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Service Design case for Avanade’s Customer

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Palvelumuotoiluprojekti suoritettiin onnistuneesti kesän 2015 aikana Avanaden asiakkaalle. Projektin päämääränä oli tuoda esille ITILin tuomia hyötyjä asiakasyritykselle.

Asiakkaan odotukset projektin osalta eivät keskittyneet niinkään ITILiin vaan heidän toiveissaan oli saada selvitettyä nykyisten prosessien kypsyysaste.

Kypsyysarviointi suoritettiin osana prosessien kypsyyden arviointia ja tämä vei projektille lasketusta ajasta puolet. Kypsyysnäyte on iso osa lopullista opinnäytetyötä. Lopputulokset oli jo projektin aikana analysoitu ja käyty asiakkaan kanssa läpi, Ilmeni että asiakkaan edustajilla on huomattavasti eriäviä käsityksiä prosessien kypsyyden tasosta.

Varsinaiset prosessien määritykset tehtiin kypsyysarvioinnin jälkeen. Asiakas suosi käytännönläheistä lähestymistä prosessien luomiseen ja painotti että projektin tuotoksena tulisi tuottaa implementoitavia prosesseja. Tämän asiakkaan vaatimuksen ja tiukan aikarajoituksen myötä projekti ei noudattanut tarkasti ITIL –käytäntöjä.

Asiakas halusi painottaa työtä huomattavasti vuosikelloon, joka itsessää on karkea versio prosessista jolla voidaan hallinnoida ohjelmistojen ja laitteistojen versioiden tarkistamista. Vuosikello on vahvasti sidoksissa järjestelmien dokumentaatioon joka pyrkii yhtenäistämään ja keskittämään järjestelmien keskeisimmän tiedot.

Asiasanat
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Abstract

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The "Service Design" – thesis project was completed during summer 2015. The project aimed to showcase service design and the benefits of organizing for ITIL. Project was delivered on schedule successfully.

Based on commissioner's expectations this project did not focus on ITIL as much as providing client with clear insight into their process maturity and defining multiple existing processes.

Readiness assessment that was used to gauge process maturity took half of the allocated time and it is a large part of the report. The results of readiness assessment clearly show that the customer has significant variance in how the employees see their process maturity.

Actual process definitions were created after the assessment was completed. The commissioner preferred pragmatic approach to service design in order to get some of the more critical processes defined within the strict schedule of the project. Due to these limitations the thesis is not following ITIL methodology very strictly.

The commissioner heavily prioritized the year clock which in itself is a proof of concept stage process for managing software and hardware updates. Year clock is also heavily tied into system documentation which aims to keep all systems documented and their relevant information easily accessible.

Keywords
Service design, ITIL, Process management, Readiness assessment

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1 Project

1.1 Premise

Customer is a multinational finance sector firm operating in three major Nordic cities. They currently have couple of hundred employees and have their own IT-section which is in charge of day-to-day operations, IT-support and security. Customer also has on premise data center, but has most its software from third party vendors.

Avanade has been doing development work for customer organization for some time. During this development Avanade has been continuously looking for business opportunities, one such opportunity is adaptation of service design and ITIL frameworks.

Customer was skeptical with service design as they had little knowledge on ITIL frameworks and how they could be used to define and enhance existing processes. Customer admitted that they have room for improvement regarding documentation and process definition (which are of utmost importance since they are subjects to frequent audits) which in turn sparked this project to show what kind of benefits can be gained with service design.

Tessa Viitanen offered this chance as a thesis project to Ville Solja, who had little prior experience in ITIL and service design, but gladly accepted as it would undoubtedly be great for learning.

1.2 Objectives of the project

The goal of the project was to introduce the client to service design and its benefits meanwhile conducting readiness assessment in order to gauge client's process maturity.

Before the project began there were estimates by Tessa Viitanen that the process maturity would need refining in order to reach mature state and considering the duration of the project that was never the target.

Project was provided to customer on a very agreeable price and its length was set to 20 man-days.

1.3 Project Plan

Project plan is covering the overall projects schedule and focuses on the dynamics between employer and customer. Project goal features things such as customer's requests

and their documentation in the Project plan document. Said document was updated throughout the project in order to reflect the deliverables accurately.

2 Customer's infrastructure

Customer's main office is located in Helsinki and it is the office where I had all of my meetings with customer's representatives. They also house their datacenter in their office.

Service design processes are designed broadly without taking into consideration offices environmental variables, therefore providing client with additional value as same processes are usable throughout the organization.

3 Service Design

Service design is clearly defined part of ITIL that focuses on defining and maturing processes in order to help client provide IT services to its employees. Before starting service design process most customer's repeatable processes are inefficient and require silent knowledge that isn't documented at all.

Few examples of this kind of repeatable processes that could be refined and documented are new employee rights management and leaving employees account removal, Systematic checkup on services, software and hardware.

Service Design and its documented processes are also in great demand by customer as their field is especially prone to being audits and to ensure that they go smoothly the customer could benefit from having the well-established processes documented (OGC 2009, 49-72.)

There is no single way of approach to ITIL and no best practice library can be used to best effect in every case. Therefore, especially considering the strict limitations in the project, Liberties were taken in order to provide client with actual implementable processes and guidelines. Due to being only marginally using ITIL teachings and more practical implementation this service design case will not have many references to theoretical ITIL material.

