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Touchpoints

Improving Committee Participant's Visitor Experience in Organisation Y

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Manuel Langer
Degree Programme in
Service Innovation and Design
Master's Thesis
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Laurea University of Applied Sciences **Abstract**
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The purpose of this thesis is to support case organisation Y in creating an excellent meeting experience in the new environment. The research context is a conference environment that is used by several committees which meet regularly over the year. Out of 14.000 visitors annually, over 60% are committee participants. With the move to new premises and a major impact on its biggest visitor group, organisation Y aims to use this move to improve the service provision and to create an excellent user journey in the new premises.

The objective of this thesis is to understand how user experience can be improved to increase the productivity of its core business. Research question 1 aims to take the user's view and establish all touchpoints of the journey, with research question 2 building on it and defining the journey for the service provider

The theoretical framework starts with the analysis of how experiences are created and how they can be embedded in the services of organisation Y. With the understanding that experiences are created over interactions and time, the role of Facility Management in providing these interactions is defined. While Facility Management provides these services, service management and its methodology take the user far more into account when service quality is measured. While the physical environment can provide areas for various types of work, its social and virtual aspects are as important. Theories for the journey creation combine Facility Management, value co-creation and experience design. Service design, with its human-centred approach and methodology will support the practical application and creation of the journey.

For the process of the empirical work qualitative methods are used to find data. Site-observations and focus groups provide and create data for the design sprint. Together with the Stakeholder map to understand relations, the touchpoints for the users and service providers are defined. The final workshop was used to validate the journey and embed the journey in the framework.

The outcome of this thesis is a user journey with crucial touchpoints for the user and service provider. Organisation Y is able to align the realised journey with the expectations of the user to offer an excellent experience. The results show that centralised services, communication between teams, visitor badge and info screen to guide visitors and the use of available information in the system in use to eliminate touchpoints, can create the journey.

All aspects of the journey and results entail a change in the service provision and ways of working for stakeholders involved in the creation of the journey. For organisation Y, this means that change management for staff has to become a part of the implementation. Once the journey for committee participants is implemented, it seems fair to believe, that further journeys for processes and stakeholders will be created to improve efficiency and service quality.

Keywords: Facility Management, Service Management, User experience

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1 Introduction

Facility Management is an "organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business" (ISO 41001:2018). This is achieved by strategic sourcing of the identified and required services via the correct channels and agreed service levels. Built environment is defined as "the human-made space in which people live, work, and recreate on a day-to-day basis" (Roof et. al. 2008, 24). In organisations, such as the case company in this thesis, Facility Management focuses on the space in which people work. Facility Management and its teams have often grown organically and established ways of working and its processes over time to deliver its services. To change, improve or break the status quo can be a venture that takes lots of energy and resources.

Facility services are often interlinked and depend on each other. Changing the source and channel of one service or process, can effect on the desired output for other processes or, in worst case, lower user satisfaction. While Facility Management aims to improve the quality of life of people, it needs to analyse and identify user's needs and business requirements to understand how it can do so. For Facility Management the perspective to improve the quality of life has a broad approach. It can reach from improvements in safety of the workplace and increased health and well-being or productivity of staff to more consistent and improved service quality levels or lower environmental footprint of an organisation.

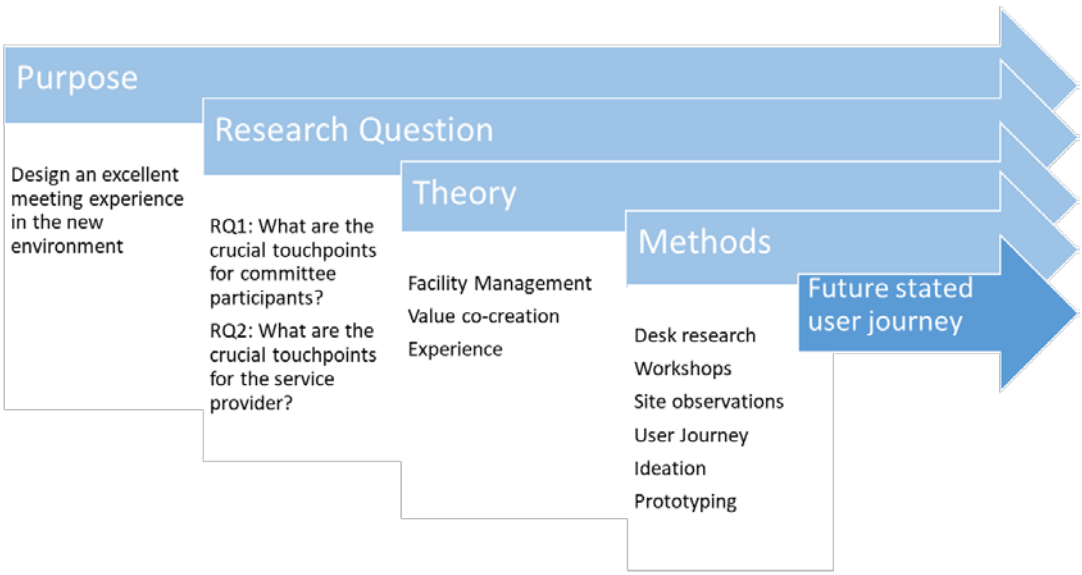

Figure 1 Research Purpose

This thesis, see figure 1, will study how Facility Management can improve the quality of life of the user of the building by creating an excellent user journey for the visitors of case organisation Y. For a holistic approach, the thesis will look into the areas of the physical, social and virtual environment. As the physical environment determines strongly the location, solutions and journey of services and visitors, this is a main aspect to research. Socially, people's "emphasis will be placed on satisfying individual needs, solving problems and creating value" (World Economic Forum 2019), and users of the building will potentially expect that services are designed accordingly and while visiting organisation Y seek the face to face communication to meet like-minded people to socialise, solve and create. According to the World Economic Forum (2015, 3) software will change our lives and will impact our well-being, environment, business and bring the world closer together. Hence, the virtual, or digital, aspect will become more and more essential in future. Technology will enhance people's "digital presence", allowing them to interact with objects and one another in new ways (World economic forum 2015, 5) supported by the internet of things bringing sensors to everywhere.

Possible solutions for the future stated user journey, see figure 1, will not be able to cover all aspects of experience creation and services provided in Facility Management, but hopes to provide sufficient input and thinking in the ways of working of the participating stakeholders to take the aspect of user experience and continuous improvement into consideration on process reviews and future projects.

Main focus of this thesis, see figure 1, lies on the upcoming change of the built environment of organisation Y. The service providers' approach is to copy and paste service provision and processes 1:1 from the current to the new environment. Unfortunately this approach would entail, that the reason why organisation Y has chosen to move, and chosen specifically these premises, would not be able to harvest the possible improvements on users, visitors, service providers and processes and provide the best possible and suitable experience.

The objective of this thesis is to understand how user experience can be improved to increase the productivity of its core business. Research question 1 aims to take the users view and establish all touchpoints of the journey, with research question 2 building on it and defining the journey for the service provider. For continuous use in organisation Y, the user journey will be used as a guideline for all further service delivery and provision. As case organisation Y will move to new premises, it is now the perfect moment in time to analyse the service provision and future needs and requirements and to understand touchpoints, user needs and improvement possibilities of processes. Theories for the journey creation, see also table 1, will draw upon Facility Management, value co-creation and experience design. Service design, with its human-centred approach and methodology will support the practical application and creation of the journey.

Facility management is often also referred to as Facilities Management. This has historical reasons. Broadly, Facility management has been used mainly in US, when FM came to Europe and UK, the term Facilities management has become more common. According to GlobalFM (2009) Facility management tends to refer more to the management of an office building and is the term that is used in this Thesis.

1.1 Thesis structure

Chapter 2 will explain the need for this thesis and the case organisation Y that is taken to apply the theoretical framework.

Chapter 3 sets the theoretical frame work and discussed the experience in a workplace environment and analyse how an experience is created. This will be done from three aspects. First aspect is Facility Management and its role in experience creation by through service provision. Second aspect is the background of co-value creation within the service-dominant logic methodology. Third theory covers user experience in the physical, social and virtual environment and concludes the theoretical framework in chapter 3.3.3.

Chapter 4 covers the practical application of this thesis based on the double diamond introduced by the Design Council and used as the framework for the application of the service design methodology. The first diamond includes the phases discover and define and describe the creation of the theoretical framework. In the second diamond, develop and deliver, the empirical study is executed.

Chapter 5 presents the results and reflects on the process and main results, methodology used, usability of the framework by the company for further projects and a personal reflection.

2 Research context

This chapter introduces case company Y and background information showing the significance and impact of this research on its visitors and staff.

2.1 Case Organisation Y

The case company, further referred to as organisation Y, is a large organisation operating Europe wide with its headquarter in Finland. Organisation Y will move into new premises by the end of the year 2019. This entails a change in the built environment, processes, workflows, locations, etc. In its current premises the organisation offer around 700 workstations for the staff working at its premises. In addition, a large conference centre offers the possibility to

host large meeting and conferences for its stakeholders. Of all over 14.000 visitors annually, over 60% are regular visitors.

In the current premises, the user journey of the users and meeting participants in the physical environment does not offer a self-guiding user journey or enables the user to move and navigate freely within the defined space. A high amount of physical barriers and the lack of a building guiding system, information screens or easy navigation make it challenging to enable a fluent user journey between reception, meeting room and other facilities, e.g. canteen. Additionally the organisation has very high security and access regulations in place that add further challenges to the creation of an excellent user experience.

For staff working in the office environment various workshops and consultancies took place to offer the best possible office layout and support the various ways of working in the organisation. Considering its stakeholders, there is a gap in the organisation fully understanding the user needs and conference participants in the new conference centre. So far, the analysis of various needs has happened with the various teams and this thesis aims to connect the knowledge, requirements and needs of the various touchpoints and create a journey by connecting them.

With its headquarter in Finland, it means that a significant part of the stakeholders have to take a flight and usually at least one Hotel night to participate in meetings and conferences. All services to host an event at its premises are provided by the corporate service unit. This research will help the organisation to align its service offerings of the corporate service unit with their user needs and to get a better understanding of crucial touchpoints within the premises.

With a conference duration of up to two weeks, it is crucial for the success and impact on society of the organisation to establish space that enables efficient and effective decision making and outcome of the events. This can be done by creating a user experience, that enables users to fully focus on the content of the event and participate effectively.

Qualitative and quantitative research methods were used in the empirical study process of this thesis. Qualitative methods were applied to find data and quantitative methods were used to support the findings. For the empirical process, following methods were applied. Desk research was used to understand what theoretical framework is most suitable for the theoretical framework and preparatory research. According to Stickdorn et al. (2018, 117-118) desk research can be preparatory or secondary. Preparatory research is used get familiar with the environment of the research topic and to support the process of finding and defining correct

questions, in this case the research questions. Desk research of existing data, so called secondary research, is used to review data such as a previous projects of the company and available data from the various teams, was used to gain a profound understanding of the research environment.

