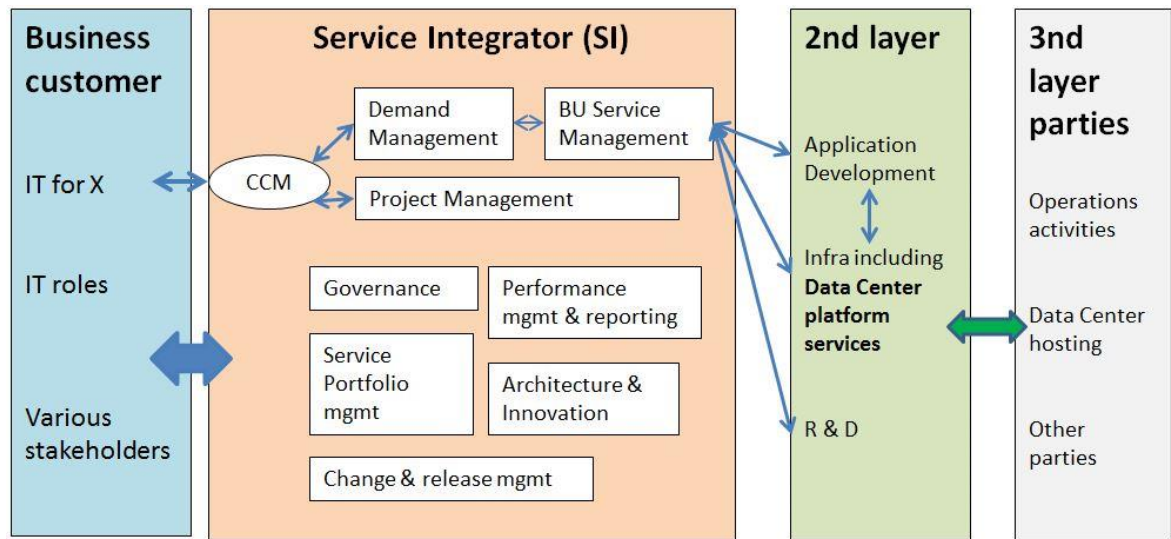
1. The Layer 1 Service integrator is responsible to manage full eco-system of business customer, end-to-end based on ITIL processes and agreed contracts to ensure defined end-to-end KPIs. This model requires very clear and strict management governance and clear communication channels with all Layer 2 providers.
2. The Layer 2 Providers focus on IT technical service management and the delivery of the IT Services within their own contractual scope. Layer 2 has agreed service and operational meetings with Layer 3 providers.
3. The Layer 3 Providers focus on IT technical service management and the delivery of the IT Services within their own contractual scope. In Data Center area this means providing operational services to run Data Center Platforms. Operational services include for example installations, change implementations, monitoring and backups.

Before the change IT had a centralized structure, same rules, regulations, routine, sharing global tools and global standards. It was quite easy and clear to work in that kind of environment, but issue was that service cost took 80% and only 20% was left to develop new things. That was the main trigger to this change. Therefore service side was moved to Service integrator and innovation and new development planning was left to company X side.

Before the change our customer was internal IT business service that required a technical platform to run their business application. We had responsibility also from costs management, road mapping and license management. We had customer meeting when required, sometimes in the coffee corner or a bit more official meetings. We were able to use time and listening our customer and made decision quite freedom. That might be one issue when looking about the cost side. Sometimes we most likely served customer more that we were supposed to do. But as we worked as a one company, everybody tried to do the best to fulfill business requirements. We had service providers already in place that offered the Data Center platform services with the operational responsibility of our platforms. This means that layer 3 and layer 2 co-operation did not change in this new model.

After the change some of our customer moved to same company with us, but some was moved to another company. Few of the customers remained in company X called in my thesis also as a business customer. Co-operation and communication is not as simple anymore as everyone follows their own goal and contracts. We had agreements and contracts that we need to obey. Sometimes we needed to stop some activities we did before. Now we need to be very careful and act according the contracts. I am afraid that may be visible in customer satisfaction. But in other hand, as we work very strict way, it can be also beneficial to customer relationship. Data Center platform services are located in 2nd layer, not in first layer that is called Service integrator layer. That brings some challenges how to maintain active information flow related to strategy and business roadmaps and how to get feedback from our services. Co-operation has been going to better direction all the time. That was quite clear in the

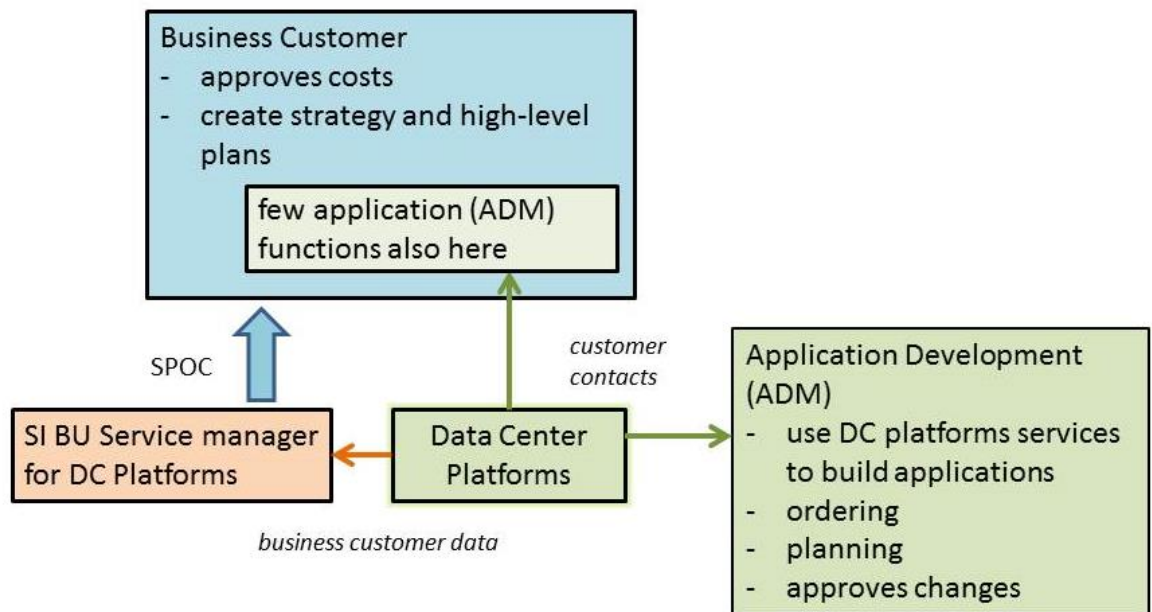
beginning of the outsourcing process that this kind of big change and new service integrator model just takes some time to get things rolling smoothly.



Picture 2. Integrated Service Delivery model

Business customer in picture 2 is the old mother company, who outsourced 70% of its original IT. There are still few applications that are managed inside business customer organizations, but most of the applications are managed in 2nd layer companies in function called Application Development. Data Center platform services' daily customer relationship is managed inside 2nd layer. As described in picture 2 Service Integrator has a role to act as a single point of contact to business customer to manage services end-to-end lifecycle. Service Integrator is accountable toward business customer and 2nd layer is responsible to deliver agreed outcomes in co-operation with 3rd layer providers.

Data Center platform services' main customers today are the same business application service managers located in same Layer 2 than we do. This means that our customer can be internal or external ones. Daily service management and customer relationship is managed inside Layer 2 and with Layer 3. That co-operation has been working quite well all the time. Although many new people has come to work in this area and we need to build customer relationship and trust with them from beginning. Picture 3 describes Data Center platform services main interfaces within new co-operation model.



Picture 3. Data Center platform services' customer interfaces

This has not being a classical outsourcing case. We have faced a much higher complexity from taking over also the Service Integration part from company X. Therefore it is even more important that everyone understand the business model, contracts and the connecting processes, including high-level processes and detailed processes like Data Center platform service offering life cycle process.

1.1 Purpose of this thesis

This thesis purpose is to answer to questions raised about our existence after outsourcing was done: "What the Data Center platforms are?" "Why Data Center platform services exist?" "What are Data Center platform service offerings?". In the end thesis purpose is to answer the question what is Data Center platform service offering in service integrator model.

Documentation can be used wide across our company and with our customers to communicate Data Center platform services' benefits and business value.

Documentation can be also used to show clear step how to interact with Data Center platform services in different life cycle phases.

Scope for the work is Data Center Platform Services – Platform Service Management offered services: Common Computing Platform (CCP), Common Database Platform (CDP), Common Web and Application Platform (CWAP) and Windows Application Hosting platform (WAH). Our company has also other services like single-sign-on that can be treated as platforms. But those are not part of this thesis scope.

Thesis first goal is to get visibility of our purpose in new organizational setup after outsourcing. Goal is to prove that Data Center platform service offering creates a business value, brings efficiency and cost savings to customer and for our own company as service provider. To be able to do that, Data Center platform service offering process lifecycle needs to be documented and communicated clearly across the organization and towards customers.

Goal is not only to complete our contractual obligation providing Data Center platform services but also to increase customer satisfaction of our services and via that get new orders and new business in.

One goal is to get customer feedback on our service offering lifecycle and what we can improve.

Our organization is taking ITIL base tool called ServiceNow in use. We are not involved in the program much, but Data Center platform services will be managed via that tool. Tool includes also service catalogue. With the clear and exact Data Center platform service lifecycle process description it is easier to explain to ServiceNow program team what information tool needs to include about the Data Center platform services and how Data Center platform services are linked to existing service management processes.

My personal motivation is to show to management team the value we bring. I see it is not so clear as so many people still ask what we do and why you are needed? Another motivation is to get good marketing material that I can use with our communication team to inform about us and our service offering.

1.2 Research questions

The main research question is:

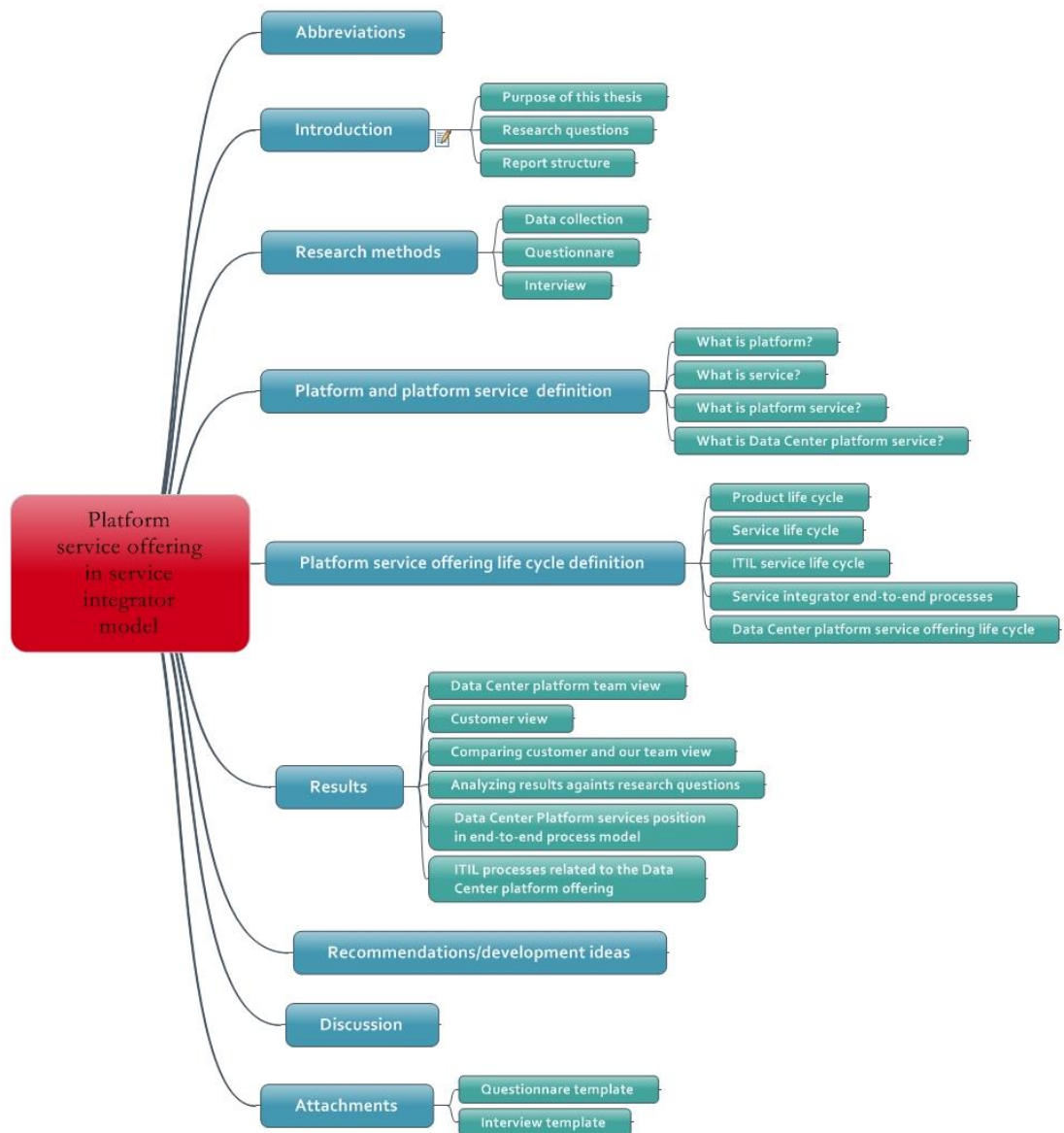
“What are Data Center platform services’ value position in new integrated service delivery model now and in the future?”