4 Readiness Assessment

Readiness assessment is an ITIL frameworks tool that is used to gauge organizations processes and their state. It is also immensely helpful in providing insight into how customer organization spreads and shares information within itself.

4.1 Readiness assessment tool

Readiness assessment tool is an excel-file with macros that consists of six pages. The tool is provided by UCISA (UCISA 2016.)

1. Introduction, which has brief introductory to the actual assessment
2. Questionnaire page which is in total 261 rows long.
3. Page providing questionnaire results in number of responses per service design category (which can be found below). Also included are average score per sub category and sum of scores given to each sub category per participant.
4. Page showing a radar chart.
5. Column diagram with sum of each score per sub category of service design.
6. Contains average score per process for each of the participants.

Answers in the questionnaire page must range from one to five or “Not Applicable”

1. Initial – processes and activities are adhoc or chaotic or undefined.
2. Repeatable – Basic processes and activities are established and there is a level of discipline and adherence.
3. Defined – All processes and activities are defined, documented, standardized and integrated together.
4. Managed – Processes are measured by collecting detailed data on the processes and their quality and appropriately improved.
5. Optimizing – Continuous process improvement is adopted. Process and activities are mature.

In the initial project kickoff meeting I represented customer with the readiness assessment tool and we agreed unanimously with customer’s representatives that the questionnaire should be heavily trimmed in order to keep the interviews in less than hour, but also in order to ask the questions applicable to customer’s organization.
Readiness Assessment tool is scalable, so in order to match the questionnaire with customer organizations needs I consulted Tessa Viitanen in order to remove questions aimed at larger corporations.
I have hidden the excluded questions as it would take necessary focus from the answers and will provide blank template as an attachment.

4.2 Service design

Service design is spread to following subtypes in readiness assessment.

Service Management as a practice

Service management as a practice focuses on determining whether employees actually know what their services are and who they are providing services for. It also contains multiple questions regarding the quality and other measurements and employees understanding of service quality on these metrics.

Service design and process documentation isn't implemented, therefore service design as a practice received only average score of 2.2

1	Service Management as a Practice	[redacted]	Participant 10	Total	Count	Avg
2	We know what our services are	2 3 4 3 2 4 2 3 2	Not applicable	25	9	2,777777778
3	We are able to measure our processes in a relevant manner	1 2 2 1 1 2 1 2 3	Not applicable	15	9	1,666666667
4	The reason our processes exist is to deliver a specific result	2 2 3 2 2 3 3 2 3	Not applicable	22	9	2,444444444
5	Every process delivers its primary results to a customer or stakeholder	2 3 3 2 1 3 2 2 3	Not applicable	21	9	2,333333333
8	We actively manage the design of the service portfolio, including the Service Catalogue	2 2 2 2 3 3 Not app 2 2	Not applicable	18	8	2,25
9	We actively manage the design of the processes required	3 2 2 3 1 3 2 2 2	Not applicable	20	9	2,222222222
10	We actively manage the design of measurement methods and metrics	2 2 1 2 1 3 1 1 2	Not applicable	15	9	1,666666667
12	We measure IT quality in businessuser terms, reporting what is relevant to users	3 2 4 1 2 3 1 3 2	Not applicable	21	9	2,333333333
17	We provide IT Services that are business and customer oriented, focused and driven	4 3 3 4 3 3 3 5 4	Not applicable	32	9	3,555555556
18	We provide IT Services that are cost effective and secure	4 3 4 3 3 3 3 4 3	Not applicable	30	9	3,333333333
19	We provide IT Services that are flexible and adaptable, yet fit for purpose at the point of delivery	5 2 4 3 4 3 2 4 4	Not applicable	31	9	3,444444444
21	We provide IT Services that meet increasing business demands for continuous operation	4 3 3 3 4 4 3 4 3	Not applicable	31	9	3,444444444
22	We provide IT Services that are managed and operated to an acceptable level of risk	3 3 4 3 4 4 4 3 3	Not applicable	31	9	3,444444444
23	We provide IT Services that are responsive with appropriate availability matched to business needs	4 3 4 3 3 4 4 4 4	Not applicable	33	9	3,666666667
24	An IT Strategy or Steering Group carries the overall accountability for setting governance, direction, policy and strategy for IT Services	2 2 3 2 3 3 2 Not appli 3	Not applicable	20	8	2,5
	SCORE	17 18 21 16 13 24 12 17 19	0	157	71	2,211267606

Service Design principles

Then we go through whether organization has control and longer term plans for their processes. This category has really large difference based on interviewee's position and how visible the decision making is to them.

Even though the customer doesn't actively document their processes there are still underlying processes that are being followed by word of mouth, and this is why employees rated service design principles highest among categories with the average of 2.6

2	Service Design Principles	[redacted]	Participant 10	Total	Count	Avg
6	The Service Desk is made aware of new services, prepared and trained	2 2 3 4 2 2 2 2 2	Not applicable	21	9	2,333333333
9	We design services to satisfy business objectives	2 3 3 4 2 3 4 4 2	Not applicable	27	9	3
10	We design services that can be easily and efficiently developed	2 3 4 3 2 2 2 4 3	Not applicable	25	9	2,777777778
11	We design efficient and effective processes	2 2 3 3 2 2 2 3 2	Not applicable	21	9	2,333333333
12	We identify and manage risks prior to services becoming live	3 2 5 3 2 3 2 3 3	Not applicable	26	9	2,888888889
13	We design secure and resilient IT Services	4 2 5 4 2 3 3 3 2	Not applicable	28	9	3,111111111
14	We design measurement methods and metrics for processes and their deliverables	2 1 2 2 1 2 1 2 2	Not applicable	15	9	1,666666667
15	We produce and maintain IT design plans	3 3 3 2 2 3 2 4 3	Not applicable	25	9	2,777777778
27	We evaluate alternative solutions	3 3 4 4 2 2 3 3 2	Not applicable	26	9	2,888888889
	SCORE	20 18 28 25 15 20 18 25 19	0	188	72	2,611111111