Non participatory site observations of the current state journey are applied to "level out researcher biases … and to reveal differences between what people say and at they actually do" (Stickdorn et al. 2018. 123). Further, system mapping and future stated journey mapping are applied. In the service design methodology, these methods support the visualisation and analysis of data. Journey mapping is used to create the future stated journey from the view point of the committee participant. Focus groups are organised in workshops "to understand the perceptions, opinions, ideas, or attitudes toward a given topic" (This is service design doing, 2019).

2.2 Limitations

Within the organisation the

- The built environment, available space types and set-up of the future premises pre determine the user journey inside the building to quite an extended
- Processes and regulations regarding reimbursement,
- Access rules to the site add further steps for the participant but can't be circumvented.
- IT systems undergo heavy procedures when procured to assure data protection and IT safety. As there are many different IT systems, alignment and automatization of all is not always possible.

3 Experience in workplace environment

The theoretical framework is built up by four elements that are listed in table 1.

Theory	Sources	Key Words
Experience	Battarbee. Co-experience – understanding user experience in social interaction. Dewey. Experience and Education.	Experience creation
Facility Management	EN-15221 Facility Management Vischer, J. C. Towards a user-centred theory of the built environment.	Facility Management Framework
Value Co-creation	Lusch, R., Vargo, S. Service-Dominant Logic. Premises, Perspectives, Possibilities.	Co-creation, Value proposition
Experience design	Stickdorn, M., Hormess, M., Lawrence, A., & Schneider, J. 2018. This is service design doing: Applying service design thinking in the real world: A practitioner's handbook.	Interactions, user journey, Service design

Table 1 Framework theories

Organisation Y aims to offer its committee participants the best experience possible. With many committees having a duration of several days, the premises of the organisation Y can become a workplace for the committee participants. A workplace is a place where work is performed and must cater for a variety of needs. In addition to being a conference participant with certain expectations, this adds the element of workplace requirements as an additional layer that will influence on the experience. A workplace is a "system of physical artefacts, cultural symbolic, human behaviour and spatial dynamics" (Airo et al. 2014, 41). Following this definition, Airo et al. (2014, 28) conclude that workplace management aims to manage and align the physical (spatial) and the social (human) environment and issues. According to Omar and Heywood (2014, 71), workplace management includes tasks such as the building fit-out in line with business needs, the management of energy consumption, air quality, lighting and health and safety.

This brings workplace management very close to Facility Management (FM). Facility Management is defined in the EN15221 as an integrated process to support and improve the effectiveness of the primary activities of an organization" (CEN 2006, 3). FM does so by managing and delivering the services required for the environment needed by the business to achieve its objectives. In the workplace environment, Tay and Ooi (2001, 359) argue that FM focuses on the allocation, content, quality, quantity, location and type of the workplace. But leaves out the social aspect that is taken into account by workplace management. The role and the focus of FM has changed drastically over the last decades, following the changing needs requirements and expectations of the industries and employees.

In future, the role of Facility Management and Workplace Management will become more and more important for a business to deliver positive workplace experiences and support the users of a workplace in the best possible way. As such, these two disciplines have to work together

with a strong alignment and focus on the user experience. According to Batterbee (2004, 47), experience cannot be evaluated static and categorised but rather focused on the interaction. Mäenpää (2019) writes, that holistic thinking, human-centred design-driven, co-creation and a match of skills and competences and measuring of KPI's lead to a meaningful employee experience. These points are also viable when it comes to the creation of experience for the committee participants. First, it is essential to understand how experience is created.

Based on Dewey's definition, continuity and interaction are the "longitudinal and lateral aspects of experience" (Dewey 1953, 42) and can't be separated from each other. Interaction is an exchange or contact with anything, e.g. physical objects or human encounters. Continuity refers to continuation over time. According to Dewey (1953, 43), the principle of continuity determines also, that people take something from one situation to the next and move from one interaction to the next. We build up expectations for the next encounters and interactions. Learnings from previous encounters and interaction serve as a reference point for current and future situations in similar contexts. So when users interact with the physical and social environment over time, they experience it. Experience a user has in an environment needs to be considered along these interactions and timeline, see figure 2.

Figure 2 Gaining experience

In the context of a workplace, user experience includes "all of the end-user's interaction with an organisation, its services, its products and its facilities (Alexander 2006, p. 269). Based on Alexander's view the user experience is hence created also outside the built environment and in virtual form, as products and services are not necessarily bound to the physical workplace.

To understand what makes an experience, we will see the definition of experience in a broader concept. In addition to Dewey (1953, 42) stating that interaction and continuity create experience and expectations, see figure 2, we can consider further aspects when the goal is to provide the best user experience. The user of the building is an active participant in creating the experience and, according to Vischer (2008, 235), interacts with the environment continuously. Battarbee K. & Koskinen define that "user experience is subjective and holistic. It has utilitarian and emotional aspects" (2005, 6) and stress that experience happens constantly between the user and its environment. More detailed, user experience can be either:

- a subconscious experience, meaning it is a fluent experience that happens automatically
- a cognitive experience, meaning it takes effort and focus.

So essentially, the more subconscious elements the various interactions contain, the less energy and focus is required along the journey, causing also less stress. Cockburn, Quinn and Gutwin (2017, 89) write, that subjective experience has the biggest impact on a person's desire to use or interact with a system. Further Cockburn et al. (2017, 89) state that while the experience can be subconscious or cognitive, the memory of an experience (recollected) can vary from experience at the moment it happened (instantaneous).

Creating the best possible experience for the user of a building is a challenge that requires careful examination of each interaction, see figure 3, of the user within the physical, virtual and social environment. The correct level of fit and comfort is to be provided on a physical, functional and psychological level. A sufficient degree of usability needs to be provided within the correct context. According to Battarbee & Koskinen (2005, 5), interactions, see chapter 3.3.2, help to provide functional products to users but lacks the aspect of experience to determine if other solutions could provide better experiences, see figure 3. In this Thesis, this statement will be taken with the aspect, that usability is not a one off status, but requires constant and iterative testing and user experience observation.

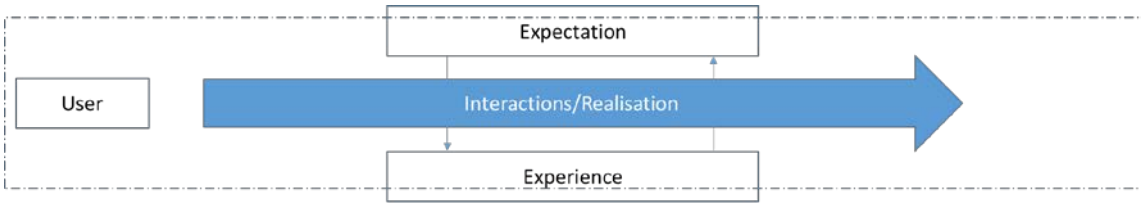

Figure 3 User interaction

Mobile workers connecting to work an colleagues via a virtual environment need to be taken into account. According to SIBIS (2003, 38), a worker is considered mobile when working more than 10 hours outside the workplace. With people spending several days at meetings at organisation Y, the environment becomes their workplace. Vischer (2008, 235) describes the user as an active participant in the creation of the experience by interacting continuously with the environment in various and changing ways. So user experience has a physical, virtual and a social aspect.

With new ways of working and changing work profiles and possibilities, the worker nowadays has developed mobility and freedom. Advancing technology enables to work from anywhere at any time and creates a virtual workplace. Vischer (2008, 236) and Hyrkkänen et al. (2012) set up a framework to analyse user experience with the three stages of physical, functional and

psychological comfort and fit, see figure 8. Based on Hyrkkänen et al. (2012), the threshold to work in a virtual environment is to have at fulfilment on the functional and physical comfort and fit.

3.1 Facility Management and its role in experience creation

The following will lay out how the evolution of Facility Management, existing Framework terminology and methodology, how FM takes the user of a building into account, how quality is created and how FM supports and positively impacts on the creation of the user experience.

Price (2002, 56) states that there is a gap between the strategic business and the operational facility management. In Facility Management (FM) many understand it as the provision of commodities purchased on price. The Facility Management provider that wants to evolve from this understanding and to be able to close the gap, "needs to find the business language, and evidence, to describe what they do" (price 2002, 66). Several attempts have been taken to create either a definition of what Facilities Management is defined as. The Industry seems to have gone through various definitions what FM stands for and struggles to provide a suitable framework. Various definitions of FM have evolved over time.

According to Nor, Mohammed, & Alias (2014), FM has become a recognised profession and discipline in various industries in the 1980s. The foundation of the Facility Management Organisation (FMA) in 1970, the International Facilities Management Association (IFMA) in 1980 or the European FM Network (EuroFM) in 1987 show that various professional organisations came out of the need to manage more than only the physical building and align the processes around them. Over time many approaches to define FM were taken and Nor et. al (2014) state that it is crucial to understand how FM has development over time and stress the evolvement from the definitions of FM from Becker in 1990 and Then in 1999. Tay and Ooi (2001, 358) state that the understanding of FM within the industry itself is far from a harmonious approach and ability to provide guidance on its objectives and its scope.

Source	FM Definition
Becker (1990)	FM is responsible for the building, systems, equipment and furniture.
Then (1999)	FM is concerned with the delivery of the enabling workplace environment – the optimum functional space that supports the business processes and human resources.

IFMA (2003)	Facility management (FM) is a profession that encompasses multiple disciplines to ensure functionality, comfort, safety and efficiency of the built environment by integrating people, place, process and technology.
EN 15221-1:2006	FM is an integrated process to support and improve the effectiveness of the primary activities of an organization by the management and delivery of agreed support services for the appropriate environment that is needed to achieve its changing objectives.
ISO 41011:2017	FM is the organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business.

Table 2 Definitions of Facility Management

While in Becker's definition, see Table 2, the focus lies in the building and furniture, the definition of Then has evolved into a broader and deeper approach taking also the human factor and business needs into account. In 2003, IFMA published its updated definition of FM and stated that FM is delivered via integration. With the growing importance and complexity of Facilities Management for support on the primary activities of a company, the EN 15221 was published and approved by the European Committee for Standardization (CEN) in 2011. It offers a framework for Facility Management. The legal online register Pegasus points out that the ISO 41011, published in 2017 does not replace the EN 15221.

Coenen and Felten (2014, 554) argue that albeit EN 15221-1:2006, see table 2, defines that FM achieves its set goals by the "management and delivery of agreed services", there is still a gap in the management understanding to properly implement and account for the service characteristics of FM. The point being, that in Facilities Management definitions are essential, as they set the basics and common language to create Facilities Management already on the basic level. Findings of Ashworth, Strup & Somorova (2015) confirm the need for a common language in FM and its support to create a unique understanding of FM on the service provider and client side. In their study, the benefits of using the EN 15221 reach from increased benefits in communication between stakeholders, explaining FM to the top management, systemisation of terminology to improving the transparency and quality of the services.