To get answer to main question I have defined following sub research questions:

- What are Data Center platform services?
 - Does customer define our services in the same way that we do?
 - What is Data Center platform services’ current position in integrated service delivery model?
- What is customer satisfaction at the moment?
 - Definition who are our customers?
 - How do customers come to use our services?
 - Where they get information about our offering?
 - How do customers interact with our services?
 - What customers expect from our services?
- What are the needed actions to make Data Center platform services essential part of the existing IT landscape?
 - Are there specific issues with our services at the moment?

During the working process I will collect the areas for improvements, which can be presented as development ideas to improve the Data Center platform services using agreed demand management process with our customer.

1.3 Structure of the report



Picture 4. Thesis report structure

Introduction

Under introduction section I will describe how IT' transformation and outsourcing affected our role offering Data Center platform services. In section purpose of this work I will explain thesis goal and scope.

Research methods

In this chapter I will explain how the data for the thesis is collected, what the process to create the questionnaire was and how I selected who to interview.

Platform and platform service definition

Under “What is platform?” topic I will introduce different platform definitions.

Under “What is service?” topic I will define service as a terminology.

Under “What is platform service?” section I will explain connection between platform and platform service.

“What is Data Center platform service?” section I will define what our platform service is.

Platform Service offering life cycle definition

Product life cycle

In this section I describe product life cycle and how it can be linked to platform life cycle.

Service life cycle

In this section I describe service life cycle and how it can be linked to platform service life cycle.

ITIL service life cycle

ITIL is famous service management framework. I will open ITIL view of service life cycle.

Service integrator end-to-end processes

I will describe current SI end-to-processes in high-level

Data Center Platform service offering life cycle

In this section I describe the current Data Center platform service life cycle.

Results of the survey

In “Data Center platform team view” topic I will present our team members definition of our offering.

Under “Customer view” section I will present the answers how our customers see what Data Center platform services are.

Comparing customer and our team view

Is there differences and if yes, what those are?

Analyzing results against research questions

In this section I compare answers againsts the research questions and present improvement areas.

Data Center Platform service position in end-to-end process model

I will write the finding how Data Center platform service is linked to SI end-to-end processes.

ITIL processes related to the Data Center platform offering

I will open ITIL processes that are related to Data Center platform service offering.

Recommendations/development ideas

I will propose any other recommendations and development ideas, that has not been presented in analyzing results section.

Discussion

I will describe how thesis process went in my personal point of view and what I have learned.

2 Research methods

I am using mainly quantitative research methodology in my thesis. More detailed I am using survey research that involves questionnaires and interviews. I do use also qualitative methodology to get answers to questions about ‘what’, ‘how’ or ‘why’. I use semi-structured interview type with room for open discussion.

Used working methods:

- analyzing contract documents what is defined is our responsible
- analyzing end-to-end service management process handbook what is our responsibility in processes
- interview colleagues what is their understanding what we do
- asking customers what is their understanding what we do, what they expect from us and what is the added value we bring (using questionnaire and interviews)
- identify gaps what we supposed to do, what our obligation is according the contracts and process handbook and what customers expect to receive from us.

Data is analyzed using the combination of all above mentioned sources.

2.1 Data collection

As a first step I asked from my service manager colleagues to get their understanding what we do. Question was sent to them via email. I did not use these answers when I was planning the customer questionnaire.

I planned the customer questionnaire according the research questions. Purpose is to get answer to my research questions from different stakeholders. As the topic is familiar to me, I needed to test the questions with other people. I wanted to be sure that there is no room for misunderstanding. First I asked few (3) of my colleagues to review and comment the questions. I got very good feedback and change proposals. I run the test cycle few times with them. After that I asked few of my friends outside of the

work and one student colleague to review the questions. As they did not had content competence, it was good test to see was the questions clear enough to be understood. After those review rounds I sent to questionnaire to be reviewed and approved by work and school thesis supervisors. This iteration work took 2 weeks. I see it was very important to test the questionnaire many times. As if my stakeholders do not answer the questions due to vague questions, I do not get valuable and reliable results for my thesis.

I collected more research data from already available company internal materials. Material includes contract documentation, service catalogues, communication material and process documentation.

2.2 Questionnaire: Data Center platform team view

I was asking from Data Center platform service manager's two questions: "Why we exist" and "Why we offer platforms and our services"? There are total four service managers in Data Center platform services, me being one of them. All three answered plus one ex-Data Center service manager, who moved to new position in November 2013. This means I have answers from four team members.

2.3 Questionnaire: DC platform services customer survey

Customer questionnaire with the title "DC platform services customer survey" was elect-ronic. I sent the questionnaire to 49 persons, 29 replied. It means that response rate was 60%. People had 2 weeks' time to reply after they received the link to questionnaire. I sent the questionnaire to all stakeholder levels we have: business managers, capability cluster managers, project managers, application service managers, system specialist. That is the way I got comprehensive results. DC platform services customer survey questionnaire template is as an attachment 1 in the end of this thesis.

2.4 Customer interview

I selected persons to be interview based on their role. I interviewed one Business Service Manager, one Capability Cluster Manager, one process manager and two Applica-

tion Service Managers. Capability cluster manager act as a single point of contact to business customer. Business Service manager role is in Layer 1 Service integrator organization. Application service managers are customers that we interact mostly and they are the ones ordering our services in the end. Process manager gave me insight about the current service integrator (SI) model processes and we had deep discussion how Data Center platform services are positioned there.

I prepared some question as a base for interviews, but in the end the discussion was very open. I got good comments, proposals and questions from all of them. As they look the Data Center platform services in a different angle, I got very good coverage to all level of our offering and service. Interview frame questions template is as an attachment 2 in the end of this thesis.

3 Platform and platform service definition

Platform definition is not so clear when reading the definitions available in internet and literature. In below chapters I will describe definitions I collected from several sources.

3.1 What is platform?

There are computing platforms and software platforms. In cloud terms there are Software as a service, Platform as a service, and Infrastructure as a Service. I found many other definitions from internet:

- A platform is a group of technologies that are used as a base upon which other applications, processes or technologies are developed (Techopedia 2014).
- In computers, a platform is an underlying computer system on which application programs can run. A platform is any base of technologies on which other technologies or processes are built. (Rouse 2006.)
- A computing platform is, in the most general sense, whatever pre-existing environment a piece of software is designed to run within, obeying its constraints, and making use of its facilities. Typical platforms include hardware architecture, an operating system (OS) and runtime libraries. (Wikipedia 2014.)
- Platform as a Service (PaaS) is a way to rent hardware, operating systems, storage and network capacity over the Internet. The service delivery model allows the customer to rent virtualized servers and associated services for running existing applications or developing and testing new ones. (Rouse 2010.)
- In Cloud Infrastructure as a Service (IaaS) model cloud service provider is responsible for providing and managing hardware resources, such as infrastructure and storage. Consumers who can provision these resources are responsible for installing and maintaining and operating system and any application they require. (Mell & Grance 2011.)
- In Cloud Software as a Service (SaaS) model cloud service provider is responsible for providing and maintaining the complete operating environment, which includes

the infrastructure and all applications. These applications are provide online via a user interface, which often takes the form of a web browser. (Mell & Grance 2011.)

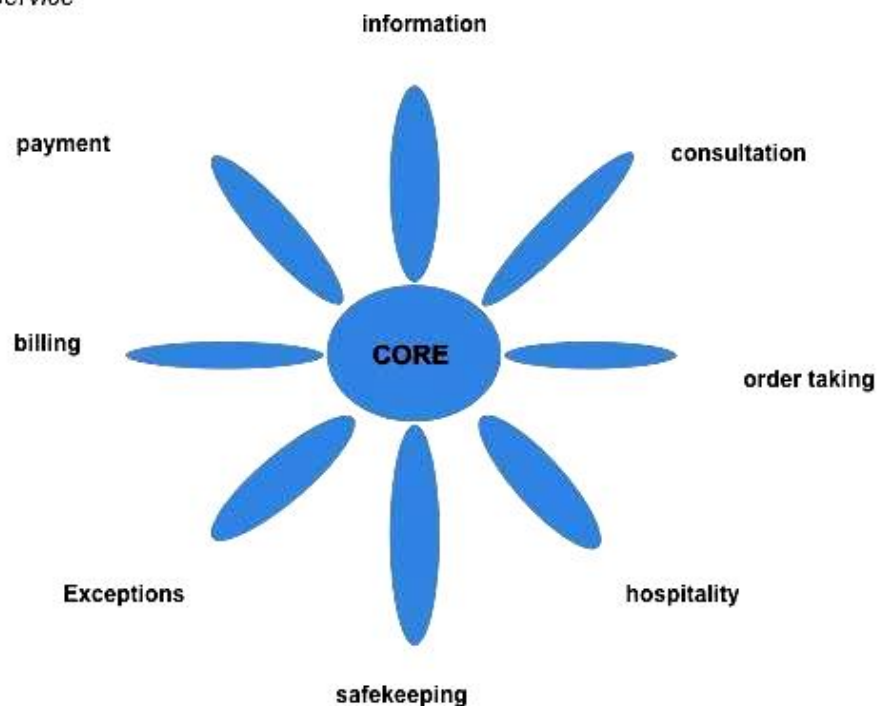
- Environment including hardware, device drivers, operating system, and software libraries for a software developer or a system integrator to develop applications, system programs, and services (Nokia Termbank 2002).

Platform can be also thought to be a product or a service product. A service product comprises all elements of service performance, both tangible and intangible that create value to customers the service concept is represented by a core product and accompanied by supplementary services. (Lovelock & Wirtz 2007).

3.2 What is service?

A “service” is a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks (Introduction to the ITIL Service lifecycle, 2010.) Lovelock (2011, 108) introduces flower of service (picture 5) that is the representation of the key requirements of a good service:

Flower of Service



Picture 5. Flower of service

In well designed and well-managed service product the petals and core are fresh and well formed. A badly designed or poorly executed service is like a flower with missing, wilted, or discolored petals. Even if the core is perfect, the overall impression of the flower is unattractive. Lovelock asks you to think about your own experiences as a customer. When you were dissatisfied with the particular purchase, was it the core that was fault or was it a problem with one or more of the petals? (Lovelock 2011, 109.)

We need to think same way with Data Center platform service offering lifecycle. It is end-to-end process. It does not matter even we have a great product, if we do not handle all the petals well. Sometimes technical oriented people focus mostly top get perfect core but we forgot the service around.

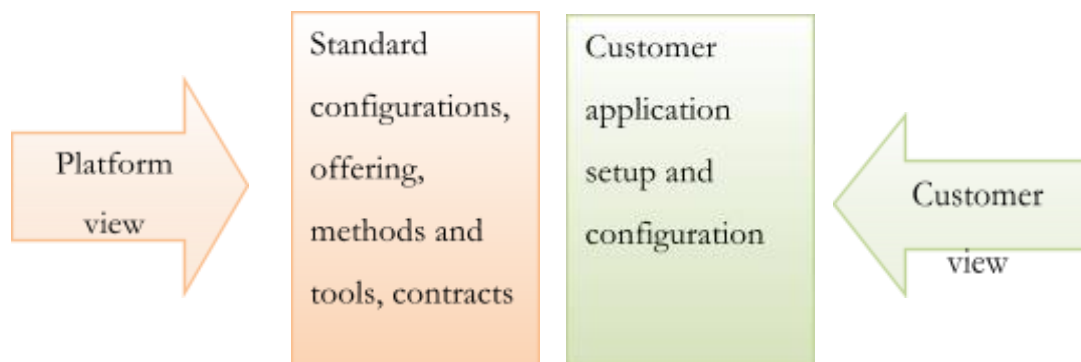
To obtain full value from any service, customers need relevant information. Lovelock (2011, 109) present an example of information elements:

- direction to service site
- schedules/service hours
- prices
- instructions on using core product/supplementary services
- reminders
- warnings
- conditions of sale/service
- notification of changes
- documentation
- confirmation of reservations
- summaries of account activities
- receipts and tickets.

Grönroos (2001) defines seven criteria for good service:

1. professionalism and skills
2. attitudes and behavior
3. approachability and flexibility
4. reliability
5. standardization of service
6. physical service location
7. reputation and credibility.

These quality factors can be adapted also to service life cycle. Good service life cycle takes into account of customer requirements, keeping promises and keeping service level. Life cycle consist many other areas than customer can see. Customer relationship and service is the core function where service demand and offering meets.



Picture 6. Different service view

Customer sees the service via their own view (picture 6). Even service offering and way-of-working are same to all customers; there is always a unique customer interaction that customizes service a bit.