Service Design processes

There are multiple subcategories in service design and for organizations case only three most important were picked and they were:

1. Service Catalogue management which in essence means that the whether the organization has up to date documentation regarding the services they provide and whether that catalogue is actively maintained
2. Availability Management is there to ensure that the availability of organizations service meets the business demands for their customers. For example documented processes and plans about active and reactive actions that would be taken in case of emergency would be included in this section.

3. Security Management most prominently comes into consideration during the audits as they are very keen on knowing how organizations security is maintained and developed.

3	Service Design Processes	[redacted]	Participant 10	Total	Count	Avg
1	We have defined **Service Catalogue Management**'s Purpose, Goal and Objective	4 1 Not app 1 1 3 2 3 2	Not applicable	17	8	2,125
2	We have defined Service Catalogue Management's Scope	3 1 Not app 1 1 3 2 2 2	Not applicable	15	8	1,875
3	We have defined Service Catalogue Management's Value to the business	2 1 Not app 1 1 3 2 1 2	Not applicable	13	8	1,625
4	We have defined Service Catalogue Management's Policies, Principles and basic concepts	3 1 Not app 1 1 3 2 2 3	Not applicable	16	8	2
5	We have defined Service Catalogue Management's Process Activities, Methods and Techniques	2 1 Not app 1 2 3 2 1 2	Not applicable	14	8	1,75
6	We have defined Service Catalogue Management's Triggers, Inputs, Outputs and interfaces	2 1 Not app 1 1 3 2 1 3	Not applicable	14	8	1,75
		Not appli Not appl Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable			
		Not appli Not appl Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable	0	0	0
26	We have defined **Availability Management**'s Purpose, Goal and Objective	2 2 4 2 2 2 2 2 2	Not applicable	20	9	2,222222222
27	We have defined Availability Management's Scope	2 2 Not app 2 2 2 2 2 2	Not applicable	16	8	2
28	We have defined Availability Management's Value to the business	4 3 4 2 2 2 2 2 2	Not applicable	23	9	2,555555556
29	We have defined Availability Management's Policies, Principles and basic concepts	4 1 4 2 2 2 2 2 2	Not applicable	21	9	2,333333333
30	We have defined Availability Management's Process Activities, Methods and Techniques	4 1 4 2 2 2 2 2 2	Not applicable	21	9	2,333333333
31	The Reactive activities of Availability Management are Defined	2 2 3 2 3 3 2 1 3	Not applicable	21	9	2,333333333
32	The Proactive activities of Availability Management are defined	3 3 4 3 2 Not apj 2 Not appl 2	Not applicable	19	7	2,714285714
		Not appli Not appl Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable	0	0	0
		Not appli Not appl Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable	0	0	0
50	We have defined Information **Security Management**'s Purpose, Goal and Objective	2 2 4 3 3 3 2 2 2	Not applicable	23	9	2,555555556
51	We have defined Information Security Management's Scope	2 2 4 3 3 3 Not app 2 2	Not applicable	21	8	2,625
52	We have defined Information Security Management's Value to the business	2 3 4 3 2 3 2 2 2	Not applicable	23	9	2,555555556
53	We have defined Information Security Management's Policies, Principles and basic concepts	2 2 4 3 3 3 2 3 2	Not applicable	24	9	2,666666667
54	We have a defined Security Framework	2 1 Not app Not appl 3 Not apj Not app Not appl Not appl	Not applicable	6	3	2
55	We have an Information Security Policy	2 2 5 3 3 4 3 2 3	Not applicable	27	9	3
56	We have an Information Security Policy Management System	2 1 4 1 3 3 3 2 2	Not applicable	21	9	2,333333333
57	We have defined Information Security Management's Process Activities, Methods and Techniques	2 1 4 1 3 3 3 2 2	Not applicable	21	9	2,333333333
		Not appli Not appl Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable	0	0	0
	SCORE	53 34 52 38 45 53 41 36 44	0	396	173	2,289017341

Service design processes show the wildest variation among categories, as employee's job description and their knowledge on day-to-day activities of IT personnel vary greatly.

Overall employees scored design processes average of 2.2

Service Design technology related activities

Technology related activities are policies and processes that are related to data in all and any form.

4	Service Design Technology Related Activities	[redacted]	Participant 10	Total	Count	Avg
1	Defining Functional requirements is an integral part of requirements engineering	2 2 4 3 3 3 Not app 2 3	Not applicable	22	8	2,75
16	Data is valued as an asset	4 1 4 5 4 3 2 4 2	Not applicable	29	9	3,222222222
17	Data is classified as operational, tactical and strategic	2 1 2 2 4 3 2 2 2	Not applicable	20	9	2,222222222
18	Data standards are defined and managed	4 1 3 Not appl 4 Not apj 1 3 2	Not applicable	18	7	2,571428571
19	Data ownership is defined and managed	3 1 4 3 3 4 2 2 3	Not applicable	25	9	2,777777778
20	Data migration is defined and managed	3 1 4 3 Not applic Not apj 2 3 2	Not applicable	18	7	2,571428571
21	Data storage is defined and managed	2 3 3 3 3 3 3 2 3	Not applicable	25	9	2,777777778
23	Data retrieval and usage is defined and managed	3 3 4 2 3 Not apj 2 3 2	Not applicable	22	8	2,75
25	The application portfolio is described in Application Management	3 1 4 1 2 2 2 3 2	Not applicable	20	9	2,222222222
	SCORE	26 14 32 22 26 18 16 24 21	0	199	75	2,653333333

Client's employees know that information and data is their most important asset and actually have corporation wide policies regarding usage of important data.