According to Atkin & Bildsten (2017, 117) research has been carried out in a broad variety of fields related to FM. In relation to Facility Management, research stretches from improvement on operational level to strategic concerns and the role of artificial intelligence. As listed above, it is essential for experience to measure and establish KPI's. Regarding the identification of improvements and the need for KPI's, it is albeit crucial to keep in mind that KPI's tend to measure with data that lies in the past. While FM provides the space and functionalities for the users, focus must be "on drivers for space into the future and the facilities/assets that will have to be provided" (Atkin et. al 2017, 118). To drive the user experience and understand what Facility Management needs to provide, this Thesis will look into the framework for FM provided by the EN15221 and how it can take the user requirements, needs and expectations into account.

3.1.1 Service Management in Facility Management

Based on Rothe's findings, a relocation process of a company is "anything but a straight forward process" (Rothe 2015, 2-3) as the process is build u of multiple decisions, actors, goals and uncertainty. According to Rothe (2015, 13) for companies the removal usually entails costs that can be linked either directly or indirectly. Direct costs the end of lease, removal or fit-out costs. Indirect costs can be related to social implications, e.g. stress, lack of belonging, changing organisational dynamics and ways of working. Her studies show that there is a gap in involving staff when it comes to Facility Management. The user is one aspect in Facility Management when it comes to relocation, but not the determined one. According to Morgan et al. (2008, 35-37) a change in location can drive changes on an organisational level such as positive changes in employee behaviour, enhanced employee satisfaction and productivity, Better decision making, collaboration and cross-selling or improved retention and recruitment. To map where the user is located in the Facility Management framework established by EN15221, see figure 4, we will examine the FM model provided by it.

Based on the definition of EN 15221, see table 2, Facility Management "support(s) and improve(s) the effectiveness of the primary activities of an organization. This is achieved by the "the management and delivery of agreed support services for the appropriate environment". Further, the norm also defines that services in the field of Facility Management relate to space and infrastructure and people and organisation, called the facility services and can be delivered by an internal or external service provider. These services, defined as a "time perishable, intangible experience performed for a customer acting as co-producer" (CEN 2011, 8) need to be managed and bring service management into the Facility Management.

While in general customer could refer to the meeting participant, the EN 15221-1 distinguishes between three categories on the organisational side, see figure 4. To better divide the various needs the various stakeholders are laid out as follow in accordance with EN 15221-

1. The first category in the organisation is called *client* and refers to the party within the organisation procuring the facility service in a Facility Management agreement. *Customers* refer to as the group ordering facility services under the agreement. *End-users* summarises the group receiving the services. On the provider side stands the provider of the facility services, as shown, this can be internal or external.

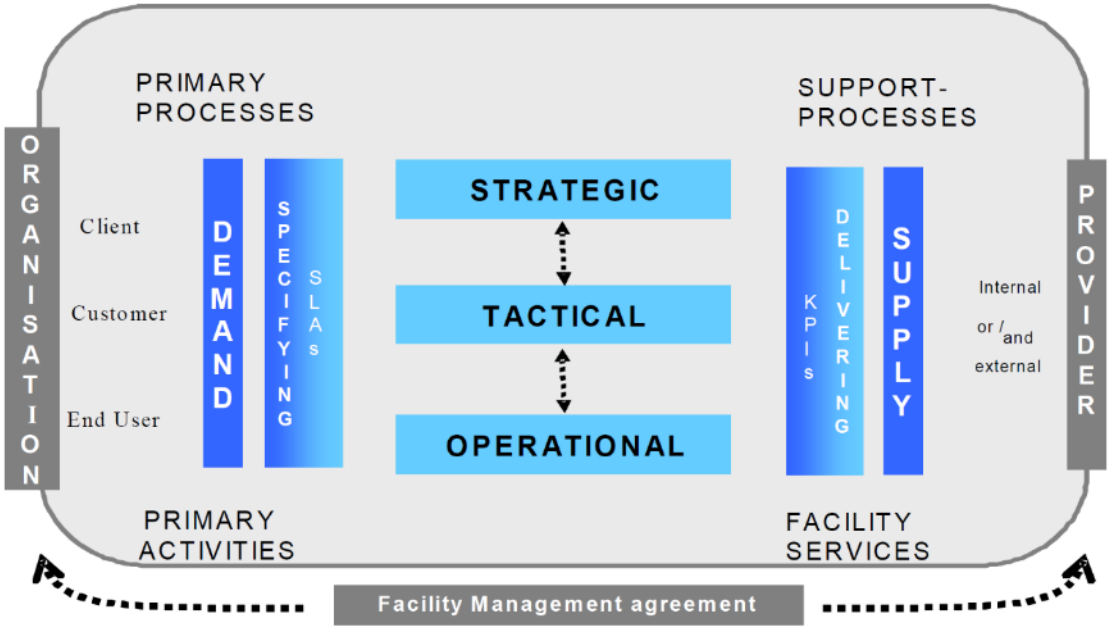

Figure 4 FM Model based on EN 15221-1

In this thesis, the terms will be applied as follows. In case organisation Y, the corporate service unit provides many services related to meeting organisation directly. With the aim to understand the user journey, a distinction between provider and client is not necessary. Same for the customer and end-user.

- Client and service provider = Facility service provider.
- Customer and end-user = users.

The FM model by EN 15221-1 sees organisation and its primary processes on the demanding side and the service provider and its supporting processes on the supplying side, see figure 4. Facility Management is embedded on three levels, Strategic, tactical and operational. To understand where Facility Management comes in touch with the users of the building, it is essential to understand the various levels, see figure 4, Facility Management can operate on. Trifonova et al. (2015, 3) argue that Facility services are based on the user needs and driven by the purpose to support the primary activities. To enable coordination and service provision

on the operational level, FM aims to have integrated management on the strategic and tactical level. Facility service that create and form the user journey are coordinated and provided on the operational level.

The quality of the services delivered is fundamental for the client organisation due to their direct impact on the primary activities. EN 15221-3 (CEN 2011, 12) stresses that the facility service provider needs the knowledge, processes and tools to define the required level of quality and have a system in place that enables to deliver within defined processes. Following chapter will lay out the aspect of quality in facility services.

3.1.2 Service quality in FM

EN 15221-3 (CEN 2011, 12) defines quality as the "degree to which a set of inherent characteristics fulfils requirements". Elements that influence the quality of a FM service, see figure 5, show the soft characteristics, representing customer needs, and hard characteristics representing the facility service provider. I will argue, that this overview gives a good framework for the FM service provider, but still leaves the user and the user experience too far out of the picture and does not take perceived quality into account.

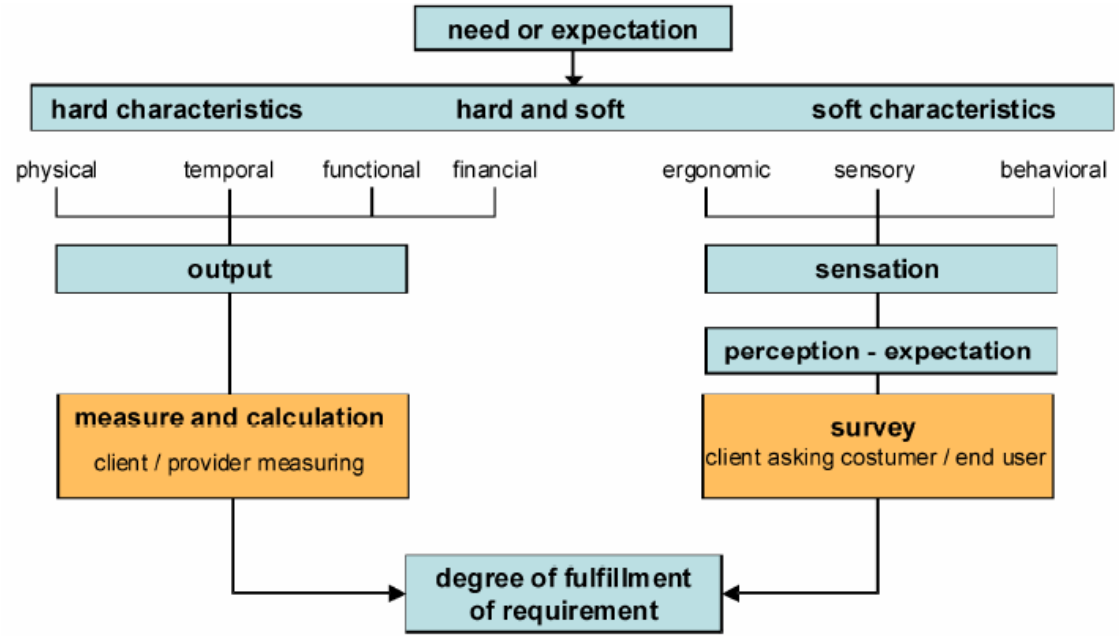

Figure 5 Elements and influences to quality in Facility Management (CEN 2011, p.16)

Measurement of the quality of a FM service is divided in to hard and soft characteristics, see figure 5. Each part has a set of characteristics that can be applied to measure provided services. Hard characteristics are used to objectively measure the fulfilment by the service provider on a functional, technical and financial level. Soft characteristics measure the subjective fulfilment of requirements of the customers.

Further, EN 15221-3 adds that this measurement methodology also requires measurement of the expected and the perceived value. Under the expected value is the gap between the defined and expected requirements. In case needs are only specified partly or expectations are not written explicitly, it can cause a gap in understanding what is needed. It can be challenging for organisations to define their needs in accurate words and terminology. Perceived value defines the gap between delivered and defined service level. Issues in translation, uncommon technical language or writing instructions not in line with agreed service levels can cause a gap.

This approach is very much to match to close the gap between the Facility Service provider and the parties executing the services. The quality from the user perspective, or in this case the user is the consumer of the service, is only measured from ergonomic, sensory and behavioural points. Functionality or temporal aspects are not taken into account for the service delivery. Missing from this approach to measure quality is the expected and experienced quality. Case organisation Y's primary process is, among others, the organisation of committee meetings. So, it is essential for the visitor experience that needs and requirements on services are strongly driven by the users on all aspects. Since EN 15221 defines output deliver under Facility Management as facility services, a look into service management methodology can give additional insights.

Service management can be defined as "a total organizational approach that makes quality of service, as perceived by the customer, the number one driving force for the operations of the business" (Alexander 1988, 20). Grönroos (1990, 6) points out that this is a rather compact definition and lists that service management is driven by an overall management perspective, customer driven, a holistic perspective throughout the organisation, quality management is an integral part and internal development and commitment of the company to goals and its strategy.

In comparison to the quality characteristics brought forward by the EN 15221, see figure 5, the understanding of quality takes the importance of perception and expectations vs experience as the starting point to understand total perceived quality in services, see figure 6.