Product that are defined well and it is offered as a service, is easier to market and sell, than service products that do not have clear definition and documentation

Table 1. Difference of productized and non-productized service (Laine 2010)

Traditional service	Product service
Price varies	Price is defined
Implementation varies	Default implementation
Hard to sell	Easy to sell
Information goes along the workers	Information is documented
Lack of resources	Efficient

When customer orders productized service it will be clear what they will get. That is also service provider's benefit, as this is the way to avoid misunderstandings and unrealistic expectations. It is very important to open service delivery process and identify the key factors, what makes the service. Service steps need to be documented, also those steps that are not visible to customers but are mandatory when delivering the service. Service delivery process should have performance target and indicators, what is the way to measure the success. Quality management, instructions and document management are important support functions. Therefore those functions need to be added to process descriptions. (Laine 2010.)

3.3 What is platform service?

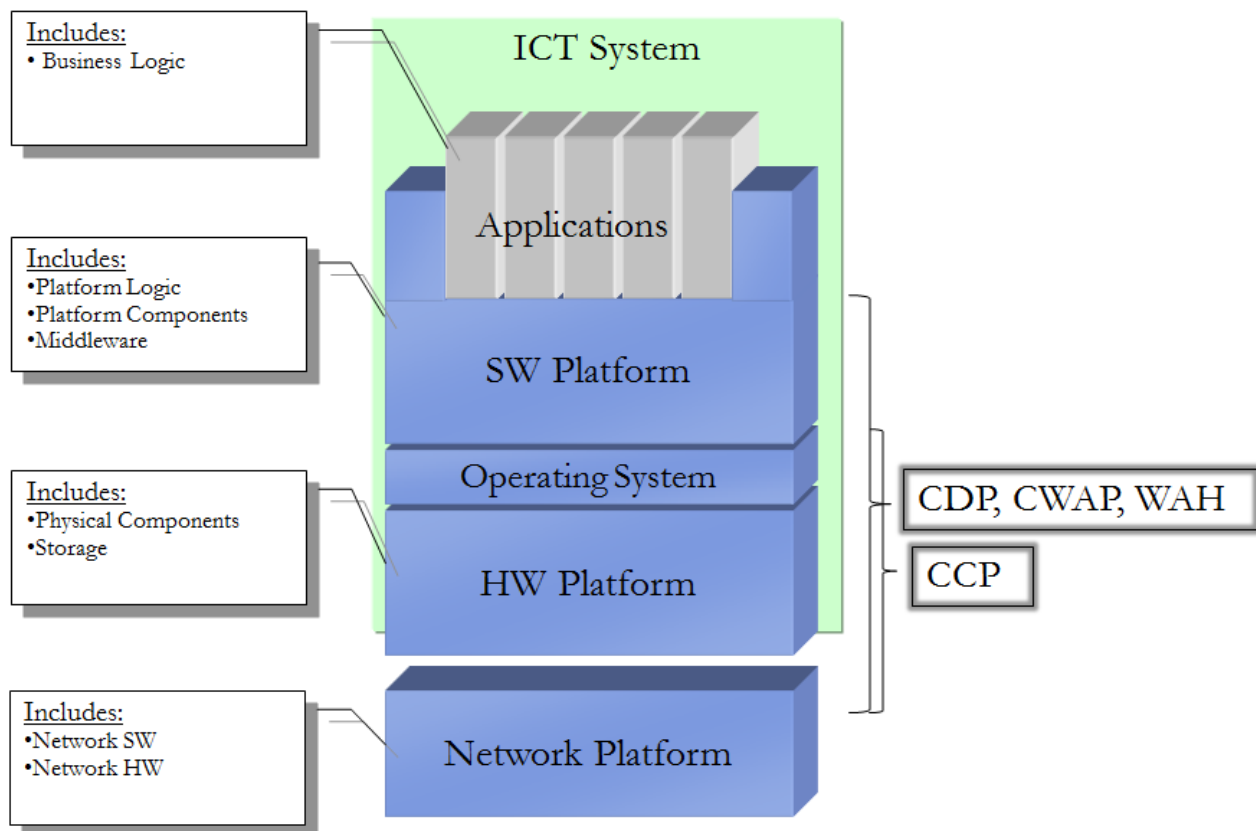
Platform service is like any other service offering: something that customer need. According to Grönroos (2000, 52) service can be defined to be any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything.

According to Lovelock & Wirtz (2011, 37) services are economic activities offered by one party to another. Often time-based, performance brings about desired results to recipients, objects, or other assets for which purchases have responsibility. In exchange for money, time, and effort, service customers expect value from access to goods, labor, professional skills, facilities, networks, and systems, but they do not normally take ownership of any of the physical elements involved.

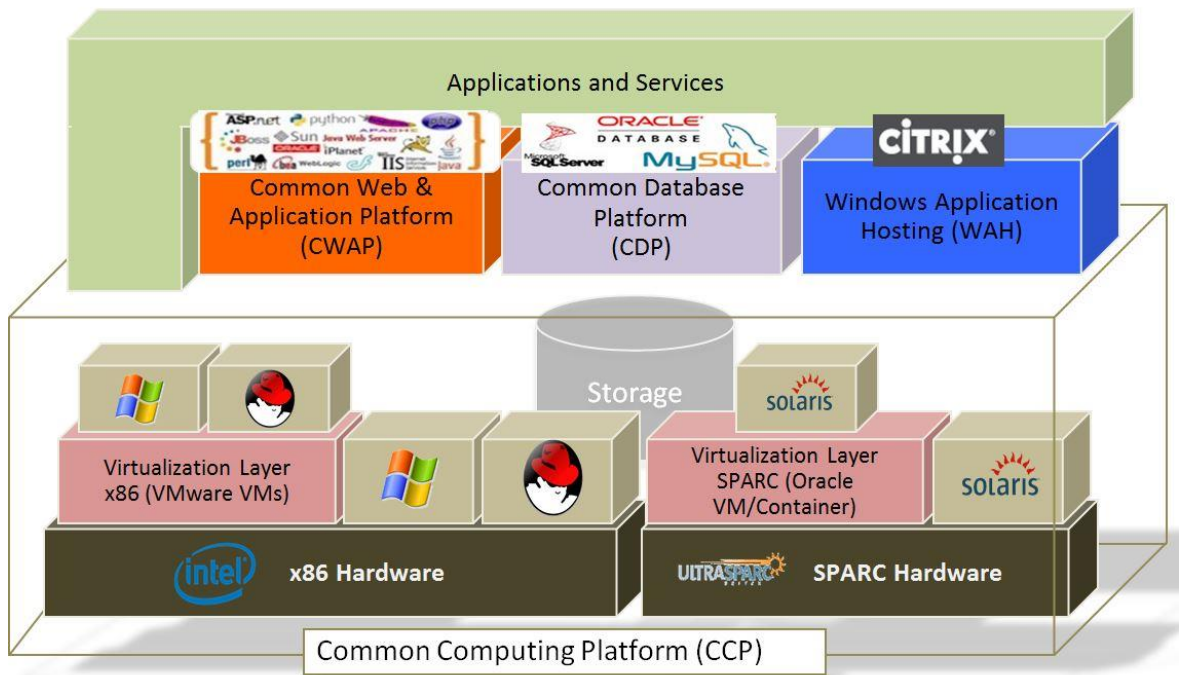
3.4 What is Data Center platform service?

Nokia termbank (2002) definition: “Environment including hardware, device drivers, operating system, and software libraries for a software developer or a system integrator to develop applications, system programs, and services” is the closest definition that is valid to our Data Center platform service purpose. Over time platform service idea will remain the same, but the technology below can change during the years.

Data Center Platform service includes hardware, operating systems and a wide range of software libraries as standardized building blocks. Picture 7 illustrates the Data Center platform services position in platform stack. Picture 8 illustrates Data Center Platform service offering in technology point of view.



Picture 7. Platform stack



Picture 8. Data Center Platform service offering in technology view

Data Center platform services offers standardized cost efficient platform for business services in all phases of application lifecycle in production or non-production way. This offering brings a lot of flexibility to cover the needs of the customer and to reduce the maintenance efforts. Data Center platform services offers also consultancy services for business applications to select the best possible solution based on applications requirements.

Data Center platform services consist of four different services, all responsible for a specific type of platform integrated into the Data Center Infrastructure provided by Layer 3:

- **Common Computing Platform Service (CCP)**
Provides all computing infrastructure required to install and to run a software stack (middleware or business logic software) on top of an Operating System. The main focus lies on shared environment using virtualization.

- Common Database Platform Service (CDP)
Provides standardized shared and non-shared database server environments to new or existing business applications.
- Common Web and Application Service (CWAP)
Provides Web Servers (e.g. Apache) and Web Application Servers (e.g. WebLogic) to new or existing business applications.
- Windows Application Hosting Service (WAH)
Provides consolidated servers based on Citrix presentation server to run business applications instead of end-users' workstations.

Data Center platform services offer standard building blocks that are suitable to most of the business application. There are always some business applications requirements that are so rare that it does not have business case to implement those as a standard Data Center platform service offering. Therefore the consultant activity in the beginning of the offering process is very important to get the right solution in place at once.

4 Platform service offering life cycle definition

4.1 Product life cycle

In the previous section I compared platform to product. Same way I like to compare product life cycle to platform lifecycle. Management of product lifecycle is the one of the core factors in product development.

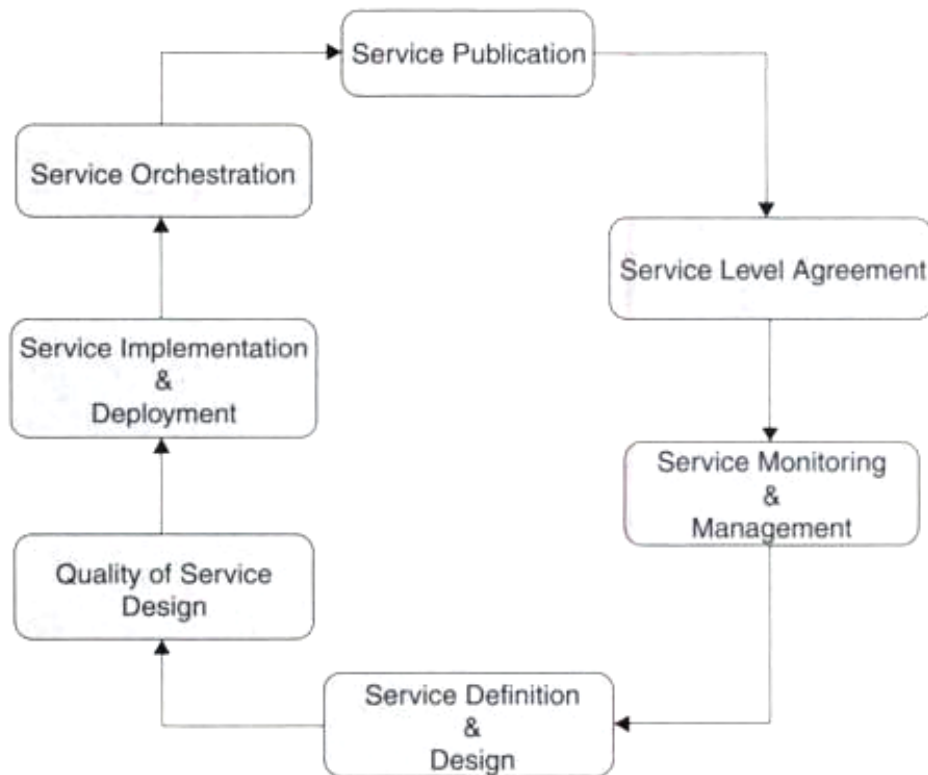
Baker and Hart (s. 105-113, 2007) define product life cycle to four stages: Introduction, Growth, Maturity and Decline. The stretched PLC adds three more: Gestation (new product development), Introduction (launch), Growth, Maturity, Saturation, Decline and Elimination.

Lawley (2012) defines seven phases as a standard product life cycle:

- Conceive Phase that includes brainstorming, generate ideas and prioritization and choose.
- Plan phase includes strategy, market research, competitive analysis, business case, market needs, product description and roadmap.
- Develop phase includes engineering, tradeoffs and adjustments of schedule, feature and plans.
- Quality phase includes beta, early customer and minor adjustments
- Launch phase includes accouchements, availability, exposure and ramp revenues.
- Market phase includes ongoing programs, measure ROI and optimization.
- Retire phase includes end of life, new version and obsolescence.

4.2 Service life cycle

Good service life cycle takes into account of customer requirements, keeping promises and keeping service level. Life cycle consist many other areas than customer can see and will interact. In the end service life cycle includes the steps that deliver value to customer (picture 9).