Average score was 2.6

Organizing for Service Design

How the organization has taken service design into consideration in its position and roles

5	Organising for Service Design	[redacted]	Participant 10	Total	Count	Avg
1	The RACI model is used to define the roles and responsibilities for Service Design	2 1 4 2 3 2 3 2 2	Not applicable	21	9	2,333333333
14	Security Manager roles and responsibilities are defined and scoped	2 1 1 1 2 3 3 2 2	Not applicable	17	9	1,888888889
	SCORE	4 2 5 3 5 5 6 4 4	0	38	18	2,111111111

Organizing for service design had great discrepancies in the answers and only contained two questions

Service Design Technology consideration

Determines whether customer has the appropriate tools and systems in place to effectively improve their service design.

6	Service Design Technology Considerations	[redacted]	Participant 10	Total	Count	Avg
6	Our tools manage of all stages of the service lifecycle	2 2 1 Not appl 2 2 Not app 2 2	Not applicable	13	7	1,857142857
14	Our tools enable us to manage the relationships, interfaces and inter-dependencies	2 1 4 2 Not applic 3 Not app 2 3	Not applicable	17	7	2,428571429
16	We have a Configuration Management system (CMS)	Not appli 1 Not app Not appl Not applic Not apj Not app Not appl Not appl	Not applicable	1	1	1
17	We have a Service Knowledge Management System (SKMS)	4 1 5 2 2 3 2 3 1	Not applicable	23	9	2,555555556
	SCORE	8 5 10 4 4 8 2 7 6	0	54	24	2,25

Employees rated technology considerations on 2.2 on average which would imply that there are some tools in place to determine and monitor service lifecycle. These tools were not part of this assignment.

Service Design Process Implementation Considerations

Other consideration that the organization should consider in order to improve their service design capabilities.

7	Service Design Process Implementation Considerations	[redacted]	Participant 10	Total	Count	Avg
6	Service Level Requirements for all services are ascertained	2 2 4 1 3 2 Not app 3 2	Not applicable	19	8	2,375
	SCORE	2 2 4 1 3 2 0 3 2	0	19	8	2,375

Employees have clear understanding on service level requirements.

4.3 Interviews

I delivered customers representatives list of possible user types that would be ideal to get a varied viewpoint in readiness assessment. This list contained but was not limited to: IT-lead, IT-support, Technical architect and Users from multiple roles. Customer's representatives chose the subjects that were interviewed during readiness assessment with mostly changes that would shift the focus towards technically adept personnel. I agreed to the changes as the tool itself is rife with ITIL lingo which would have possibly rendered layman interviewees opinion inaccurate.

Interviews are set up one at a time with an hour dedicated to each. There were 9 interviewees that consisted of different roles inside customer organization.

Before starting the interview, I went through the rating system detailed in the start of questionnaire (Described previously)

During this interview each interviewee is taken through readiness assessment tool and they are asked to give each statement a value from one to five, with a possibility to leave it "Not applicable" in the case they the statement or question isn't relevant to customer organization.

Interviewees were encouraged to ask if they were unsure what each question means in order to help provide accurate results to which I would answer to best of my ability.

Scores from previous interviews were hidden in order to not affect interviews outcome.

4.4 Results

The results show that there is clear discrepancy among the interviewed personnel, this can be partly attributed to the fact that they have different job descriptions. This is shown clearly by the results which feature multiple questions containing great divide in the answers.

Total average of answers is 2.35 which according to the tool equals “Repeatable – basic processes and activities are established and there is a level of discipline and adherence”

The results show that customer’s organization is in no way fit to provide future auditors with sufficiently documented processes. The silver lining is that processes exist and are being maintained even if they aren’t put on paper.

4.5 Response

Almost all interviewees agreed that the current level of process definition is insufficient and that there is an immediate need to improve documentation.

Interviewees generally saw the readiness assessment as a valuable part of service design, and it functioned as an eye opener to these glaring issues.

Based on the response I have received regarding readiness assessment I would highly recommend it to other service design cases, especially in cases where clients current state would need fast but flexible evaluation.

5 System documentation

System documentation is a wider concept that consists of how systems in customer's infrastructure are documented and how that documentation is kept up to date. Each document will be briefly described and

5.1 Year Clock

Year clock is meant the process of keeping existing systems and their relevant documentation up to date. Year clock is an excel file.

5.2 System Document template

System document template is created in order to consolidate client's system documents within a single document.

5.3 IP list

IP-list is an existing document that houses information of static IP's in customer's infrastructure and what they are used for. This document is major priority to customer's IT sector and it is used daily.

6 Year clock

Year clock stems from the clients wish to have a maintainable schedule for all their systems. Before year clock there was no schedule for any of the systems and their updates were installed ad hoc. Year clock functions as proof of concept stage service catalogue (OGC 2009, 54.)