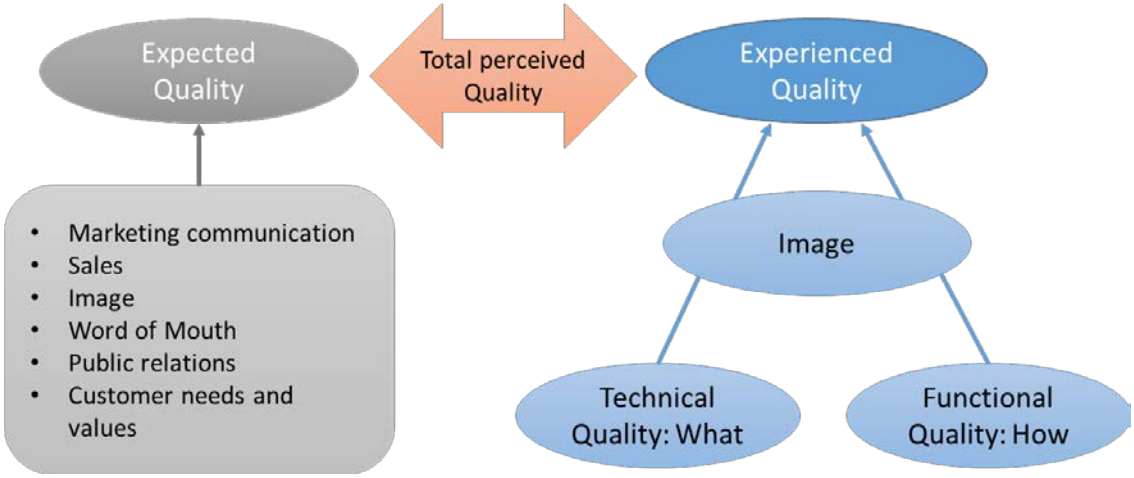

Figure 6 Total perceived Quality, adapted (Grönroos 2007, 77)

The total perceived quality is the gap between the expected quality and the experience quality. The expected quality. This approach states, differently to EN 15221, that the technical and functional requirements do not have such a dominant role here. A good perceived quality is achieved when the "experience quality meets the expectations of the customer; that is, the expected quality" (Grönroos 2007, 76). Expected quality by costumers, or in this thesis, the user, is build up by, e.g. the image of a company, marketing or the users' needs and values.

To measure service quality, the user's perception of quality must be assessed and also held against customer satisfaction. It can be that with the level of perceived quality is good, but customer satisfaction can be satisfactory or low. These two aspects do not necessarily go hand in hand. Grönroos (2007, 90) lists seven criteria that can be used as guidelines 1) professionalism and skills, 2) attitudes and behaviour, 3) accessibility and flexibility, 4) reliability and trustworthiness, 5) service recovery, 6) servicescape, 7) reputation and credibility.

Following these guidelines does of course not automatically entail successful services and according to Grönroos (2007, 467) the five barriers to achieve results are organisational, systems and regulations-related, management-related, strategy-related or decision-making related. Following this, the implementation of a user journey that is defined by user requirements can entail changes that can face all five barriers. These barriers are often met when it comes to change.

Customer satisfaction influences user behaviour and is based on loyalty and commitment. Grönroos (2007, 94-96) points out that factors such as legal, economic or time can lock the customer into a relationship, others have a positive or strengthening effect, such as ideology, social or knowledge-related aspects. Comparing the approach of EN 15221 and Grönroos, it

becomes evident, that a service provider in Facility Management can benefit from the implementation of a service management ideology. It takes the quality perceived by users more into the centre and gives it a lot of weight and input on the technical and functional requirements of a service.

3.2 Value Co-Creation

With the understanding that Facility Management provides services, this thesis will pick up in the following theories of the service-dominant logic established by Vargo and Lusch. The premises established under this logic help to get a better understanding of services in itself, actors, resource integrators, collaboration and ecosystems.

A service-dominant mind-set helps us to determine the way we see the world. The service-dominant logic evolved from the goods-dominant logic. Lusch and Vargo (2014, 5) describe the goods-dominant logic as focus on the value created by the exchange, goods and companies. This entails that goods are the centre point and main part in this logic. Companies are focused on the provision of goods and are the provider and producer. Value is transferred through a produced good. Lastly, the economic exchange describes the understanding of what a good is worth in an exchange or transaction. Contradicting this, Edvardsson, Tronvoll & Gruber (2011, 327) write that the service-dominant logic promotes that value is co-creation, assessed by its consumer in context and the outcome of interaction and activation of resources.

Axiom 1	Axiom 2	Axiom 3	Axiom 4
• Service is the fundamental basis of exchange.	• The customer is always a co-creator of value.	• All economic and social actors are resource integrators.	• Value is always uniquely and phenomenologically determined by the beneficiary.

Table 3 Service-dominant logic premises

Lusch and Vargo (2014, 15) established four main axioms, see table 3, that define the core of the service-dominant logic. The first axiom states service is the basis of exchange. Service is defined as "the application of resources linked to competence (knowledge and skills) for the benefit of an actor" (Lusch & Vargo 2014, 15). Under the second axiom it is stated that the customer is always a co-creator of value. This means that resources or resource integrators alone do not contain any value by itself and also shows the service focus where the value is produced in context and over time from the use of an offering. Axiom three defines that all actors, social or economic, integrate sources. These sources can be private, from the market or public. Through this approach many combination of interactions become possible. Some

may be direct, but also indirect through a network where other actors integrate their resources. Fourth axiom defines the determination of value is always done by the beneficiary uniquely and phenomenologically. Vargo & Lusch (2014, 16) state that here the experiential aspect of value is shown. So in the service-dominant logic, value is experienced and determined by each actor uniquely as the value proposition or resources integrated by the different actors are also perceived differently and in different context. This value proposition can be transferred directly through service or indirectly via the exchange of goods or money.

Based on Lusch & Vargo (2014, 90-95) Implications of this service-centred view are the a transition from value-in-exchange to value-in-use, learning and integrating focus and stakeholder unification. Transitioning to value-in-use brings the benefit of getting closer to the benefiting actor. Value-in-exchange focuses on the act of exchanging products. Use of the service is not playing a major role. Value-in-use shows that the co-creation of value is essential. On the other side value-in-exchange remains an important factor in the service-dominant logic as in modern society services are usually exchanged for money. Value-in-use focus can bring the advantage to the involved actors to learn from each other through feedback gained. Learning can be triggered, e.g. during the exchange process of a service where both actors can learn what value means for the other party. Both parties exchange offer and demand and want to match each other as closely as possible. Future transactions can so be improved from the gained knowledge. Actors unify within their resource network and create an ecosystem with the common aim to create a service.

Collaboration among the actors is essential for service creation. Actor to Actor collaboration is created though common practices, rules and legislations or social context. Through the establishment of these guidelines, actors are able to understand each other on mutual grounds. Further, Lusch and Vargo (2014, 162) argue that networks or an ecosystem in itself are self-contain, self-adjusting, share institutional logics and have a mutual value creation through service exchange.

For the purpose of this thesis the service-dominant logic brings important aspects to the theoretical framework. The four axioms, see table 3, help to gain a better understanding of its environment. It can be concluded, that facility services are integrated on the operational level. These services have to be provided in an efficient, standardised way but their value is always defined, determined and created by the customer. Skålén, Gummerus, Von Koskull, & Magnusson (2015, 154) debate that the service-dominant logic can hinder innovation in its services and suggest for future developments and service innovations to a) adapt and deliver existing services in a new way, b) bring in new resources to existing practices, c) bring new practices to existing resources or d) total renewal and bring in new resources and new practices.

Through these services, Facility Management enables the user experience. Hence, if Facilities Management wants to provide a great experience and to evolve from its current state to a user-centred Facilities Management, it needs to focus on the co-creation of the user experience and understand its value propositions. In addition, Facility Management benefits with an analysis of its ecosystem and alignment or unification of its other actors.

3.3 User experience

The increased demand to Facilities Management to provide more than a functioning physical environment, forces FM services providers to form their services around the serviceability, social aspects and user experience in buildings. Even though the built environment limits the service provider's influence on position of walls or other fixed physical boundaries, it offers the opportunity to influence and increase the serviceability and user experience within these boundaries. According to Vischer (2008, 232), the physical environment causes behaviour of the users in certain ways, see figure 7, and most often this behaviour is predictable. Research in this field aims to understand how space features and space influence behaviour. Nowadays, satisfaction is often used as an outcome measure for environmental determinism.

Figure 7 User-centred built environment theories (Vischer 2008, 232)

Social constructivism on the other side, see figure 7, is the theory that social context creates ones' reality and knowledge. The theory of social construction of reality was developed by Berger and Luckmann in the 1960s. This socially constructed reality "is available to the common sense of the ordinary members of society" (Berger et al. 1991, 33). Reality, or the world of everyday life, is created through ones actions and thought. Through this social construct also knowledge is created. According to Berger et al. (1991, 34), the social context creates the experience, whether it is a physical world or the subjective reality.

Following the combination of environmental determinism and social constructivism, a building creates space where both come together. Airo (2014, 44) argues, that social constructionism affects how space is experienced and used. Through language the world is objectified (Berger

et al. 1991, 84) and hence communication affects space use and its management. Facility management, responsible for the aspects of use and management, can through the communication of space influence positive the experience and influence social behaviour. In the scope of this Thesis, Facility management can, by considering social background and context of users of the building add positive value to the user journey.

Digitalism is a megatrend that has influenced the social constructionism. Nowadays it is considered normal to be constantly reachable. While users are at the premises of organisation Y, they come with the expectation to be able to work digitally and virtual. Fox et. al. (2009) describe the virtual environment as digital space that creates rendered surroundings and reacts to the way the user interacts with it. Users that access or interact with their workplace through a virtual environment can work from anywhere at any time. In workplaces, workers can use the virtual space to connect their work and perform their tasks on an individual or group level to cooperate with others.

So interactions that happen before the interactions within the built environment can set expectations towards it. To enable continuous interaction with the physical and virtual environment, correct services have to be offered by the FM service provider. Based on Vischer's framework, see figure 8, various aspects form a working environment that promotes satisfaction and well-being and promote efficiency and effectiveness.

While the total experience is created individually and by society (Berger et al. 1991, 56), it follows that comfort of the individual or a group needs to be provided accordingly. For suitable provision of space and experience, the distribution of space to cater individual or group needs, can increase work effectiveness (Vischer 2008, 236). To enable an excellent experience for the user, we will look into the range of users in working environment, the variety of spaces offered and how usability is defined for each interaction.