Picture 9. Service Life cycle (Khoshafian 2007, 179)

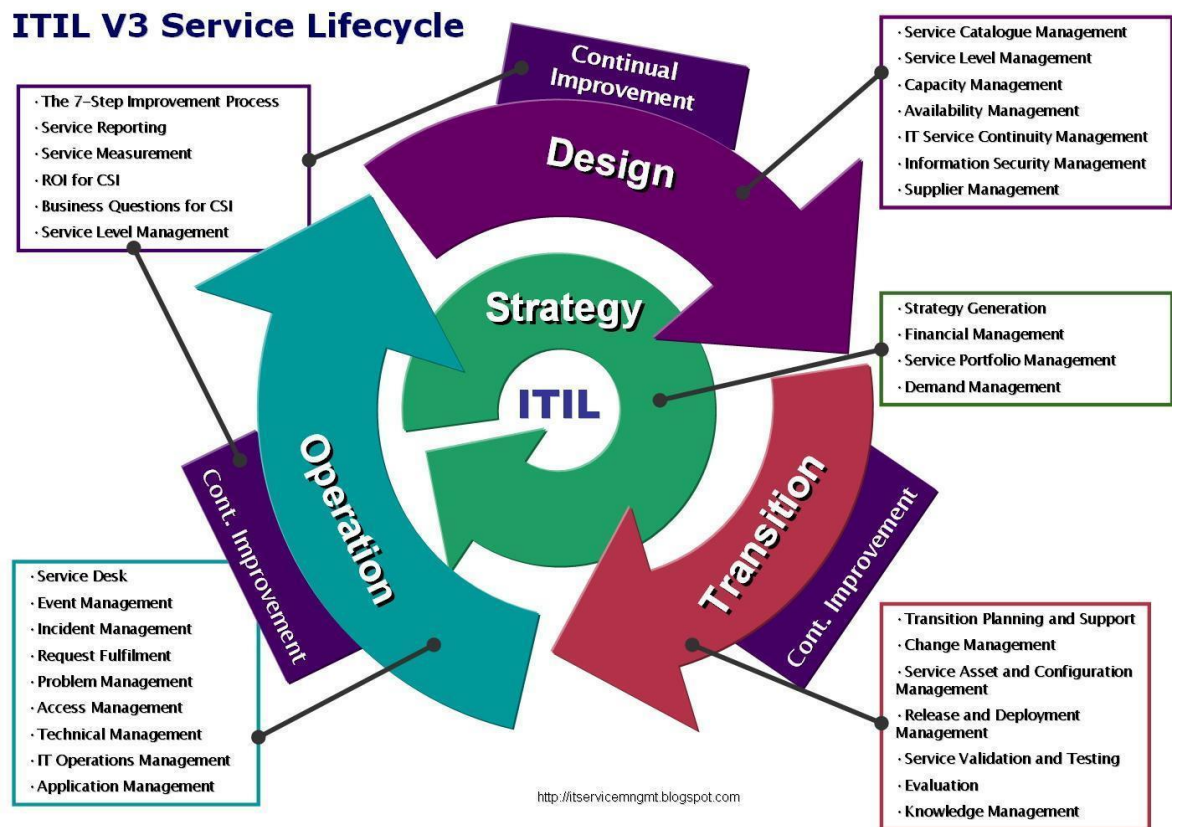
We can see the same steps with the different terms in COBIT framework (Moeller R. 2013, 81.), which defines following areas for the management of enterprise IT:

- align, plan and organize
- build, acquire and implement
- deliver, service and support
- evaluate, direct and monitor.

4.3 ITIL service life cycle

According the ITIL official site (2014) ITIL is the most widely adopted approach for IT Service Management in the world. It provides a practical framework for identifying, planning, delivering and supporting IT services to the business.

ITIL is organized around a service lifecycle which includes service strategy, service design, service transition, service operation and continual service improvement (picture 10).



Picture 10. ITIL ® Service Lifecycle

The lifecycle starts with Service Strategy. Service strategy means strategy definition how to deliver services to meet customer's business outcomes and definition how to manage those services. In practice it means understanding who the IT customers are and what are the service offerings that are required to meet the customers' needs, the IT capabilities and resources that are required to develop these offerings, and the requirements for executing them successfully. IT service provider must also always try to ensure that the cost of delivery is consistent with the value delivered to the customer.

Service design ensures that new and changed services are designed effectively to meet customer expectations. Service Design is the stage in the lifecycle that turns Service Strategy into the blueprint for delivering the business objectives. The technology and

architecture required to meet customer needs cost-effectively are an integral part of service design, as are the processes required to manage the services. Service management systems and tools to adequately monitor and support new or modified services must be considered, as well as mechanisms for measuring the service levels, the technology, and the efficiency and effectiveness of processes.

Through the service transition phase of the lifecycle the design is built, tested and moved into production to enable the business customer to achieve the desired value. This phase addresses managing changes: controlling the assets and configuration items (the underlying components such as hardware, software etc.) associated with the new and changed systems; service validation; and testing and transition planning to ensure that users, support personnel and the production environment have been prepared for the release to production.

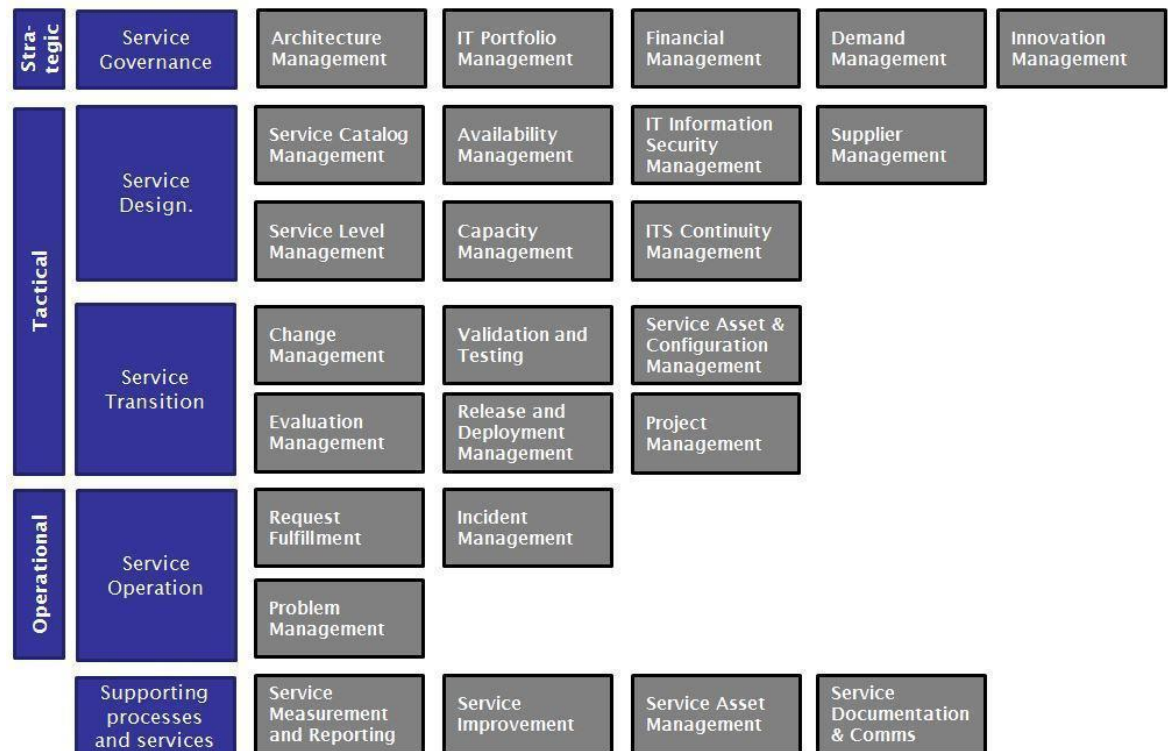
Once transitioned, service operation then delivers the service on an ongoing basis, overseeing the daily overall health of the service. This includes managing disruptions to service through rapid restoration after incidents; determining the root cause of problems and detecting trends associated with recurring issues; handling daily routine end-user requests; and managing service access.

Enveloping the service lifecycle is continual service improvement (CSI). CSI offers a mechanism for the IT organization to measure and improve the service levels, the Technology and the efficiency and effectiveness of processes used in the overall management of services. (Arraj 2013; ITIL® Service lifecycle 2010, 11–13.)

4.4 Service integrator's end-to-end processes

ITIL v3 is generally considered to be made up of 26 processes and four functions. It is a framework and not a methodology. Because it is a framework, we should not have to include all of the components. Instead, the key to delivering a service management facility that is fit for purpose is to select the correct components and implement them with careful planning. (Fry 2010, 3.) That is the guideline also the definition how we use ITIL framework in Service integrator (SI) model. The SI organization owns the

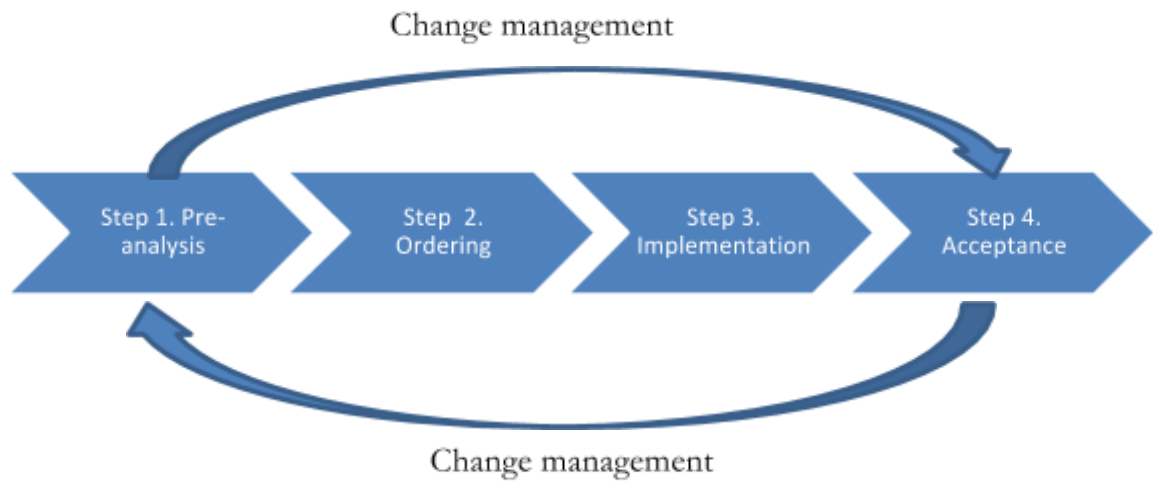
end-to-end process and is the layer between Business IT and end users on one side, and the 2nd layer suppliers (the service delivery parties) on the other side. The SI executes primarily tactical and strategic processes; day-to-day operational activities are performed by 2nd layer parties under SI responsibility. For operational processes SI has the role for allocation of activities to parties (mainly via the service desk), end-to-end monitoring and reporting, for escalation and for alignment between parties. From ITIL best practices SI use the processes visible in the below picture 11.



Picture 11. Processes according end-to-end service management cooperation agreement

4.5 Data Center platform service offering life cycle

Data Center platform service offering life cycle includes four major steps that are presented in picture 12. Change management process is the trigger for offering activities.



Picture 12. Simplified Data Center Platform offering with change management affect

Step 1. Pre-analysis includes requirement analyze, consulting of different options and guidance through the needed processes and tools.

Step 2. Ordering includes 3rd layer service provide selection and Request for change creation with needed technical checklists. 3rd layer provider will do the planning against the requirements and deliver cost estimation to business customer directly. 3rd layer has own ordering process.

Step 3: Implementation is done by 3rd layer selected service provider. Our role is to consultant, support and follows up the implementation. 3rd layer has own implementation process.

Step 4: Acceptance includes delivery approval. In practice it means that customer will test that they got what they ordered. After delivery is approved, invoicing can start. Final step is to close the change.

5 Results of the survey

5.1 Data Center platform team view

I was asking from Data Center platform service manager's two questions: "Why we exist" and "Why we offer platforms and our services"? I got very similar answer to all of them, which was also my assumption.

Purpose of our existence was defined clearly by all of my colleagues. We are a service provider and we provide value to our customers by offloading their IT responsibilities so they can focus on their core competencies. We are an interface between the customer and different supplier's technical delivery teams. We provide a standardized environment to meet the client's current and future requirements. This avoids that for every client custom solutions are defined. This way of working reduces the maintenance costs and the cost to investigate every possible product properties and the possible acquisition of licenses. Costs are also reduced due to mass use of specific products. Also experience can be gathered for a limited number of products what results in better support for the client and sharing of the experience over many clients and assurance about security of the products. Additionally, by concentrating products types like server, database and web environments to specific services, clients have one central point of contact for technical information.

Reasons why we offer Data Center platform services is that across-the-board business need to have a standardized, timely and easy to maintain and manage IT solution. Customers value one interface and easy way to buy or get support. We are the "local tradesman" and not the "wholesale dealer". Important goal is also to reduce cost and 'capacity-as-needed' solution to the organization without too much overhead and investment. I think the key here is core competency and cost optimization. In the end all turns down on cost, efficiency and security, what means money.

5.2 Customer view

One question in “DC Platform services customer survey” questionnaire and interview was: “Are you familiar with Data Center Platforms?” 6 from 34 respondents did not know what Data Center platforms are. Those 6 were from different capability clusters. This means ~18% from business application do not know our platform offering. That is quite alarming number and we need to focus to get more visibility to us and our offering.