6.1 Overview and customer requirements

Customer prioritized the year clock as the most essential process. Customers' needs to be able to determine whether all their systems are up to date. This is highly required for both auditions and overall security.

6.2 Deliverables

It was decided with customer that in order to get year clock to a usable level it should be done in excel format.

System Name	System Ty	Priority (Mon	Last checkup (D	Previously chec	Current vers	Until next chec	System documents ID
New system	Software	3	11.2.2016	ASD		90	7826351734
New system	Software	3	11.2.2016	ASD		90	3363683063
New system	Other	2	11.2.2016	ASD	1.1	60	3606854052
New system	Component	3	11.2.2016	VES	1.6123	90	1280935872
New system	Hardware	3	11.2.2016	ASD	2.5.5.1	90	6593741839
New system	Component	3	11.2.2016	VES	1.1	90	227114820
New system	Firewall	2	5.2.2016	ASD	1.1	54	975621066
New system	Other	2	5.2.2016			54	3499357989
New system	Other	3	5.2.2016	VES	2.647	84	3130984396
New system	Other	3	5.2.2016	VES	1.52	84	5435123851
New system	Hardware	6	25.1.2016	VES	1.25	163	7011024438
New system	Other	3	25.1.2016			73	5595211980
New system	Other	3	25.1.2016			73	4549614005
New system	Other	3	25.1.2016			73	5718045389
New system	Other	3	25.1.2016			73	5785984614
New system	Other	6	25.1.2016	ASD	1.1	163	3378337642
New system	Component	6	1.1.2016	ASD	1.1	139	5695567229
New system	Hardware	12	1.1.2016	ASD	Text is fine too	319	8997635188

6.3 Results

Year clock contains the following information regarding the system:

1. System Name

Self-explanatory information with systems full name.

2. System Type

System type contains the type of system in question which can have value of component, hardware, software, firewall or other.

3. Priority

All systems have priority based on how essential they are to the daily operations. Priorities range from 1 to 4 and higher the number the longer time the system can be safely left unchecked

4. Last Checkup

Date of the previous checkup

5. Previous checkup by

Initials of the previous person who handled checkup

6. Current version

Current version of system. This will be updated during the checkup

7. Until next checkup

Calculates days until next checkup by comparing current date to previous checkup date. System priority factors in the equation by calculating 30 days for 1st priority systems and additional 30 days per category. 2nd priority has checkup dates every 60 days and 3rd every 90 days.

8. System Documents ID

Unique identifier for the system that matches the system document located in the intranet.

6.4 Future prospects

There have been multiple ideas on how to improve the year clock in the future:

- SharePoint implementation would provide the client with option to have email reminders on upcoming checkups
- Automated version checking would help check quickly whether systems are in need of an update
- Charts could be provided with more visibility.

7 System documentation template

7.1 Overview and customer requirements

Client does have so data regarding the systems they have in installed. The more prominent issue is that the documentation is misplaced or ill named for any employee to find.

7.2 Deliverables

Single multipurpose template in which customer will store all relevant information regarding the system.

7.3 Results

Client was provided with the document template that could govern at least the following topics:

- Systems name
- Description
- Power user
- Support contact
- Last checkup date
- Last checkup by
- Year clock priority
- Version history
- Troubleshooting
- Deployment documentation

7.4 Future prospects

Client is tasked with keeping the documentations up to date.

System documentation

Systems name Example system name	
Description Example of system purpose	
Power user Paul Power +3581234567	**Support contact** Saul Support +3581234567 Saul@vendor.com
Last checkup date 2.7.2015	
Last checkup by XXXXX	
Year clock priority 2	
Version history	

1.0	2.6.2010
1.5	2.7.2015

8 IP list

8.1 Overview and customer requirements

Customer already has consolidated all their IP addresses and system locations to a single location which provides clear insight into on which servers respective systems are.

8.2 Deliverables

IP list is in great shape considering overall status of documentations. Therefore, IP list will not be updated as a part of this project.

8.3 Results

IP list will be used in conjunction with system documentation template and year clock in order to keep information clearly consolidated.

8.4 Future prospects

Client should appoint an employee in charge of keeping the IP list up to date.

9 System document usage

System documentation itself doesn't provide anything unless they are used as a part of a process. In this segment I will go through the intended process of system checkups and how the aforementioned documents will support it.

1. **Routinely check year clock**

Year clock is intended to be checked often in order to prevent pending checkups from accumulating. When checkup date has already passed customers main user of this document should give a task of checking the system to appropriate employee.

2. **Checkup steps**

Each systems individual checkup steps are documented in the systems individual *system document*. This document can be found from the intranet by using Document ID from the *year clock* as a search parameter.

Actual steps will vary between systems as they vary greatly. If no steps have been documented employee should follow the default steps documented in the *system documentation template*:

1. *Check that system document is up to date (Enter documents ID here)*
2. *Check that IP list document is up to date (Enter documents ID here)*
3. *Check that Year clock document is up to date (Enter documents ID here)*
4. *Check whether there is update for system*
    a. *Determine whether system update is necessary*
    b. *If system update is necessary. Schedule the update and carry it out. Then version number on IP list, system document and year clock*
5. *Maintenance steps*

10 System deployment

Client requires clearer process for deploying new systems as currently there is no documented process whatsoever.
System deployment document is meant as a checklist that should provide client with clearer indication on steps that should be completed in order to deploy systems effectively and safely.