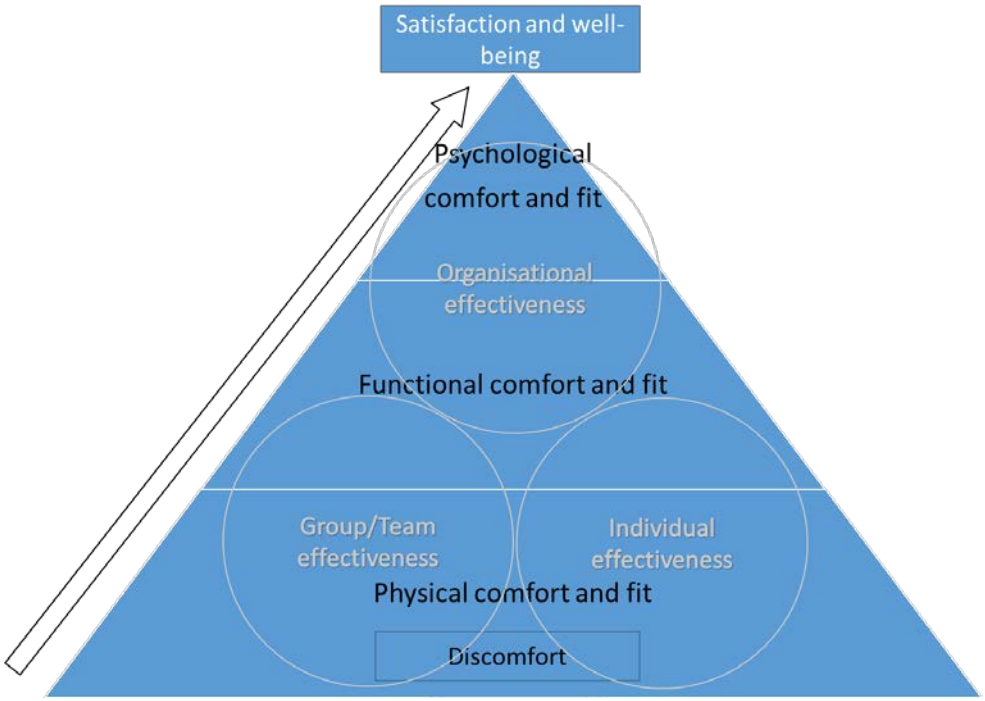

Figure 8 Framework for assessing user experience (Vischer 2008, 236), adapted

- Physical comfort can be obtained by creating a supporting environment for the tasks to be performed.
- Functional comfort describes the aspect of a built environment that supports the efficient and functional execution of tasks.
- Psychological comfort takes each user's individual expectation, memories and feelings into account for the built environment.

According to Vischer (2008, 232) the physical environment causes human behaviour, see figure 7, and has to assure it is fit for function and purpose and supports satisfaction and well-being, see figure 7. In workplace environment and knowledge work the requirements on what determines an effective and functional physical environment is determined by various factors. Based on Hyrkkänen, Nenonen & Kojo (2012, 196) the functional fit also shows the ratio of attention and energy that is used to either focus on the task to be performed or needed to cope with a poor working environment, e.g. noise or other disturbances.

These Requirements can change based on the user's tasks, level of collaboration and user profile. While, providing the right amount of comfort and fit in the various environments, each environment has to provide and support a sufficient degree of variety, interactions and experience.

3.3.1 Physical, Virtual and Social space

Based on Vischer, see Figure 8, there are physical and social aspects effecting the workplace environment. Alexander (2006) and Hyrkannen & Nenonen (2012) add also the virtual aspect of a workplace. According to Nenonen (2004, 233) it is more significant to obtain the correct balance between the physical, virtual and social environment rather than finding the impact of the physical on the social environment

Based on Erlich and Bichard's (2008, 278) requirements in general on the physical, virtual and social environments in relation to the work / task performed can be divided into two aspects. First aspect is the level of collaboration required for the delivery of the expected work. Second aspect is the level of concentration required. In general a space offers more concentration by blocking out distractions or noise caused by other users. Collaboration on an organisational level can be enhanced by providing spaces that spaces where users can interact together. According to the Finnish Institute for Occupational Health (2012, 19) spaces in an office environment can be categorised in four different zones, see figure 9. The overview shows selected space types and the support type of work.

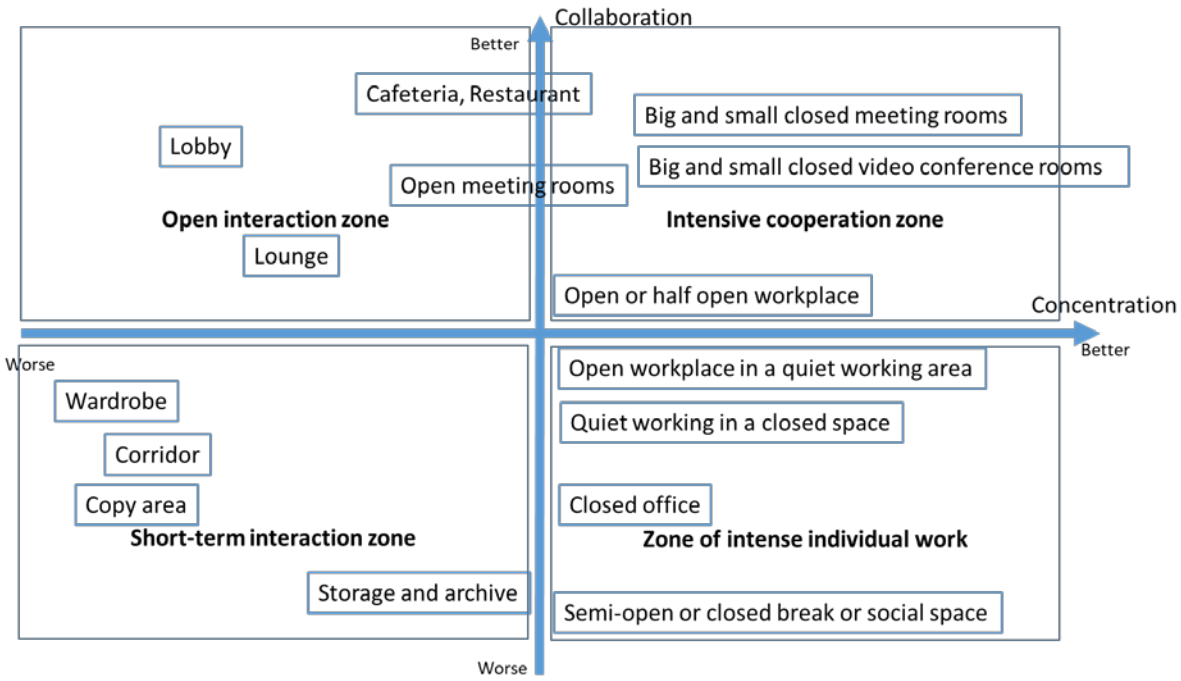

Figure 9 Space types in an activity based working environment (Finnish Institute for Occupational Health 2012, 19), adapted

Erlich and Bichard (2008, 279) point out that not all knowledge workers have the same way of working and learning. Especially in office environments that need to support various ways of working and a broad range of users, it is important to offer also the variety to perform tasks

that require the high concentration or high collaboration. In addition there is also the need to cater for space to rest and recover as these space types can help to "recharge mental activity and subsequently increase productivity" (Erlich and Bichard 2008, 282) and are typically overlooked. Also Vischer's framework, see figure 4, shows that providing psychological comfort promotes organisational efficiency and can increase the individual user experience.

According to the Finnish institute for Occupational Health (2012, 6-7), the four zones shown in figure 5, can be described as follows.

- The *open interaction zone* offers space for collaboration and usually all services available to everybody, e.g. cafeteria or reception, are placed here. In addition to shared facilities, workstations that have face-to-face contact are in this zone and commonly located in the public area of the building.
- The *Intensive cooperation zone* promotes cooperation with others. Often located in the semi-public zone, where invited visitors and staff have access to. Contains a variety of meeting rooms and conference centres. This zone can be considered to be representative space.
- In the *zone of Intensive individual work*, mainly spaces can be found that allow a high concentration. Mainly found in the private area of an organisation where only staff has access and internal services are available.
- In *Short-term drop by zones* users usually spend a short time only, but perform a tasks significant for the work. Often stopped by when moving from one to another room.

In relation to Vischer's framework, see figure 4, the zones laid out in the description above contribute to the creation of the layers of the physical comfort and fit and functional comfort and fit. Each of these zones, see figure 5, have a physical, virtual and social environment, aspect and context to it.

Physical environment

Dul, Ceylan & Jaspers define the physical environment as the "total of separate physical elements that are perceived by the employee to be present in the work environment" (2011, 735). This entails that all elements in the work environment create the physical aspect, taking into account the design of the building (e.g. offices, lobbies, staircases, windows, furniture) and its comfort (e.g. light, temperature, humidity, noise). According to Carlopio and Gardner (1992, 599) the needs and perception of the physical environment is strongly influenced by the type of work that is to be performed and the hierarchical status.

With a higher job level or more complex type of work, the needs and requirements on the physical environment rises. Physically, the work environment can support the various needs via an adequate design of its office landscape, space types and space offerings. Findings of Veitch, Charles, Farley & Newsham (2009, 189) link adequate provision and availability of the physical environment to the contributing factors of the overall job satisfaction of a workforce.

Pending the user's physical space requirements and expectations on collaboration and concentration, see figure 9, a variety of space types can cater the needs. Physical space can through its space offerings also cause user behaviour, see figure 7. The responsibility of the service provider is to understand what user behaviour is envisaged or is happening at the various places and spaces in the physical environment.

Virtual environment

Hinson (2010, 322) describes the virtual environment with the absence of a physical presence. Mobile workers are defined in SIBIS as workers "who spend at least 10 working hours per week away from home and the main place of work" (2003, 38). Mobile workers or worker that work outside the physical office environment usually connect to work via a virtual environment. In case of organisation Y, all committee participants can be considered mobile workers. Their work is performed outside the office environment and for the duration of their stay, organisation Y's premises become their office. Depending on the duration of their stay, visitors often work at their virtual workplace and need to connect to colleagues virtually.

Social environment

Social environment can determine human behaviour, see figure 7, but also offer a social space for users that enables to meet or exchange and create knowledge through interaction (Nenonen 2004, 233). According to Airo (2014, 31), these interactions contribute to the user experience. Nenonen (2004, 235) points out, that commonly knowledge is created in space. This space can be in a physical context (e.g. meeting room), virtual context (e.g. chat room) or social context (e.g. cafeteria).

With the limitations given by the for this Thesis, the following definitions will apply

- The physical environment is defined via the walls for the building, its spatial layout and room programme offered.
- The virtual environment is defined via IT hardware and software used to work with or interact with colleagues or interactions that are with interactive technology.
- The social environment is interaction between people, may it be colleagues, visitors or staff of the service provider

3.3.2 Interactions

Each momentary interaction contributes its part to creating the experience over time. As such it is important that each interaction adds to the user satisfaction in the context of purpose situation and situation. According to Alexander (2008) usability is not guaranteed though a set of technical or physical functionalities. To provide a functioning environment the interaction with it needs to provide usability and serviceability to enhance the experience for the user. According to Strawdermann and Koubek (2008, 461-462) the usability of a system is essential to forecast if a customer is likely to return. A customer is more likely to return to a system that is easy to use rather than to a system that works poorly. In the case of organisation Y it can be concluded, that a good usability of the environment causes that users are more likely/willing to return, are in general less negative and can contribute better to the content of their meeting. In service management, usability as a factor can be beneficial to increase service quality and provision.