But for those that were familiar with Data Center platform services the main idea was quite clear. Question asked: “Describe shortly what Data Center Platforms are/how you would define Data Center Platforms?” Answers from 23 respondents:

- Standard infra building blocks with stable support model and predictable availability.
- Data Center Platform is server related services.
- Data Center Platforms are the standard services provided by the data center. CCP are the basic applications infrastructure (like binaries and patches). CWAP is common web layer. CDP is the common database, using shared environments. WAH is the "Citrix" environment for running some of the Windows applications remotely.
- They are basically IaaS for application clusters, providing pre-defined computing and database framework for application teams.
- My understanding is (and how I have used these services) is that Data Center Platforms is offering the hardware platforms for services from different vendors. They seek to harmonize the offerings, charging and processes etc. throughout the whole company.
- We can easily order e.g. new databases without having our own HW and SW and other services regarding DBs.
- Common platforms with predefined services, service levels, capacity options and way of working.
- Standardized, shared resource that can be rapidly scaled up or down according to need.

- Providing a stable up and running DB, stable operating system (server), stable and fast connections, stable WEB services, competent and fast support for all 3 clusters, stable backup solutions.
- Generally spoken, infrastructure (incl. operating system etc.) provided to run applications for business purposes on; platforms are configurable, scalable and are tailored variously for each customer according to their business needs, e.g. VM, Cloud-instances, high availability, cluster, raids etc. Aspects as security, connection, monitoring, UPS, carbon footprint etc. are handled as well.
- Data Center Platforms are offering platforms for various services; for example database and application hosting services.
- The set of infrastructure elements, comprising of switches, racks, servers, storage, put together and capable of providing a platform for hosting business applications in a quick and agile manner.
- A service cluster consisting of common (computing, data base or WAH) platform services which are utilized by customer/end user facing applications.
- Data Center platforms having many service as a customer, normally no end users but services. Platforms share their costs to services based on the agreements (SLA's).
- Data Center Platform offers DB hosting and support services.
- Cluster of data centers that share resources to enable high utilization.
- Unified network and storage set up allowing dynamic and economic way of serving computing needs for companies and their businesses.
- They are a collection of services and technology build to run some dedicated system type, like database.
- Data Center Platforms provide standard components (e.g. infrastructure, database) which cover wide client requirements and allows reducing efforts /costs.

It can be seen from answers that most of the customers know our business case and reason for existence very well. Main idea related to cost efficiency and standardization is visible from answers. It can be seen also from answers that some customers use only

some of our offering, like server hosting only. There is room for improvement to get them to know our other service offering also and in the end order those.

5.3 Comparing customer view and Data Center platform team view

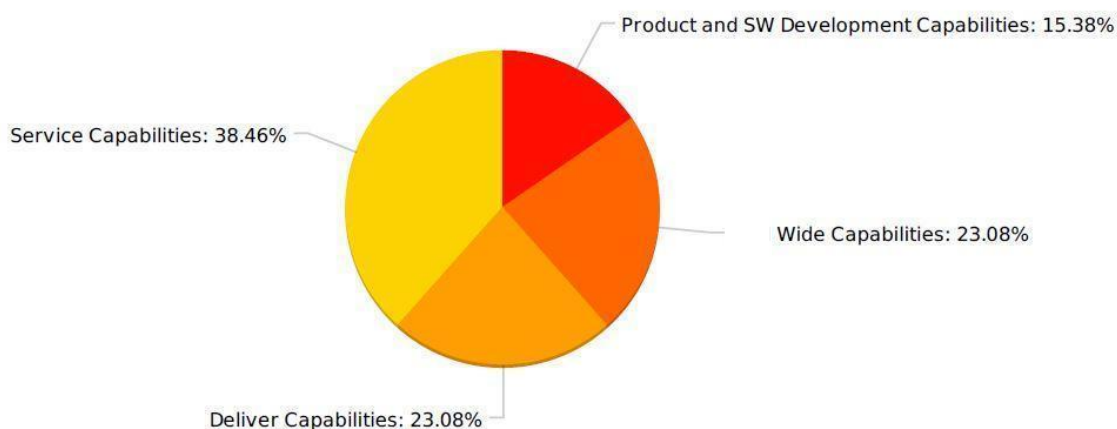
Comparing the answers I can see that there is no gap between Data Center platform team view and customer view about the understanding of our purpose. Both highlight the standardization and cost-effectiveness. What I noticed is that consulting function was not mentioned by customers. Does this mean that customers do not know we provide it also? Or does it mean customers do not need it? This is one topic to be investigated more.

5.4 Analyzing results against research questions

First I will analyze “DC Platform services customer survey” questionnaire (attachment 1) results. Interview questions (attachment 2) were partly similar what was in questionnaire. Therefore interview results are merged in questionnaire results when applicable. In the end I analyze interview results that are not presented under the Questionnaire sections. Questionnaire questions will start with the letter Q.

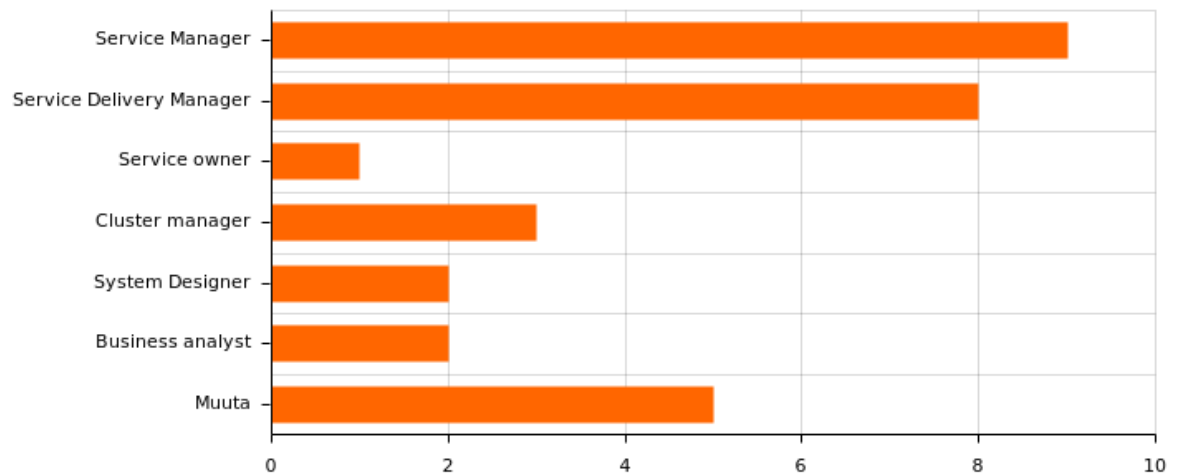
5.4.1 Q1: Background questions to define who are our customers?

Picture 13 show that customers who replied to this questionnaire are from four business capability cluster. There is total 8 business capability cluster.



Picture 13. Data Center Platform services' customer's segmentation by business area

People who answered are located in five different countries: Finland, Germany, India, Poland and Australia.



Picture 14. Roles who answered the questionnaire

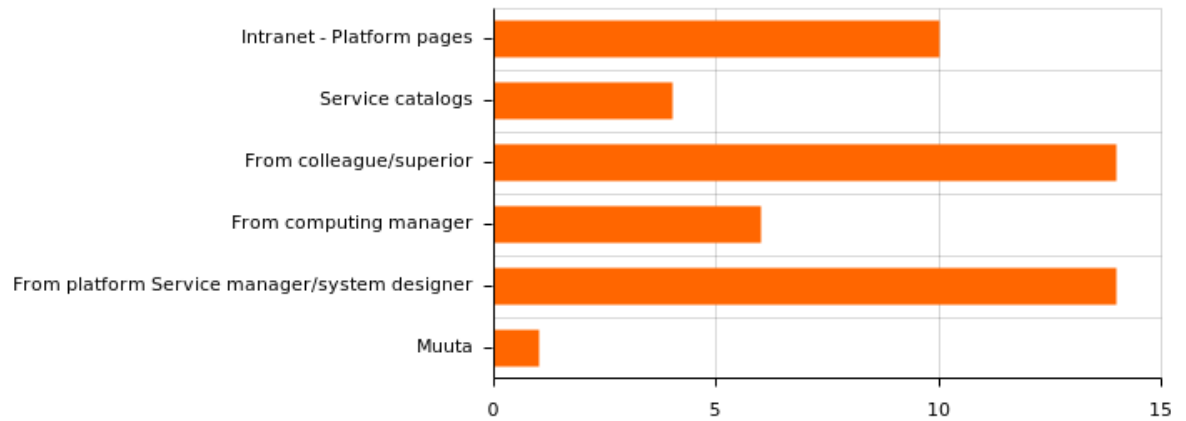
Others (text “Muuta” in picture 14) roles are program manager, project manager, change & release manager, IT Infra Specialist and business service manager. IT Infra specialist is alias to role System Designer, it means that there is three system designers answered. Everyone has been working with the company X over than 3 years. I was hoping to get more answers from people that are new in this area, people which would have been working less than 6 months with company X. Now I do not have information how familiar the new persons are with Data Center platform service offering. I have a doubt that they would have a bit different answers than people who have been working in this area over 3 years. Therefore I decided to send questionnaire later to three new people to see the possible difference in answers. I was surprised that answers were similar, or even in better level. Does it mean that new people value Data Center platform service more than people who have been working in this area longer time?

5.4.2 Q2: What are platform services?

80% from respondent know Data Center platform services offering very well as described in chapter 5.2. Customer view. But ~20% from business application do not know Data Center platform service offering. That is quite alarming number and we need to

focus to get more visibility to us and our offering. Everyone I interviewed was familiar with Data Center platform services.

5.4.3 Q3: How do customers come to use our services?

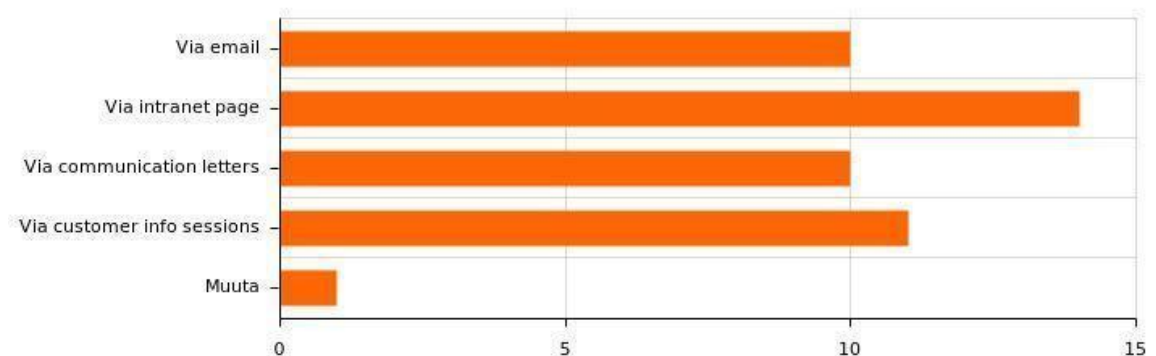


Picture 15. Information where customers got information about our services

Result show that personal interaction has been the main source to receive information about Data Center platform service offering. One other (text Muuta) is experience. It means that person has been using our services before and therefore is aware of those. This result is interesting. Even we build processes, create intranet pages and communities, human interaction is the most used channel still. This should be remembered when thinking ways to communicate to customers.

5.4.4 Q4: How do customers interact with our services?

I asked “How would you like to receive information about Platforms (offerings, changes, news)”



Picture 16. How customers liked to receive information about Data Center Platform Services

One other (text Muuta) is our enterprise social network called Blue kiwi. Here we can see the variance of people. This show that we need to use several communication channels to get good coverage to reach customers. The coming ServiceNow tool will include knowledgebase. Information is collected there from current intranet pages. That is new communication channel, that we do not have yet it place. It will be interested to see do people learn to use it as a main source. It requires services to enter quality and valid information to the tool; otherwise it will not be used. That is one important task also to Data Center platform service manager to enter and maintain the information in the tool.

5.4.5 Q5: Platform service information towards customers

List of the information customers liked to receive from Data Center platform services:

- Roadmaps, Success stories, Lessons learned.
- Basic offering described on intra.
- So it would be important to have up-to-date information easily available really on the practical steps e.g. on ordering. Even better, if there would be a real person to talk to and guide through the processes.

- Pricing, technical benefit or advantage.
- Content of your services and SLAs and when repeat when there will be changes.
- Available offerings, cost and advantages compared to dedicated servers, service lead-time.
- No need for ongoing information, more important to be able to look up when need arises and have contact information easily available.
- What is the actual status of a created ticket to DB, OS, and WEB.
- Technology report (news), improvements, prices, ecological report (carbon footprint); everything that a customer is interested in.
- Updates and how they might effect on services.
- Changes, contacts, new topics.
- Major changes and GMB's based on the needs.