10.1 Overview and customer requirements

List items that are listed on system deployment document

10.2 Deliverables

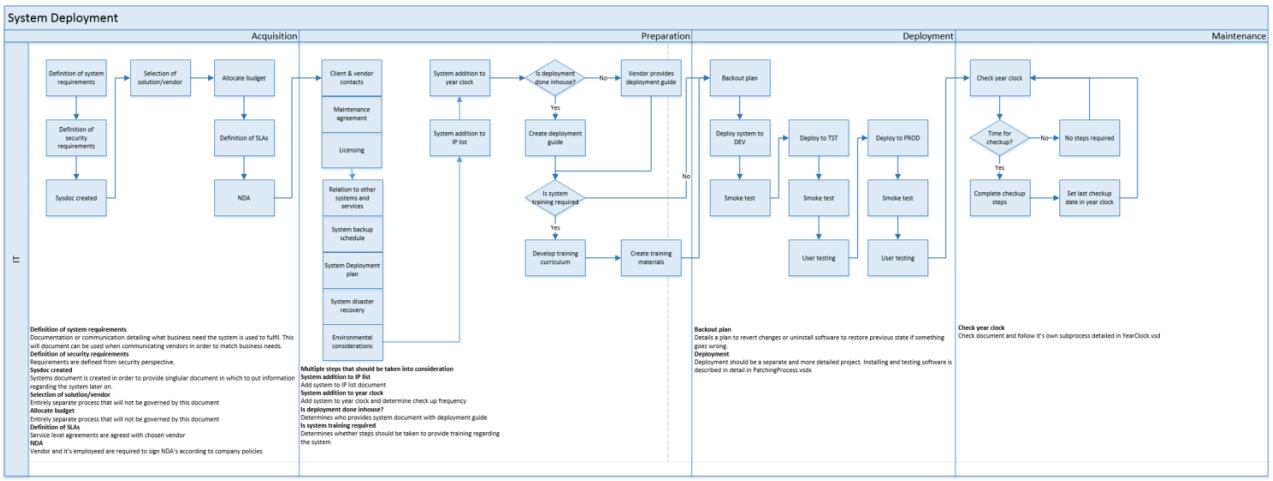
Visio of the system deployment process was created.

10.3 Results

Resulting process contains one swim lane name IT since the tasks cannot be easily spread between different roles.
There are four columns:

- Acquisition
- Preparation
- Deployment
- Maintenance

Acquisition mainly consists of organizational steps that define what is being purchased and from whom. Also most monetary issues should be contained within the acquisition column.
Preparation has client's organization prepare for the actual installation as well as prepare to add it as a part of their existing infrastructure.
Deployment contains all installation steps that will be included in client's different environments.
Maintenance is an endless cycle that contains regularly scheduled checkup tasks.



10.4 Future prospects

Final product is in raw state and client is recommended to change it in order to make it more suitable to their processes and needs.

When discussing the usage of system deployment with Tessa Viitanen there came up multiple ways to improve the process with SharePoint. These improvements would mostly be automation of steps and email notifications as the single largest issue remains within internal communication. SharePoint implementation is not within the scope of this thesis and therefore time wasn't spent to figure it out

11 Patching process

Organization has no defined way of handling patching processes and this process chart aims to provide organization with clear and structured way in which they can approach the patching as a repeatable process.

11.1 Overview and customer requirements

Part of the year clocks purpose is to provide clients organization with schedule for software maintenance. It was agreed with client's representative that having just recurring checkups is not enough and there should be a clear process in patching as well.

11.2 Deliverables

Visio chart that details patching process with the necessary steps needed to ensure safe and efficient patching. Descriptions of each of the steps will be also included. Descriptions may be omitted from the thesis.

11.3 Chart usage

Patching process chart is divided in to three swim lanes which each represent a different role in the process. Single employee may have multiple roles, but in order to keep the process clear as possible all of the tasks on a role should be assigned to single employee.

Roles are:

- Manager
- Installer
- Tester

Chart is also divided into four columns which represent different phases in the patching process:

- Preparation
- Development
- Testing
- Production

Roles

Manager role is generally in charge of internal communication and organizing the patching.

Installer handles the installation and is responsible for checking that the process can be reverted in case something goes wrong.

Tester completes the tests that are appropriate for the software in question. Testing can vary wildly between software as it may be enough to complete simple smoke tests, or in case of more crucial software there should be clearly defined steps to follow.

Phases

Preparation phase includes all the steps that are completed before the actual installation begins. This includes most of the organizational side's tasks and preparation for testing.