ISO9241-11 determines usability as the "extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction" (ISO92411, 2). This definition of usability uses the terms effectiveness to describe the level of accuracy and completeness and efficiency for the used resources in comparison to the accuracy and completeness. Satisfaction represents the users positive point of view towards the product and comfort of use. In this thesis, the product, see figure 10, represents an interaction.

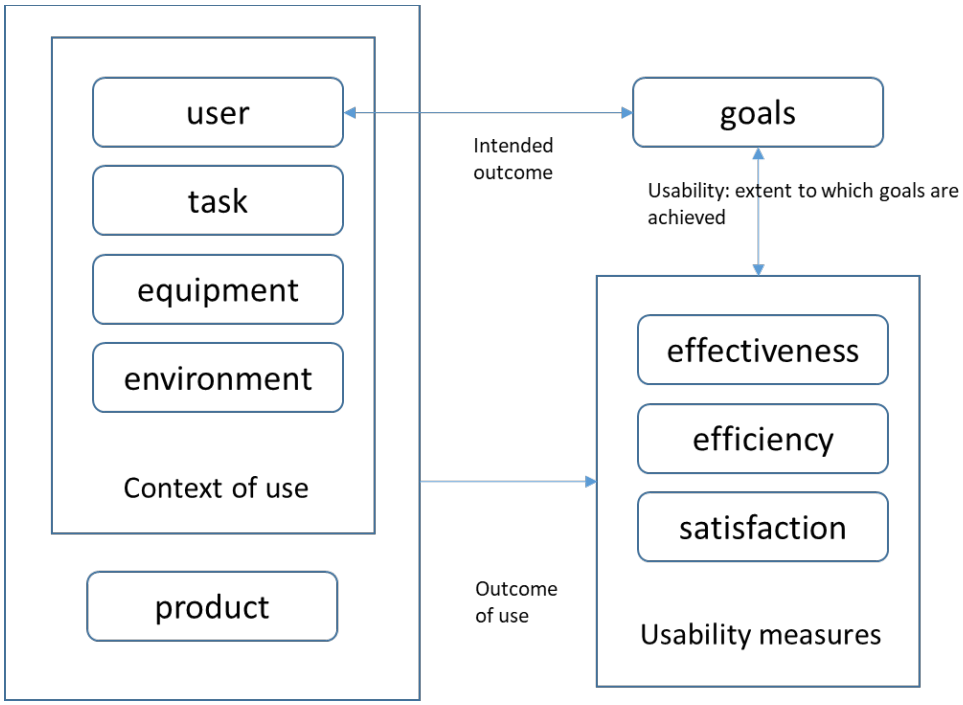

Figure 10 Factors of Usability (ISO92411:1998)

Usability provides an important aspect in the context of use to the user experience in the virtual, physical and social environment. According to Rasila, Rothe, & Kerosuo (2010, 151) the assessment of the environment requires multiple dimensions. Should the environment not provide a sufficient degree of usability, the user might feel a lack of support. This will cause a higher effort to the user to perform expected tasks. Based on Vischer (2008), this can be considered stressful and effects negatively to the experience.

The environment, together with the user, task and equipment forms the interaction, see figure 10. At each interaction the user requires the correct equipment to fulfil the given task. Based on the ISO92411, equipment represents hardware, software and materials that are used to fulfil the task, defined as "activities required to achieve a goal" (ISO92411, 2). Each change in user, context of user or environment can change the requirements to fulfil a goal. Rasila et. al (2010, 144) point out that the depending on what user is considered, the context can changes heavily in the same environment. To align the understanding of the context, an analysis of what tasks are processes are performed at each interaction can be useful.

The usability, whether in a physical, virtual or social environment, in which service is provided or an interaction takes place must take into account that each user comes with different expectation and experience. The FM service provider must assure that the required level of usability is available and sufficiently provided. Usability effects the experience which is built up over the interactions and continuity.

This entails that for each interaction, the usability needs to evaluated. Within this Thesis, the term usability will further on relate to the fact that each encounter or interaction usefully supports the user in an effective, sufficient and satisfactory way.

3.3.3 user experience

User experience is created on a subjective level. All interactions and experiences are created in one's personal view. The theoretical framework to define how the user experiences the visit at case organisation Y, the following approach is established.

- Realisation = instantaneous experience, the moment the user becomes aware of something or the experience takes place.
- Expectation = the way a person expects things to happen or be defined in a certain way.

Even though experience is a very wide and broad field, in this thesis experience will be defined as follows

Experience = Expectation + Realisation

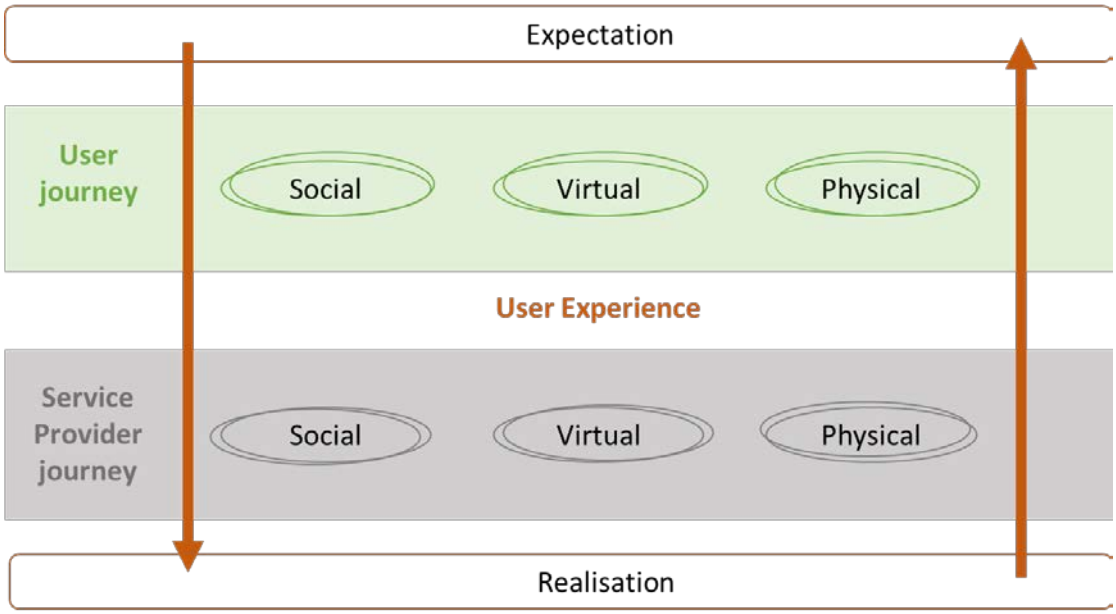

Figure 11 Creating the user experience

With Experience being the sum of expectation and realisation, it can be seen as the process that takes place along the user journey. Figure 11 shows influences on the user experience. Each user comes with a certain set of expectation gathered from previous encounters in similar situations. The user journey is experienced in three environments, the social, virtual and physical environment. On the other hand, the facility service provider deploys services along this journey and aims to match the needs and requirements as close as possible. While realising how the expectations are matched, the user experiences the user journey. The realisation on site can hence either match, exceed or fall short in meeting the expectations.

- Expectation = Realisation creates a satisfactory user experience
- Expectation > Realisation creates a lacking user experience
- Expectation < Realisation creates a great user experience

The Facility Service provider needs to understand at what point in time and place there is a match or mismatch. Interactions are, in the service design methodology, called touchpoints. The understanding of the interactions and their continuity can be visualised in the user journey.

4 Design process and its methodology

According to Stickdorn, Hormess, Lawrence and Schneider (2018, 27) Service Design has six principles which are 1) Human-centred– the experience of all people affected by the service

2) Collaborative – stakeholders are to be engaged in the design process 3) Iterative – exploratory, adaptive and experimental approach 4) Sequential – process is visualised and a sequence of interrelated actions 5) Real – research and prototypes based on and in reality, intangible values made tangible and 6) Holistic – service needs to address all stakeholders throughout the service and the business.

Following the principles listed above, the whole process of service design is based on insights on people and their needs. Polaine, Løvlie and Reason (2013, 19) argue that the consistent application of service design along all stages of a service will result in a fulfilling and satisfying human experience. The more we know about the needs and motives of the stakeholders, the better the experience of a service will be. Deeper insights and knowledge helps to empathize, and according to the Hasso Plattner institute (2010) when you understand why and how things are done in certain ways by people, it gives an understanding of what is meaningful to them and thus supports the creation of meaningful innovations. Polaine et. al. (2013, 36) write further that when a service is consumed, people create a relationship with the service. In comparison to selling a product on short-term, the design for a service must be seen as a long-term basis creating and building up to an experience.

Further, the process of service design is iterative. This means that there is not a straight line that can be followed. Stickdorn et. al (2018, 26) point out that iteration shows the capability of the process to learn from failures and to learn and adapt towards the implementation. Having iterative rounds and assessing prototypes or findings, service design requires often a step back and going back to previous phases or a repetition of earlier phases to get further input or an research that take a different approach to give a more holistic approach or different angle to improve, e.g. a prototype.

4.1 Service Design thinking and the Double Diamond Model

For this Thesis, the service design approach that is chosen is the Double Diamond model introduced by the British Service Design council. Based on its simple design and approach to the design process, stakeholders can quickly familiarise themselves with the approach. Being a creative process, service design contains divert and convert thinking process, which happens twice along the process. First in the Problem phase and then in the solution phase.

4.2 Research Framework based on the Double Diamond

The Double Diamond model introduced by the Design Council, see Figure 12, illustrates the steps of a service design process and divides it into four phases: Discover, Define, Develop, Deliver (Design Council 2015, 7). It shows how the process flow through stages where thinking

has to be very wide and broad (diverge), but narrow and on point at the next phase (converge). Each half of the double diamond has a diverging and a converging phase. The first half aims to do the right thing by identifying and the second half aims to the things right (Nessler 2016). This Thesis will follow the approach described by the Design Council, so the phases are laid out as follows.

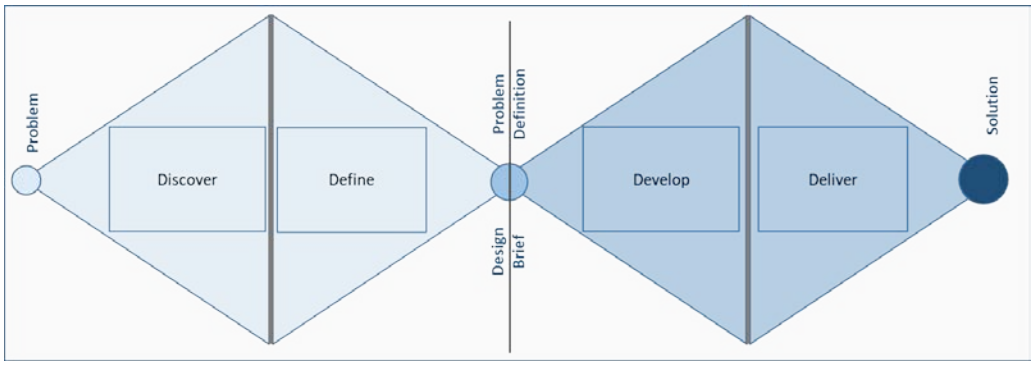

Figure 12 Double Diamond Process, Design Council, 2015.