Important note from answers is that customer high-light also here the importance to interact with real person, not just via tools and agreed processes. One important fact in decision making is price. That is challenge for us. We are not allowed to share our platform services prices from our 3rd layer suppliers. As some of the 3rd layer suppliers are also our company's competitors. Price information is therefore only available to business customers. For us that is not so difficult, but I see a very big challenge for application service managers to handle service without cost information. I can also see from answers that price and cost information is asked to be delivered. This need to be highlighted to management team once more, as customer satisfaction will decrease as they do not get all needed information from us. Data Center platform service cost estimation was provided by us towards the customers before the change and that is still asked. But we are not allowed to show prices anymore due to SI multivendor situation, that vendors are also competitors.

Success story is a good proposal. We could share customer cases in newsletter.

There was different opinion how often the information is requested. I analyzed the answers and generated average answers:

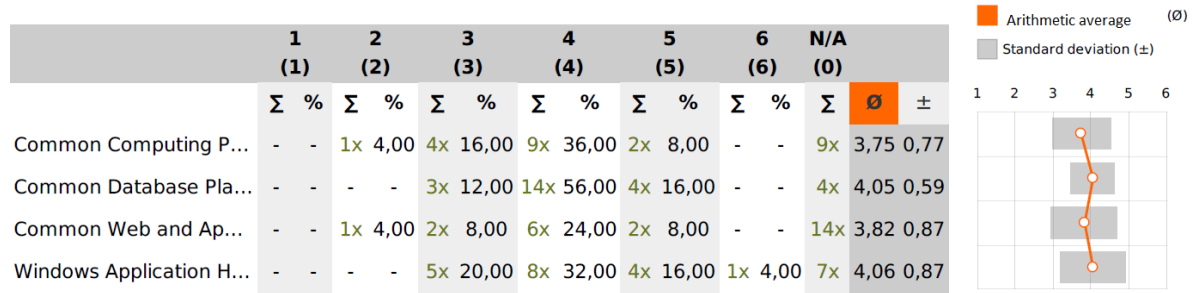
- Once a month: Information about coming changes, new features, technology information highlights and past incidents/breaks.
- Quarterly: Information about roadmap or bigger changes into platforms.

5.4.6 Q6: Rate Data Center platforms

Ron Kaufman's six levels of Customer Service (Kaufman, R. 2011) are used:

1. Criminal service is really bad. It's service that violates even minimum expectations, the kind of service that your customers remember never to use again, and are angry enough to call you and complain about.
2. Basic service is disappointing. It's the point of frustration that can turn into anger, but when it's over the customer is not disappointed enough to complain. However, he will tell his friends, and will remember not to call you for that kind of service again.
3. Expected service is nothing special. It's the average, the usual, the norm. The customer might come back to you, but only if no better options exist.
4. Desired service is what your customers hope for and prefer. They'll do business with your organization again because you do things for them just the way they like it.
5. Surprising service is something special, like an unexpected gift. It gives your customers more than they expected. This makes you an organization that customers enjoy and will come back to again and again.
6. Unbelievable service is astonishingly fantastic. This is the level of service your customers can't forget, the legendary treatment they will tell all their friends about.

I asked to select N/A if customer is not using/have not been using platform. Those answers are not included in the end result.



Picture 17. Customer feedback of Data Center platform service level

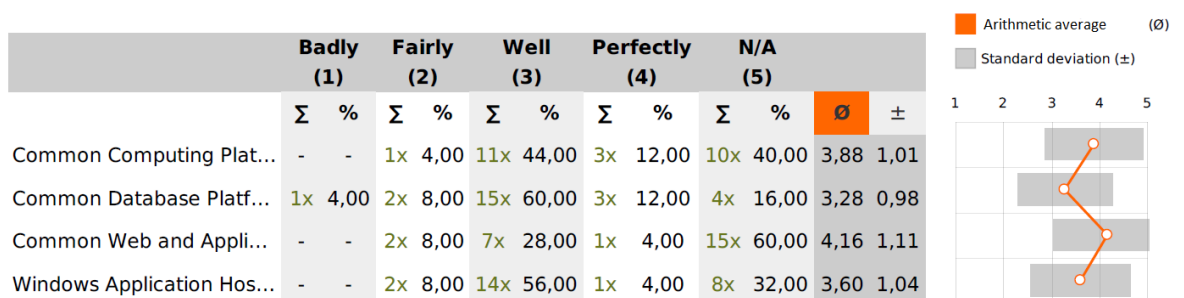
I am pleased too also one unbelievable service grading. As average the result is very good. Although there are two answers with service level basic. We need to keep the focus to deliver high quality service with service attitude.

5.4.7 Q7: Current services and offerings meeting customer requirements

I asked “How well the Data Center Platforms current service/offering meets your service requirements?” I advised to select N/A in case customer is not using the platform at the moment. I also opened the terminology to make sure question is understood correct way.

Service = Service offerings, what each service does and does not include, eligibility, limitations, how to request services, and how to get help.

Offering = Platforms portfolio of products.



Picture 18. How Data Center Platform service offering meets customer requirements

With the answer badly or Fairly I asked to describe what service/offering customer is missing. One answer was related to missing room/building/site separation solutions for business critical services. I need to raise this requirement to business customer side as a demand from application customer side. In the end, we can deliver anything that is

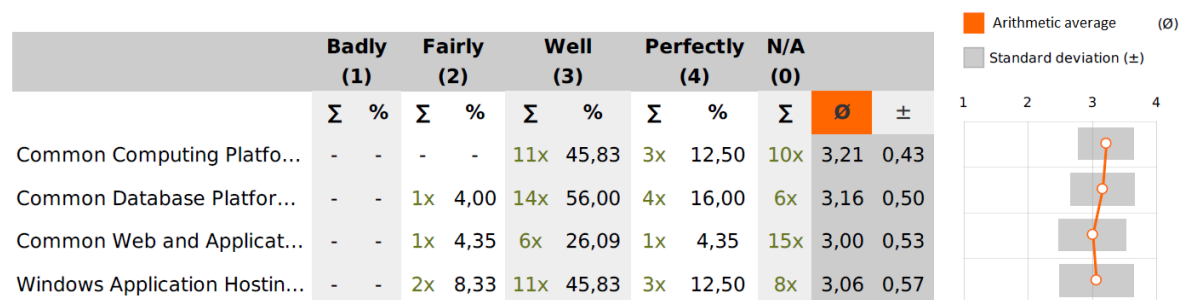
technically possible, if business customer is willing to pay for that solution. That is the key here. I have noticed that sometimes big picture about offering and ordering the services is not clear to all parties in 3 layer model.

Another topic was related to missing guideline how to transfer the service from old platform to new platform. Step-by-Step instruction with task list would be needed. That is good feedback and our team needs to analyze what we have in place today and how to improve the instructions.

One comment was that performance report is missing. We do have those available. But if customer is not aware where to find those or how to access those, there is obviously need to have training material or even training sessions. I need to find out is there general function available to support with this topic. Providing training how to access and use existing reports could be one of our new offering?

5.4.8 Q8: Platform deployment into service use

I asked “How well the design, planning and deployment to take platforms into your service use went?”



Picture 19. Customer feedback about platform deployment

With the answer Badly or Fairly I asked to describe what should be improved in deployment. Answers were not related the actual deployment and therefore these are affecting the end result wrong way.

- Ramping up my service is so far in the history that this question isn't relevant any more.

- I don't have new services.
- CWAP was still in development phase.

Taking into account that these decreased the average numbers, result is very good. I can see from the results that we have very good deployment process in place. Although there is always something we can improve to get everyone to answer perfectly.

5.4.9 Q9: Reason to use Data Center platform offering?

I asked “What is the reason you decided to use Data Center platform offering(s)?”



Picture 20. Reason why decided to use Data Center platform offering(s)

Other answer (text Muuta) was: “Common sense as no idea to re-invent the wheel and no need any more to have own HW and SW and update those.”

Here we can see the affect that all who answered have been working in this area more than 3 years. Data Center platform services used to be IT standards in company X and therefore those were mandatory to use in that time. I am happy to see that cost efficiency and business value is the most common reason to use Data Center platform services. As that is exactly the reason of our offering purpose.

5.4.10 Q10: General feedback related to Data Center platform services

In the end of the questionnaire I asked to write any other additional comments or feedback about Data Center platform services. Here are the answers:

- Very good cooperation and attitude towards service from the service managers of both platforms I have worked with.
- Good concept, could be taken even further towards cloud-type commissioning
- Today we are not having any visibility to the status of created ticket. Today the only way is to write emails to support team email; UNIX admin has to be improved: speed and quality.
- What I would like to have and easily accessible;; e.g. platform KPIs regularly on availability of a service etc.; CPU usage, storage usage per service, or other parameters; Cost per usage opportunity; platform costs per service; share of license costs etc.; possibilities to reduce service costs; more information on technology, trends, improvements etc.; transparency to my CIs and relations and easy lookup.
- In my opinion some kind of organizational change should be done to achieve better E2E view.
- This feedback is not valid only for Data Center Platforms but for all organizations who provide services to others: Data Center Platform, and others too, should remember that service buyers don't necessarily or most likely understand fully what they are going to buy because people are so busy with multiple tasks that they don't have time to get familiar with all bits and pieces, this means that service providers should always provide a high executive type of summary besides the actual deep level information.

From the feedback I can also see how the organization change is affecting the answers. Cost information is asked here again and that is what we are not allowed to deliver anymore. That seems not to be known by all our customers. I also understand that cost information would be mandatory to get. We have information in our intranet page where to request it, but as I noticed before in the answers, human interaction is the most common communication channel still. What we can do here very easily is to remind our customers every time that we have intranet pages, where updated information can always be checked.

Reporting data is asked also here, so the training offering might be good idea to consider. As that information is available, customers just do not know how to get it.

I will touch the comment “some kind of organizational change should be done to achieve better E2E view” in the next chapter. I agree with this comment. At the moment it is not always clear who is responsible for what actions. ServiceNow tool with the process descriptions may help the situation, but again, heavy training is required to get people to start to work new way. And if the tool implementation leads less human interaction, it may be big challenge to take efficiently into use.

5.4.11 Customer interview results

I focused more to the new mode of operation in the interviews. My goal was to understand did the outsourcing affect the customer relationship with the Data Center platform services and how customers understand Data center platform service offering life cycle.

Answers for interview question “2. How IT transformation affected DC platform service, if somehow visible to you as customer?” were that it was visible as old contacts was lost and roles and responsibilities were totally unclear. There was no personal contact information available anymore; instead anonym organization with the role descriptions was implemented. And as roles and responsibilities were unclear, customer did not know how to get work done. Answers are reflecting to the new end-to-end service management process with new roles. Importance of personal interaction and contacts was seen also in questionnaire results presented in section 5.4.3 Q3: How do customers come to use our services?

I asked the question: ”3. How you would describe platform service lifecycle?” to get understanding how customers define it. Answer corresponded definition presented in section 4.5 Data Center platform service offering life cycle. Main ideas from answer were that demand will start the process that deliver the required solution in the end.

Interview question: “4. B. How well customer changes are taken into account in platform life cycle?” purpose was to get customer feedback about the co-operation level. Change management importance as a part of life cycle was highlighted. Also the platform and application service requirements integration and need to have a common analyze about the proposed solution was mentioned.

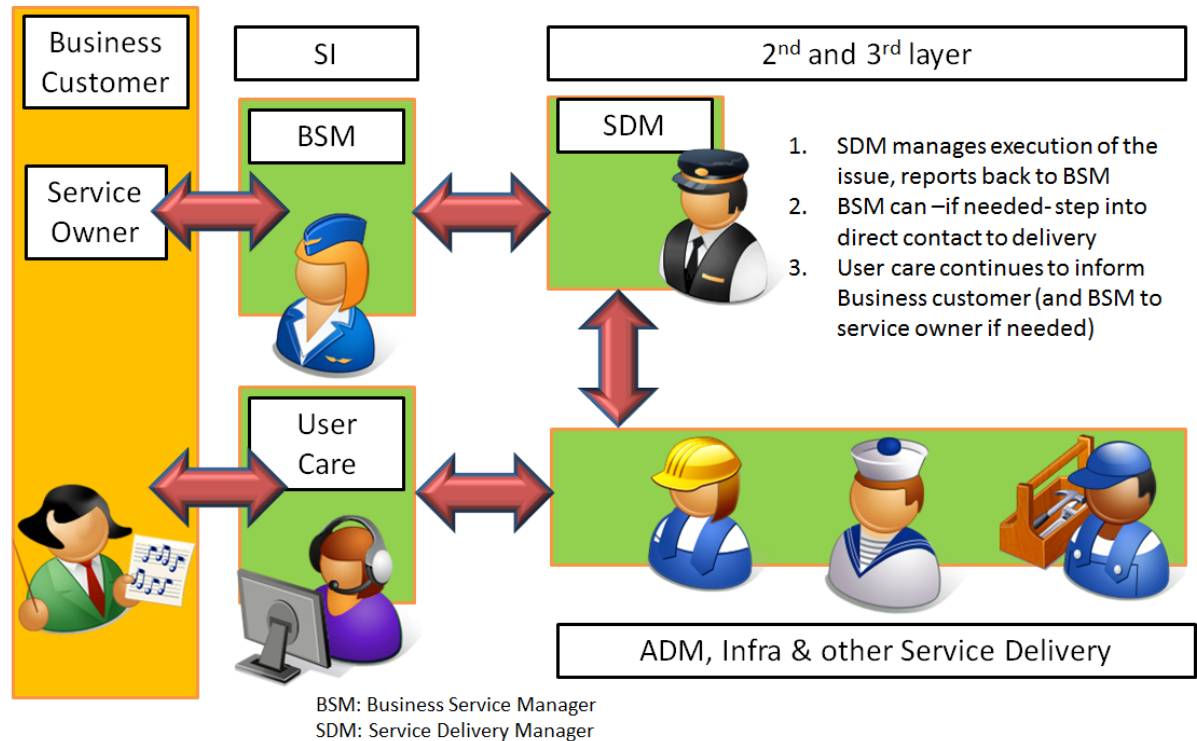
In the end I asked “5. Is there some specific issues in platform services at the moment, what you liked to point out?” Very alarming comment was related to platform continuous improvement activities. Platforms are working fine at the moment. But as platform maintenance does not get much funding, it means maintenance efforts are minimal. In the later phase that will cause problems and then there is a need to get bigger funding to repair. One interviewee compared platform to a car. Regular checkup and maintenance will keep the car in shape and it does not broke one day suddenly. Continuous service improvement is linked to budgeting and money in the end. We as service provider can propose improvement tasks, but at the end Company X decide do they give money or not. We as platform service managers need to learn to show the continuous service improvement demands in the way that we get the funding. Pure technical reason is not enough; it has to be mapped to business value.