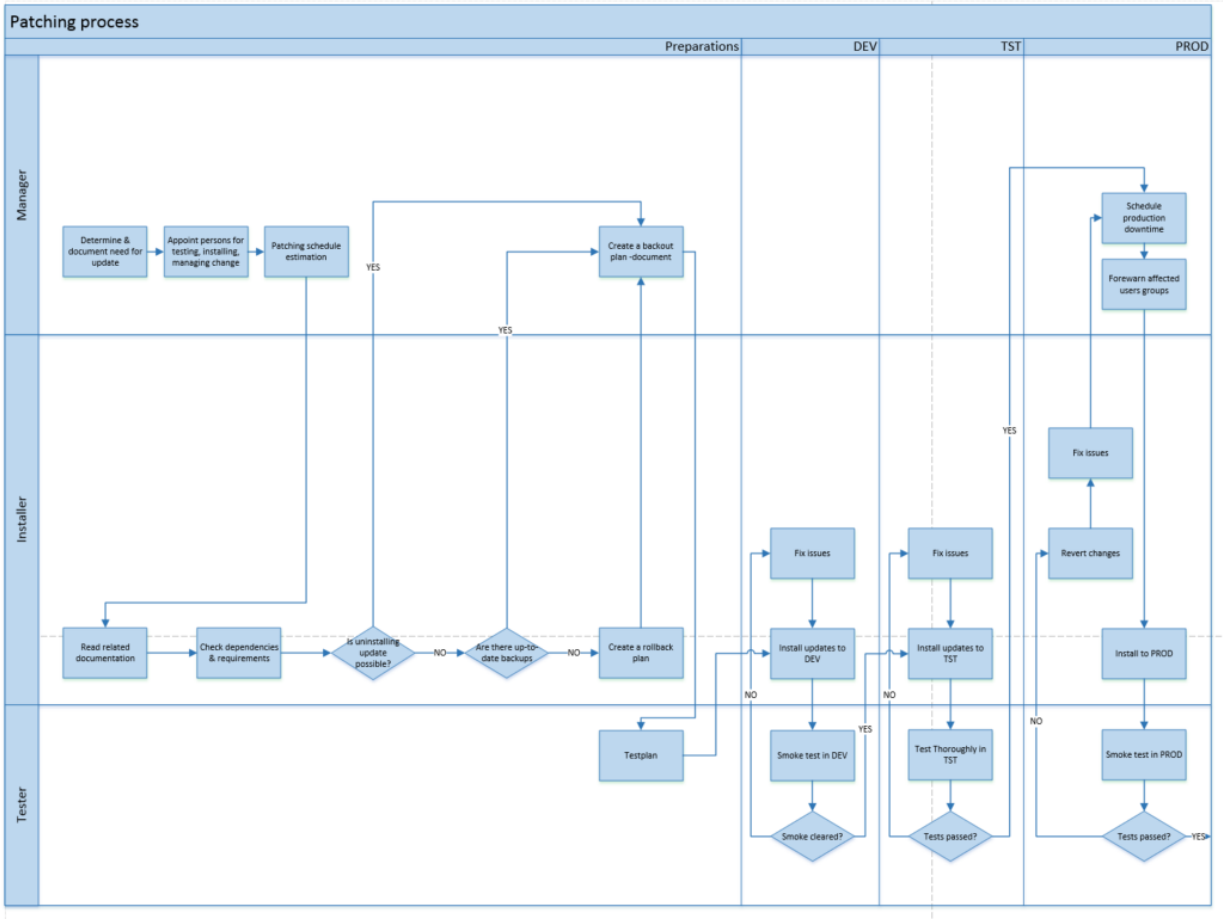
Development is the environment where patch will be first installed and tested for flaws. In case the patch breaks the system for any reason it can be attempted to fix in development before rolling back the changes.

Test is very similar to development, but it attempts to mimic the production environment as much as possible and quick fixes that maybe viable in development shouldn't be used here.

Production installation can be done when the patch is tested thoroughly in test environment. All users possibly affected by the installation of patch should be notified in advance by patching manager.

11.4 Results

Resulting chart is kept intentionally on very broad level in order for it to be applicable in most patching events. 100% applicability is impossible to achieve, so customer is instructed to use it to give general structure to patching.



11.5 Future prospects

Customer is encouraged to maintain and improve the chart to suit their processes.

12 User account processes

12.1 Request fulfillment process

Describes the handling of account elevation. Final process include vision as a reference along with elevation request form with guidelines how it should be filled.

Overview and customer requirements

Readiness assessment and meeting with customer representatives in charge of processes handling account showed that there is demand, not only from customers ITS perspective but also from security auditors that have previously asked for documentation regarding account rights elevation.

Deliverables

Deliverables include:

- Visio –file that provides the clear process that by following customer is enabled to control and most importantly authorize the access elevations. Auditors have also demanded a sort of paper trail.
- Account elevation –form
- Guidelines that will provide customer with knowledge to use the process to its full potential

Results

Customer accepted the deliverables and will consider implementing a request fulfillment process.

12.2 User account lifecycle

Describes the process that is mean to govern whole lifecycle of user account. Will include final process vision as a reference along with existing checklist.

Overview and customer requirements

Every user account has a lifecycle and its management should be clearly defined. By managing the lifecycle of user accounts client can easily:

1. Know who has access to what
2. Grant and revoke access to data based on process
3. Reduce manual work of going through user access information

Deliverables

Customer already has excel file that is used to determine what access and steps should be completed based on the new employee's role in organization. Upon inspection this document was found out to be incomplete and out of date.

The document was incomplete but still in usage as the employee who has been taking care of arriving employees accounts already knew all the required steps. I recommended that the organization should keep the document up to date and maintain it in order to ease transition if someone else is to take this role later on.

Results

Customer acknowledged the reliance on silent knowledge but didn’t prioritize this process as crucial.

13 Infrastructure mapping

Infrastructure mapping is requested by client in order to easily provide a glimpse into their existing infrastructure in an organized manner. Currently the infrastructure is only known by two key personnel who explain it by drawing on whiteboard when asked about it.