The Design Council (2015, 7-8) gives following purpose for each of the four phases. In the first half, the diverting, Discover, phase aims to start the project and seeks to gather insights and identify the problem and opportunities. The second phase, Define, converges and proposes a design brief and delivers an analysis of the finding of Phase 1. This design brief, which summarises phase 2, lists clearly what is the challenge to solve and gives input for the second half of the double diamond, where we find phase 3 Develop and phase 4 Deliver.

According to Nessler (2016), the Develop phase is about the ideation and evaluation of possible solutions to the defined problems of the design brief. A prototype of the product or service helps to test early in the process and see if it meets the customers' needs. Phase 4 can be the launch of the service or handover of the concept to the customer. The Design Council (2016, 8) stresses, that this phase also has to assure that a process or system to capture further user feedback and improve the service is in place.

Following the structure for a service design process as shown in the Double Diamond, this Thesis will use the process and the service design methodology for the practical application. It gives the stakeholders and participants a clear view of the status of the project and in what phase the project currently is.

4.2.1 The Double Diamond applied

In the beginning of a Service Design process, see Figure 13, stands the Discovery phase. This phase aims to discover / frame the Problem or research questions and is essential for a common understanding of all involved parties. Here, the Discover phase combines two aspects for

the start of the project. Discovering the understanding of the research purpose and the need of the agency on the one side. Desk research and collection of material for the theoretical framework on the other side.

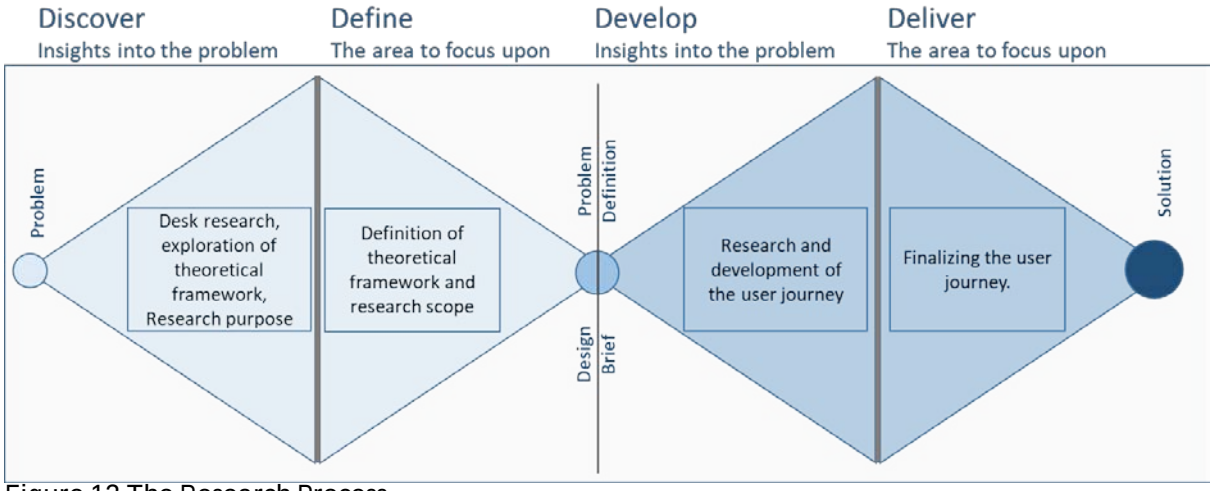

Figure 13 The Research Process

Due to the change of physical environment where the company will hold its meetings and events, there is a need to understand how user journeys will look like in the new environment. With the need to gain an understanding of how the user journey looks like, the theory will focus on the analysis on what creates the experience for the meeting participants. Further theories looked into, but are not picked up in this Thesis, covered the support of knowledge creation within the physical premises, employee satisfaction and service delivery, distant leadership and workplace management.

Goal of the define phase is also to map the research scope. Together with the company and in relation to the tasks performed by the corporate service unit, the scope of the design project consists of *the journey of a regular meeting participant, starting from entering the main door at the beginning of the day and leaving the premises at the end of the day*. The user-groups of the conference centre are quite diverse and the regular meeting participant represents the biggest group. Hence, this project focuses on this group.

The research questions of what are the crucial touchpoints for 1) the committee participant and 2) for the corporate service unit, aim to answer what are needs are. This thesis aims to map out the various touchpoints over the course of a day and the demands at each step. Framed within the theory laid out in the theoretical part, each touchpoint will be analysed from various views to get a holistic understanding.

4.2.2 Theory and design process

Based on the understanding that experience is created through interactions over time, the aim of this design process is to gain a holistic understanding of all points where the committee participant, the customer, is in touch with the building and service environment. The theoretical framework, see Figure 14, uses the three aspect of physical, digital and social view points as a foundation and gives a common guideline and guidance on how to look at the customer journey and the Service Provider Journey.

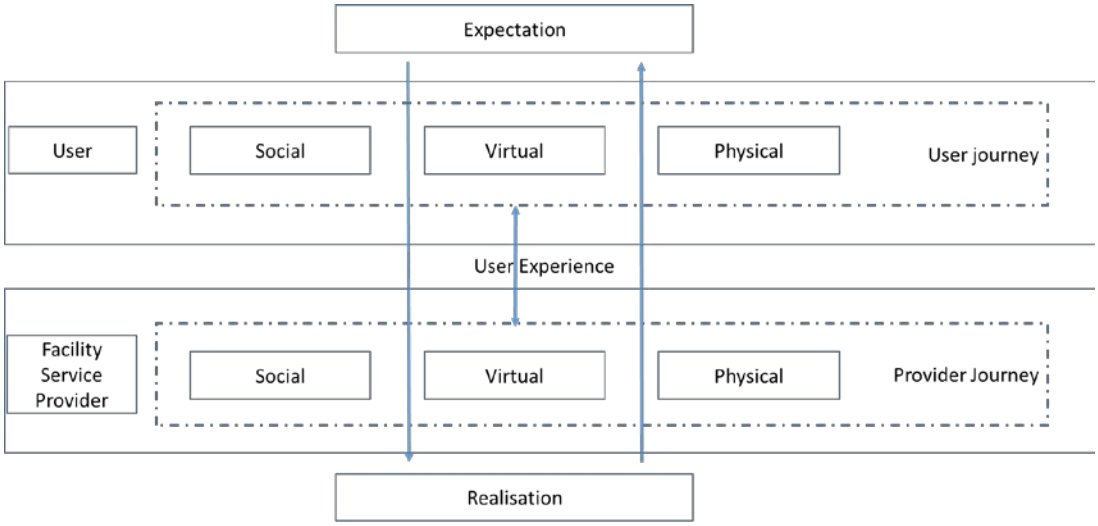

Figure 14 Research Focus

In this thesis, experience is defined as the sum of expectation and realisation, see also 4. Expectations are analysed through the customer journey. Realisation is created through the service provider journey. Usability assures, that the task to be performed does not cause pain, but supports the experience. This can be refined further in, e.g. service blueprints, collecting feedback or user testing. Availability adds the time and resource factor. Essentially not all services are required all the time, but seen holistically this might not mean that some services should on purpose not be available. Usability and Availably are out of scope of this Thesis, as the implementation of the journey is under the responsibility of the respective Team.

This thesis will focus on the journey of the user and the Facility service provider, see figure 14. If both journeys are aligned, it will create an excellent experience for the customer. These two aspects also create the requirements for the aspect of satisfaction and well-being. Outcome will be the future stated user-journey serving as a guideline for the Teams to prepare future service provision, availability and usability. As Polaine et. al. (2018, 36) write, people create a relationship and the design for a service must be seen on a long-term basis creating and building up to an experience.

In Phase 3, Develop, the focus is on the mapping and understanding of the touchpoints. Following the framework in figure 14, the alignment of the expectation of the visitors and the realisation through the service provider creates the best possible experience. Phase 4 aims to deliver the future stated model of the user journey.

The creation of the user journey will be based on data collected during on site observations, floor plans and room lists of the new conference centre, process descriptions and information collected from the various team members and three workshops. Workshop participants were be representatives of the corporate service teams and took place in Q2 2019.

4.3 Discover – research kick-off

In the discover phase, see figure 15, the goal is to collect insights of the theories that are related to the project. During the desk research various theories are explored and give a foundation for the research project and set the framework for this project.

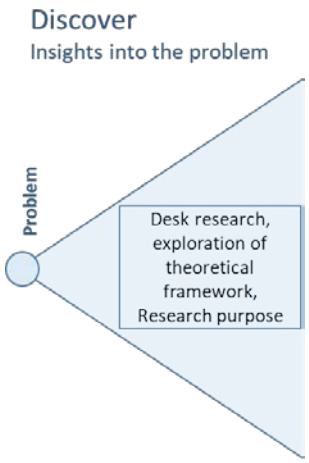

Figure 15 Content of Phase 1 - Discover

The first part of a service design process, Discover, is the process of research. Based on Stickdorn et. al. (2018, 96) in service design research is applied to gain insight and under-standing of people, motivations and behaviour. This Thesis follows the phases laid out in the double diamond, but service design can also be iterative with no ideal process or combination of methods (Polaine 2013, 48), so the discover phase can also be either the starting point of a service design process or a return from the development or deliver phase after more insights arise. In this phase the scope of the project and the research questions will be defined. Based on Stickdorn et. al. (2010, 128) in the discover phase the service designer needs to gain an understanding of the company's environment, clear definition of the research question and to visualise findings in a clear and understandable way. Moritz (2005, 125) defines the tasks for

this process into understanding clients, understanding context, understanding providers and understanding relationships.

Data Collection and research in this phase provided deep insights into the customer and employee environment and help to gain deep insights into an unknown topic. The information collected will help to overcome assumptions and understand the context in which the research takes place. "The goal is (to gather) usable insight that will improve the quality of the service design projects you are working on" (Polaine et. al. 2013, 48). Based on the size of the project and the budget available, the research methods used need to be carefully considered.

As Stickdorn et. al. (2018, 107) point out, it is beneficial to triangulate data and methods. This gives a higher accuracy and findings on the same occurrence. Data visualisation allows to map the collected research input to give a clear overview. Visualisation can also provide input for the definition of the collected insights and make ideas tangible, Polaine et. al. (2013, VII). During this phase, unstructured interviews and desk research have been used to gather data.

Findings of this phase

- The physical environment of the company is changing and to prepare service provision and processes, the corporate service needs to gain understanding of how the building functions and how services fit into the building.
- Theoretical framework will cover the topics of experience, space types, comfortable work environment, usability and Facility Management.