5.5 Data Center platform service’s position in the end-to-end process model

Based on the findings of internal contract and process documentation I defined how Data Center platform service fits to the current big picture. In addition I used data from questionnaire and interview results to highlight Data Center platform service offering position in new end-to-end service process. By making it more visible to customer it is easier to understand the boundaries where we can operate in new service integrator model.

Service Integrator (SI) organization is the layer between business customer and end users on one side, and the 2nd layer suppliers (the service delivery parties) on the other side. 2nd layer and 3rd layer have sub processes with the defined touch points with SI and each other. Data Center platform service offering is linked to SI owned end-to-end

processes and with the 3rd layer sub-processes. Therefore it is important to understand the whole end-to-end process with 2nd and 3rd layer sub-processes to understand how Data Center platform services are visible to our customers in big picture.



Picture 21. Cooperation model

Picture 21 will present the cooperation between layers in service integrator model. Data Center platform service management is located in layer 2 under SDM function. As defined already in introduction chapter our main customers are also located in 2nd layer in Application development management (ADM) function.

Business customer and Service integrator are roles with accountable. That is one difference after outsourcing. Data Center platform service managers were also accountable of all service related processes before outsourcing. Now we are responsible to deliver.

I created RACI matrix (table 2) using internal RACI matrix template as a baseline to describe what Data Center platform service role is in end-to-end service management process under new service integrator model. RACI matrix is one tool to show responsibilities and accountabilities by different functions or persons.

I have reviewed this matrix with process team and with my colleagues. I had many fruitful discussions about our role and responsibility under different processes. It took few weeks to finalize this and get all parties accept it as a current situation. I used contract documents as a master document to define roles and responsibilities. I checked also process handbook and Service Now training material about processes, but after I found few sections with different responsibility description, I decided to use only contract document. As in the end contract is legally binding. That is anyway important finding. All these three sources of process definition, roles and responsibilities have to be aligned. Otherwise people will work different ways, depending what document they read. All employees has received ServiceNow training and therefore the material used there is the most commonly known at the moment. It has to be aligned with contract content and responsibility agreements or we will have issues. I have raised my findings toward process team for actions.

Table 2. RACI Matrix about Data Center Platform service offering related processes

Processes		DC Platform service	3rd layer	SI	NSN = Business customer
SERVICE GOVERNANCE					
	Architecture Management	C		R	A
	IT Service Portfolio Management	C	C	R	A
	Financial Management	C	R	R	A
	Demand Management	C	C	A	R
	Innovation Management	C	C	A	R
SERVICE DESIGN					
	Service Level Management	R	R	A	R
	Service Catalog Management	C	C	A	C
	Capacity Management	R	R	R	A
	Availability Management	C	R	A	R
	IT Service Continuity Management	R	R	R	A
	IT Information Security Management	C	C	R	A
	Supplier Management			A	R
SERVICE TRANSITION					
	Change Management	R	R	A	R
	Evaluation Management	R	R	A	R
	Validation and Testing	C	R	A	R
	Release and Deployment Management	R	R	A	R
	Service Asset and Configuration Management	R	R	A	
	Project Management	C	C	A	R
SERVICE OPERATION					
	Request Fulfillment	C	R	A	R
	Incident Management	C	R	A	
	Problem Management	R	R	A	
SUPPORTING PROCESSES AND SERVICES					
	Service Measurement and Reporting	C	C	A	I
	Service Improvement	R	R	R	A
	Software Asset Management	C	R	R	A
	Service Documentation and Communication	R	R	A	R

R = Responsible: Those who do the work to achieve the task.

A = Accountable: One accountable for the tasks and signs off the work.

C = Consulted: Those who are subject matter experts and are consulted about the task.

I = Informed: Those who are kept up-to-date on progress, often only on completion of the task or deliverable.

5.6 ITIL processes related to the Data Center platform offering

I have defined the ITIL processes that are mainly related to the Data Center platform service offering process. All processes in RACI matrix in table 2 are not related the offering; some of those are related to service support activities. Therefore I want to define detailed the processes that are more related to offering activities. Light grey boxes are not directly related to the Data Center platform service offering activities. It should be also noted that we do have minor, mainly supporting role also in some of the grey color processes.



Picture 22. Service Governance processes

Data Center platform services' offering is influenced by Demand Management under Service Governance processes (picture 22). Demand management aims to understand, anticipate and influence customer demand for services, including service capacity changes. In end-to-end service management Demand management is handled between customer and Service Integrator role. Layer 2 Providers has a role to contribute to the demand analysis.



Picture 23. Service Design processes

Under Service Design processes (picture 23) Service Level Management (SLM) and Capacity Management are used in Data Center platform offering. SLM process defines, document, agree, monitor, measure, report and review the level of Data Center platform services provided. SLM process ensures that Data Center platform services and the customers have a clear and unambiguous expectation of the level of service to be

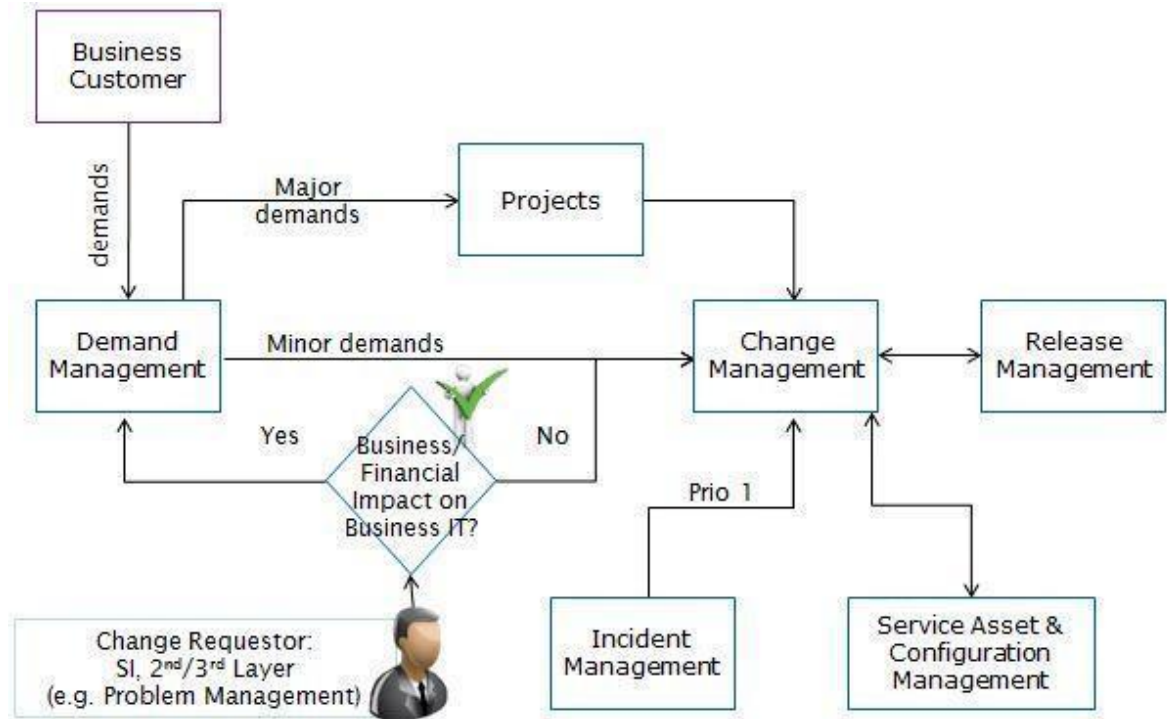
delivered. Under Capacity Management Data Center platform services ensure the adequate capacity level.



Picture 24. Service Transition processes

A Data Center platform service offering is influenced by Change Management, Evaluation management, Release and Deployment Management, Project management and Service Asset & Configuration Management under Service Transition processes (picture 24).

Change management is the main process where our offering is ordered, changed or terminated by our customers. Data Center platform offering will handle software and hardware upgrades under Release and Deployment management. Major platform upgrades can be handled also in project mode under Project Management process. Application Project management uses our offering in project activities via Change management process. Service Asset & Configuration Management process includes full life-cycle management of Service Assets and Configuration Items. Change management process will touch assets or configuration items of Data Center platform service offering. In picture 25 it is visible that Change management process is the core process related to Data Center platform service offering lifecycle.

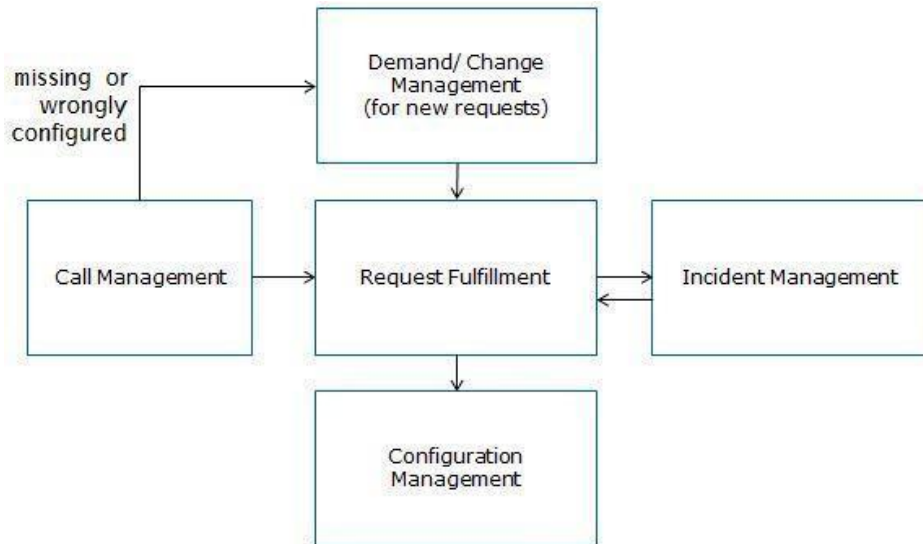


Picture 25. Change Management relationship to other processes



Picture 26. Service Operation processes

Service Operation processes (picture 26) coordinates and carries out the activities and processes required to deliver and manage services at agreed levels to customers. Request fulfillment is another process that our service requests type of offering is ordered, changed or terminated. Incident and Problem management will affect our offering via Change Management process.



Picture 27. Request Fulfillment relationship to other processes



Picture 28. Supporting processes and services

Under Service Improvement (in picture 28) Data Center platforms initiate proposals for action to improve the service. Improvement need may come via customer feedback, customer requirements or technology updates. Service Documentation & Comms (in picture 28) covers Data Center platform service offering documentation with the instructions for different actions.

(ITIL® Service lifecycle 2010, company process handbook).

6 Recommendations and development ideas

~18% from business application do not know Data Center platform service offering according the “DC Platform services customer survey” result. That is quite alarming number and we need to focus to get more visibility to us and Data Center platform service offering. One way to do it is to start service marketing activities towards all layers. At the moment there is no service marketing as such. Data Center platform services has intranet pages, where communication material and “how to order our services” documentation is available. But if people are not aware such an offering, they will not find the intranet pages either. Before the organization change we used to have customer info sessions and articles in IT newsletter. I proposed to start the customer info sessions in Layer 2 level towards Data Center platform services’ main customers Application Development services. This has been already agreed to be one of our team’s new communication channel towards customer. One outcome from interview was that personal contacts were lost. Customer info session would bring Data Center platform service managers visible to customer again. One topic in info session is customer feedback. That will be another customer feedback channel in addition to feedback we receive via end-to-end process tools. I have also proposed to provide articles to internal newsletter when there is applicable topic, like new offering or changes in the service product versions. Success stories can be shared also via newsletter. One new marketing and communication channel will be available soon when ServiceNow tool is taken into use. There will be knowledgebase section with the service information. We have agreed that we will review Data Center platform service offering information in the ServiceNow knowledgebase module. Target is to validate the current data copied from intranet pages and add any missing information. We have also discussed within our team the regular checkup and update process to keep the information maintained in the knowledgebase module in ServiceNow tool.