13.1 Overview and customer requirements

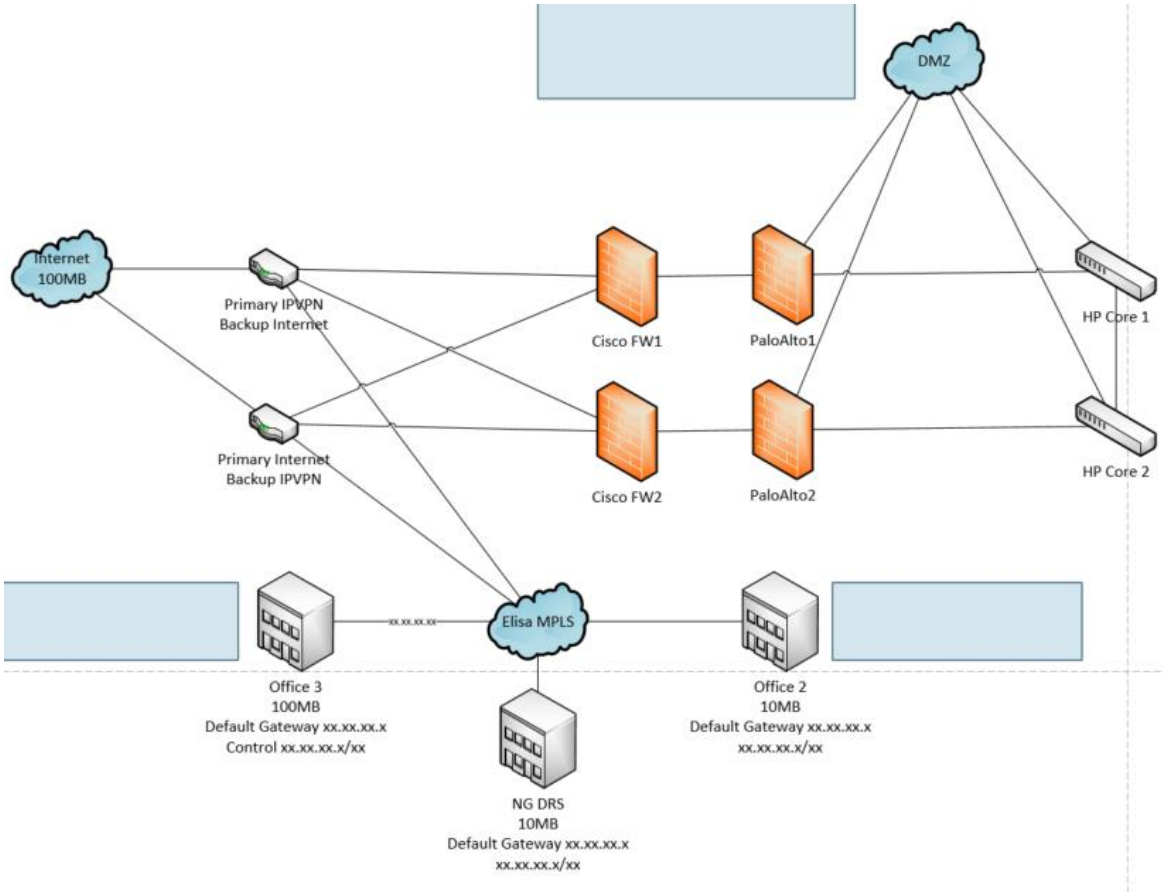
Customer requires simple mapping of current infrastructure in order to easily demonstrate to auditors and new employees how their infrastructure works on very high level.

13.2 Deliverables

Infrastructure mapping will be produced in Microsoft Visio file using standard icons from its library. For the purpose of this thesis all actual content from the file must be removed.
As I do not have access to organizations infrastructure, I am unable to check these details for myself and I am entirely relying on IT specialist who told me how their infrastructure works.

13.3 Results

Final document gives a very broad high level explanation in to the network connections between organizations offices and their firewalls. IP addresses and other identifying information has been removed from the picture.



As I did not personally have visibility to infrastructure and two IT specialists who customer sent me as contact personnel regarding this document disagreed on certain matters I cannot make entirely sure that the information is accurate.

13.4 Future prospects

Customer can easily keep the produced document up-to-date and they should strive to do so. There are multiple ways to expand infrastructure mapping by making it more detailed, but client was advised to make a separate document in case the scope and amount of detail would vary greatly. Customer expressed the need for further infrastructure documentation on more detailed level, but it wasn’t taken into the scope of the project.

14 Summary

After the project finished I have thought out few ways how to improve similar case in the future

14.1 Interaction with client

Due to having very restricted visibility into client infrastructure I would improve the following:

1. Work more at client's office
2. Work more with client's representatives
3. increase the knowledge transfer infrastructure
4. Increase the knowledge transfer of business logic

All of the listed items point to single important point. That there can never be too much knowledge of client, it is incredibly difficulty to create a process for a company which's business logic you do not fully grasp.

14.2 Adaptation of ITIL methodology

This project was more as about proving that service design can product meaningful contributions, but as previously explained didn't truly follow the heavy handed ITIL way of creating standardized processes. In order to truly embrace ITIL customer organization would have to align their processes on a larger ITIL scale before focusing on smaller day to day execution.

I can understand why customer would be reluctant to do so as implementing ITIL methodology can be long and expensive project. Especially considering their size, it doesn't really seem likely that the customer would want to go for a larger ITIL implementation.

14.3 Project management

In order to better deliver on the customers' expectations I would prefer to have a well-defined project plan in advance. In this projects case the customer had his expectations that were communicated to me as we defined project plan. This took place after the readiness assessment that took place immediately at the start.

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