“DC Platform services customer survey” should be sent again in autumn 2014. I did not have any answer from people who were working with business customer less than 3 years. Reason maybe that the time when the survey was active, new people were just came into the new roles and they may not see the value why to answer “DC Platform

services customer survey”. I sent “DC Platform services customer survey” to 3 new people afterwards, but only one answered. Therefore I do not have reliable information how familiar all new persons are with Data Center platform service offering. To ensure the results reliability survey should be conducted again against the people that have been working less than 1 year in new role with this business customer.

Data Center Platform service offering life cycle starts with the pre-analysis phase, as defined in section 4.5. In pre-analysis phase customer requirements are analyzed, different options are provided and guidance to the needed processes is given. In theory that step is defined, but in practice that step is often skipped. Reason for this is that application development services are responsible to create the order, so they start with the ordering step and skipping the pre-analyze phase. That causes sometimes issues when the offering limitation was not clear to customer and clarification afterwards causes delays in delivery. This came out also from question “Q10: General feedback related to Data Center platform services”, that service buyers don't most likely understand fully what they are going to buy. Similar message came out from question “Q5: Platform service information towards customers” answers, that customer would appreciate practical steps guide to be available for ordering. Same message was visible also from interview answers. It would be everyone's benefit to run pre-analysis phase together. One way to improve the importance of pre-analysis phase can be done via service marketing. Another way is to revive Data Center platform service consultancy activity, where the focus is to help customer to find the best possible solution against their requirement. Collaboration between all infra team would be then needed as otherwise we can provide only partial solution. Related to this topic is the missing guideline how to transfer the service from old platform to new platform. Step-by-Step instruction with task list would be needed. Our team needs to analyze what we have in place today and how to improve the instructions and include it in the consulting activities.

We use term System integration in service management end-to-end process. What we would also need is the infrastructure level system integration: integration of application requirements to standard infrastructure components and modules. Not just Data Cen-

ter platform service offering, but also others like network, security, identity and access management. That is one function what we do not have in place at the moment. We work too much in silos in infrastructure area. Consultancy should focus to be system integrator consultant, not just for Data Center platform services, but all infra services. What could be improved is the one view of the infrastructure offering. I have raised this as a new idea into our company idea tool. With this new offering we could increase also our sale. As customers may not find information about Data Center platform services, they may not find easily any other infrastructure related information like how to create a firewall request. Ongoing service management end-to-end ServiceNow tool implementation can improve this situation via service catalogue function. That needs to be analyzed before making any bigger improvement actions. I suspect can the tool be more infrastructure system integrator capable than what people could be.

What we can do in Data Center platform service team is to create or update the “Question to be asked in kickoff meeting” – document. We do have that kind of documents in some of the Data Center platform services, but those should be aligned to be more integrated. We could create document, what all platforms can use. When I discussed about this topic with my colleagues we noticed that basic information is always the same, only the platform technical questions needs to be separated. Kickoff meeting questionnaire could be proposed to be mandatory before ordering step can start. That way we could ensure that customer order is according the customer requirement and is possible to implement in agreed timeline.

It is mandatory that we can also show very clearly what we do not offer, what are the limitations to avoid any kind of misunderstandings and unnecessary hassle. That is one area where we can improve our current service offering documentation. We define clearly what we offer, but what we do not offer is not clear in all documentations. And if there are a lot of demands for a service we do not offer at the moment, we need to have a clear guideline under continuous service improvement process to be able to propose to add those to the service catalog. This has been raised to Infra management team for improvement action.

In end-to-end service management Demand management is handled between business customer and Layer 1 Service Integrator role. Layer 2 providers like Data Center platform services should contribute to the demand analysis, as it is defined also in the RACI matrix presented in table 2. In practice we are not invited to contribute to the Demands. There is room for improvement to involve us in demands that has some link to Data Center platform service offering. Link does not have to be to the current offering, it can be link to the potential new offering. At the moment business customer voice is quite silent towards us. That has changes dramatically after the organization change. I see we do have the best competence about our services and that should be used in Demand management process. Knellers (2010) defines one indicator of good IT service management a close relationship between the IT service provider and business customers at all levels, which feels like a trusted partnership. That is the situation we need to aim also using the Demand management process. Situation has been recognized also by Infra management team and they have taken an action to get us involved to Demand management process activities.

Data Center platform service offering life cycle rely on 3rd layer service provider internal processes. We do not have visibility to 3rd layer delivery processes. That is something we should get minor visibility to be able to understand where the possible bottleneck and issues may raise. I have discussed this with my 3rd layer service delivery lead counterpart and we have agreed action point to open 3rd layer delivery process towards Data Center Platform service managers. Another aspect is to investigate the DevOps concept and how we could take into use the ideology behind it. The concept is about getting developers and operations teams to work closely together to benefit the business. Today we have big silo between application development services and operational service providers. Application development services want to change setups and operational team are focused to keep the system up. Many times there is a conflict what is wanted. DevOps enlarge the infrastructure system integrator concept taking application development in. I see DevOps is something we should investigate more. Would that be the concept how we can increase our responsiveness to business customer expectations?

What was clearly visible from customer answers in “DC Platform services customer survey” was the need to see service price information. In new role in 2nd layer we are not allowed to see our own service prices or deliver those to the customers. RACI matrix (table 2) shows it also that we do have only consulted role in financial management. In company X we had end-to-end responsibility about our services. Part of the service management is financial management with the cost information. After the organization change we can propose solution to our customers without prices. Customers need to create order and then they will get price included in the implementation proposal. That causes us many issues, as our customers usually need to know the price before they can raise the order as they need to get approval to the budget. We used to have case examples with the price details in our service marketing material. After the organization change we needed to remove all price information. Reason for this is that other Layer 3 service providers are also our current company’s competitors. If we could see their prices, in theory we could misuse that information if we wanted to. But as we cannot see the prices we cannot support our customers with business case calculations. We cannot change that under current service integrator model. But we can highlight that more in our service communication material and in the customer meetings.

7 Discussion

My thesis process has not been easiest one. I started the planning and literature process with my first topic at autumn 2012. Topic was part of the big program. Program cancelled and therefore I lost also my thesis topic. Then the outsourcing was done and I changed the company. In new company I started to investigate new possible thesis topic. After few proposals and discussion with tutor I was able to agree this topic for my thesis. It was already end of year 2013, which means I had worked with the thesis already over one year. However this time was not lost, as I learned a lot about the thesis process itself. At the end the material I collected for the first topic, was partly applicable to agreed topic.

During thesis process I needed to read very detailed all contractual documentations, process handbook and end-to-end service management process training material. I have never before dived so deep into the contractual documents what I did here. Now and then I felt I should be a lawyer to be able to understand the real meaning behind the text. Now I know what level the information in contract has to be and can use that information later in my career. When I was reading the process handbook material I got very good theoretical understanding about IT service management processes and different roles within the processes.

I found some contradictions between contract and process documents, what made me wonder a lot what the information I should rely on. I reported my finding to responsible teams, as I am not sure how many has read all three source material and compared those deeply. I felt it was my obligation to inform my findings, as I cannot change those. This has been a good learning path to me. During the reading and material analyze process I have gained lot of information and understanding how we should work in this new 3rd layer service integrator model according the contract. Especially RACI matrix creation game me very good insight how we operate in new service integrator model. I had many fruitful discussions with my colleagues, process team members, customers and 3rd layer contacts about Data Center platform services role and responsibility under different processes. Almost everyone has a bit different under-

standing about the roles and responsibilities. RACI matrix creation was not easy task but it was mandatory to create to understand our position in end-to-end service management process in easy understandable way.

I used to be a bit frustrated and confused how I should do my service management work after outsourcing. I was not sure what I can do and what I am obligated to do. During the thesis process I got clarification how I should work and it affected my well-being very positive way. I stopped the wining and started to see areas where we can work better to serve our customer and to bring our value visible.

In process level some of the responsibilities are still a bit unclear, especially how to share tasks and responsibilities between 2nd and 3rd layer located in same company. That has been noticed also in management level and I am expecting us to phase few organization changes in the future. As this model is new to all, it needs some fine-tuning before it can perform the best way.

As an outcome of my thesis I was able to implement and start few improvement actions. Some of those we were able to do internally in our Data Center platform service team, some of those has been send to IT management team or innovation tool for further actions. However I see the most valuable outcome of my thesis is that me and my colleagues in Data Center platform service management team gain understanding how we work in new service integrator model. In my personal opinion that is the most important result of this work. Process and operation development is continuous work. Now we know where we are today and where we can go to bring ever more business value to our customers.

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Attachments

Attachment 1. DC platform services customer survey template

DC Platform services customer survey

Q1: **Background questions** = Who are our customers?

Select area you are working

- ☐ IT Infrastructure Capabilities
- ☐ Product and SW Development Capabilities
- ☐ People Management
- ☐ Support Capabilities
- ☐ Wide Capabilities
- ☐ Deliver Capabilities
- ☐ Service Capabilities
- ☐ Sales and Marketing Capabilities
- ☐ Other, specify

What is your location/country?

What is your role (select the most suitable)

- ☐ Service Manager
- ☐ Service Delivery Manager
- ☐ Service owner
- ☐ Cluster manager
- ☐ Application Manager
- ☐ Product manager
- ☐ System Designer
- ☐ Business analysts
- ☐ Other, specify

How long have you been working in **account as total (not necessarily in the current role) ***

- ☐ less that 6 months
- ☐ 6 months - 1 year
- ☐ 1 year - 3 years
- ☐ Over 3 years

Are you familiar with DataCenter Platforms? *

Even your service is not using DataCenter Platforms, but you are aware of those, select Yes. But if you do not have any clue about what DataCenter platform are, please select No.

- ☐ No, please move to the next page
- ☐ Yes, please answer to next question

Q2: If yes, please describe shortly what DataCenter Platforms are/how you would define Platforms?

Communication

Q3: Where did you get information about DataCenter Platforms?

- ☒ Intranet - Platform pages
- ☐ Intranet - Platform pages
- ☐ Extranet - Platform pages
- ☐ Service catalogs
- ☐ From colleague/superior
- ☐ From computing manager
- ☐ From platform Service manager/system designer
- ☐ Somewhere else, where?

Q4: How would you like to receive information about Platforms (offerings, changes,news, ..)

- ☐ Via email
- ☐ Via intranet page
- ☐ Via communication letters
- ☐ Via customer info sessions
- ☐ Via other channel? Please define

Q5: What kind of information you would like to receive and how often?

Platforms service delivery and offerings

Q6: Please indicate average rate for the DataCenter Platforms you/your service are using/have been using.

Ron Kaufman's Six levels of Customer Service:

1 = Criminal/very bad

2 = Basic

3 = Expected

4 = Desired

5 = Surprising

6 = Unbelievable *

If you are not using/have not been used, please select N/A.

	1	2	3	4	5	6	N/A
Common Computing Platform (CCP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Database Platform (CDP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Web and Application Platform (CWAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Windows Application Hosting (WAH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7: How well the DataCenter Platforms current service/offering meets your service requirements?
Select N/A if you are not using. *

Service = Service offerings, what each service does and does not include, eligibility, limitations, how to request services, and how to get help. Offering = Platforms portfolio of products

	Badly	Fairly	Well	Perfectly	N/A
Common Computing Platform (CCP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Database Platform (CDP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Web and Application platform (CWAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Windows Application Hosting (WAH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected Badly or Fairly, please describe here what service/offering you are missing. Please specify per platform, if applicable.

Add also here, if there is any other service/offering missing that you/your service might need related to platforms

Q8: How well the design, planning and deployment to take platforms into your service use went?

	Badly	Fairly	Well	Perfectly	Not in use
Common Computing Platform (CCP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Database Platform (CDP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Web and Application platform (CWAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Windows Application Hosting (WAH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected Badly or Fairly, please describe what should be improved?

Define per platform, if possible

Q9: What is the reason you decided to use DataCenter platform offering(s)?

☐ It was mandatory to use, there was no other option

☐ It was cost efficient solution

☐ It adds value to your service/business

☐ Other reason? Specify what

Q10: If you could select now again, would you still select the same DataCenter platform offering you did originally?

☐ Yes

☐ No, please specify reason why not?

If you would like to share any other additional comments or feedback about Datacenter Platforms, please enter them below.

Attachment 2. Interview frame questions template

1. How you would define what Data Center platform services' purpose is?
2. How IT transformation affected DC platform service, if somehow visible to you as customer?
3. How you would describe platform service lifecycle?
 - a. Does it differ from any service lifecycle process – like comparing to application services?
 - b. Is the lifecycle visible to you as continue process, not separated steps?
 - c. Some improvement ideas, proposals?
4. How important you see interaction between platforms and customers?
 - a. What kind of interaction you expect to happen?
 - b. How well customer changes are taken into account in platforms life cycle?
5. Are there some specific issues in platform services at the moment, what you liked to point out?
6. Free comments