4.4 Define – setting the framework and scope of the project

The define phase, see figure 16, aims to define the research questions and close off the first half of the double diamond. Common understanding of the problem definition, the research questions, and the design brief covering the theoretical framework that will be applied, assure that all involved parties are aligned.

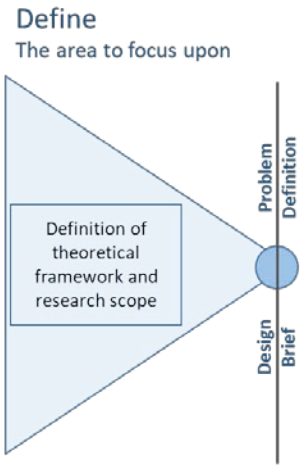

Figure 16 Content of the define phase

The objective of this phase is to define a clear brief and a clear set of problem statements (Design Council 2015, 8) and to translate the "complex data into insights" (Moritz 2005, 128). It is not the target to avoid "mistakes, but rather to explore as many as possible mistakes" (Stickdorn et. al. 2010, 130). Often it is important to understand the environment and ecosystem the service is embedded in (Polaine 2013, 80).

For the define phase the planning of the process for idea generation and Idea selection, the service designer can use a variety of methods. To reach conclusions on what ideas to proceed with, the ideas need to be generated in first instance based on the insights leading then to the idea selection. It is necessary to have a holistic involvement of stakeholders and co-create among the teams (Stickdorn 2018, 131). As Brewerton, Paul & Lynne stated, "the more precisely formulated the hypothesis, the easier it is to envisage how it should be tested" (2011, 51).

Based on the desk research and finding of the previous phase, the design brief has three main areas are identified to proceed with under the main headline of experience. With the main target, to provide an excellent user experience, the theory will research and describe experience. Then cover Facility Management and its role in experience creation. As described in Chapter 3.1, Facility Management provides the premises and services required. That aspect ties Facility Management very close to the experience a user has in a building or a built environment.

Third aspect is the user experience. Here the theories of a workplace environment are taken on and what factors lead to satisfaction and well-being in such environment. Further, this aspect aims to identify how interactions are defined or can be controlled or managed in a way that the user has a good experience. To set the scope for the research, it is limited to the journey during the day starting and ending at the main door of the premises of the company.

At the end of this phase, following research questions were defined.

- Research Question 1: What are the service providers crucial touchpoints?
- Research Question 2: What are the user's crucial touchpoints?

4.5 Development of the user journey

Guided by the research questions, this phase, see figure 17, aims to conceptualise the user journey see. Considered should be a) the touchpoints crucial for the user and b) the crucial touchpoints for the service provider. This aims to align the expected and realised journey to offer an excellent experience by meeting the requirements brought by the user. For this, findings from the desk research, on-site observations, stakeholder map and workshops will be used to gather insights. As mentioned in the first paragraph of Chapter 4, iterative is one of the principles of service design.

While being in phase 3, this phase picks up some of the methods used in phase 1 and 2. Phase 1 and 2 used the methods desk research, idea creation and unstructured interviews to frame the theoretical framework and the research questions. Now, the same methods are used to gather data and insight to answer the research questions. In addition, on-site observations and workshops are used to gather information from to have a holistic, human-centred and collaborative approach. Strictly speaking, before phase 3 should be a phase 1b and 2b, but to maintain the process flow and understanding of involved parties about the project status, these two phases are included in phase 3 and form its kick-off tasks.

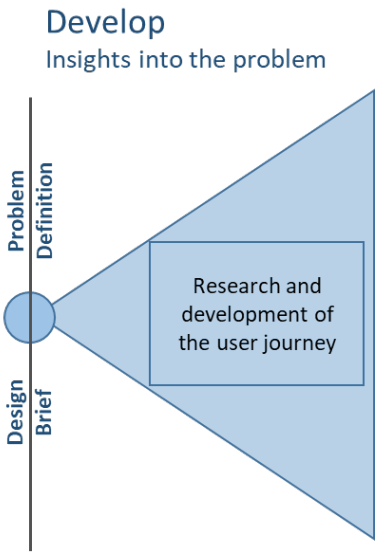

Figure 17 Scope of Develop phase

In the double diamond, the second diamond starts with the Develop phase and represents the process of prototyping. Moritz (2005, 140) defines this stage as "sensualisation (visualisation for all senses) of ideas and concepts, mapping of processes and illustration of potential scenarios". Prototyping ideas will give an understanding of essential parts of a service, show the usability, see also chapter 3.3.2, and make the concept understandable for all stakeholders (Stickdorn et. al. 2018, 210). Iterative testing with stakeholders and end-users helps to build a holistic experience. The various components of a service can be designed in detail and incorporate the stakeholder and user feedback (Design Council 2011, 9). A simple and very high-level prototyping style can help to trigger creative thoughts and input (Stickdorn et. al. 2018, 132).

The planning of the process of prototyping in the develop phase needs to consider various aspects. Prototyping is used "to explore, evaluate and communicate" (Stickdorn et. al. 2018, 212). These three aspects can go hand in hand and a clear view on the purpose of the prototype and can enhance the quality. When prototyping service processes, identifying opportunities for development and improvement and insights into what creates a positive experience will help the services to be "promoted through positive experiences by ensuring that they meet or exceed users' expectations" (Polaine et. al. 2013, 131).

In the Develop phase, the process of prototyping takes place to get the experience right. Polaine (2014, 131) writes, that with a good experience customers will less likely change providers and recommend the service further. The experience takes place in people's mind and service design can contribute to the factors of its creation and their timing. To build up to the experience, "the initial service idea must be made more concrete so that it can be presented as a developed concept, or even rough prototype" (Bitner, M., J.,Ostrom A.L. & Morgan F.N. 2008, 70).

Prototyping is about testing and communicating the idea of the service or individual touchpoints. The goal is to test the service process or parts of it, map the gap between the expectations and service level and gather feedback of the experience (Design Council 2015, 20). The prototype helps to get an understanding of what ideas are worth further investment or to communicate and present the idea as a basis for further discussions and to align the understanding of the various teams (Stickdorn et. al. 2018, 212). Prototyping for service processes and experiences can be done via investigative rehearsal or a desktop walkthrough.

In this phase of the design process, see figure 17, the following methods will be used to gather data and insights to result in the future stated user journey concept:

- On-site observations to gather insights into the current journey and touchpoints.

- Stakeholder Maps to understand the ecosystem of a participant.
- Co-creative workshops to involve stakeholders for the creation of the user journey.
- Heat map to sort the touchpoints and decide on crucial touchpoints for the journey.

Regarding the user journey, there are given factors and limitations which the user journey has to respect. Firstly, the physical built environment, building walls and layout of the space are set, which is given due to the timeline of the construction site process. Secondly, process and guidelines, e.g. security rules, have to be followed. It is although planned, that input gathered of this project, will be used, e.g. for the design of loose furniture items, process design of the entrance area etc. Following research process and approach will be taken for the creation of the user journey prototype.

1. Review of a previous project of the company
2. Status quo service delivery
3. Site observation - current state user journey
4. Workshop 1 – Stakeholder eco-system and tools
5. Workshop 2 – Future stated user journey "Touchpoint Definition"
6. Workshop 3 – Touchpoints needs and requirements
7. User Journey prototype and delivery

REVIEW OF A PREVIOUS PROJECT

During the market observation in 2016 to find the best fitting future premises, case organisation Y has conducted a research project regarding user experience and hospitality. The previous project in cooperation with bachelor students from Laurea university of applied sciences, focused on various aspects of hospitality. During this previous project, a high involvement of users was facilitated in form of workshops with meeting organisers and committee members and interviews with service providers, committee members, visitor and meeting participants. Findings from the user workshops, interviews and feedback from the students have been used in this project. This is crucial, as in this thesis project, workshop participants are from the service providing teams. User involvement is foreseen for the later stage of implementation and validation. For this, following findings were brought forward (Laurea, 2016).

- The user journey starts with the invitation to a meeting and ends with the last contact, e.g. survey.
- Journey to the premises from the point of arrival in the country needs to consider support or information for the "last mile" to the premises, e.g. public transport or taxi availability
- Sufficient light and possibly special light bulbs providing artificial sunlight should be used.

- Natural building materials can provide a more comforting environment and enhance well-being.
- On card for access, payment in canteen etc. can increase the visitor experience

STATUS QUO SERVICE DELIVERY

To prepare its services and services provision for the future premises the point of view of a committee participant is taken. In organisation Y about 5 committees are established. These committees are established to reach common agreement with its stakeholders and, e.g. decide on regulations or recommendations. Its members are located all over Europa and fly in to participate in the meetings. A committee meeting can take to up to 10 days, the size of a committee varies 30-110 participants and each committee meeting takes place several times a year. The user group of the committee participants is the biggest group of visitors for the organisation Y. In general, the company has following visitor types, sorted by amounts of visitors per year coming to the conference centre.

- Regular visitors. Participate in meetings to take decisions and draft regulations, travel by plain, stay in Hotels and are usually reimbursed. Due to the duration of their stay, the premises of the company also become their working environment for that time. In specific, these are members of the management board, RAC, SEAC or other committees.
- Short term visitors. Typically stay for maximum a day and participate in special events or meetings arranged for a specific group of stakeholders.
- Irregular visitors. Family members, contractors, trainers or else.

Not listed here are users that require access to the office building or are related to running and maintain the building, e.g. maintenance staff. For the purpose of this research, the scope will only contain visitors to the conference centre, in specific committee participants.

The current state journey was examined to provide into on the future stated journey. Based on the current journey and available service at each touchpoint, the current state serves as a reference point to show the structure of the services and teams and will serve to find the gap to the future stated journey.

From an organisational point of view, 4 parties are involved in the meeting. The organising party is the committee hosting the event, taking care of invitations and providing information such as the day, agenda, amount of participants. Second party are the committee participants. As defined in the service-dominant logic, the consumer of a service, in this case the participants, create the value of the committee. Services are provided via the third party,

the corporate services unit of the company, it's teams and structure is shown in figure 22. Fourth party are the contractors under the management of corporate services.

The participant observation, was done to observe the status quo on the user journey in the current building. To understand user needs and observe the current transition between touch-points. In specific the journey from the main door of the building to the door of the meeting room has been observed. The site observation was done during morning hours, 7.30 to 09.30, when the meeting participants arrive and about 40 visitors entered the premises. At 9.30 the meeting started. During the observation, following findings have been made of the current state journey observation.

The journey, see figure 19, covers the touchpoints from the main door, over the info desk in the conference area in level K3 until exiting the premises. It shows that there are about 7 touchpoints for the user. While this does not seem much, it needs to be kept in mind that along the journey there are, besides inside the elevator showing "K3 conference", no further signage of the building indicating where to go. These touchpoints are currently stops along the journey that do not consider the previous or upcoming step. A detailed overview of each touchpoint is available in the Appendix. The journey in figure 19, considers only the journey within its premises as agreed with organisation Y.

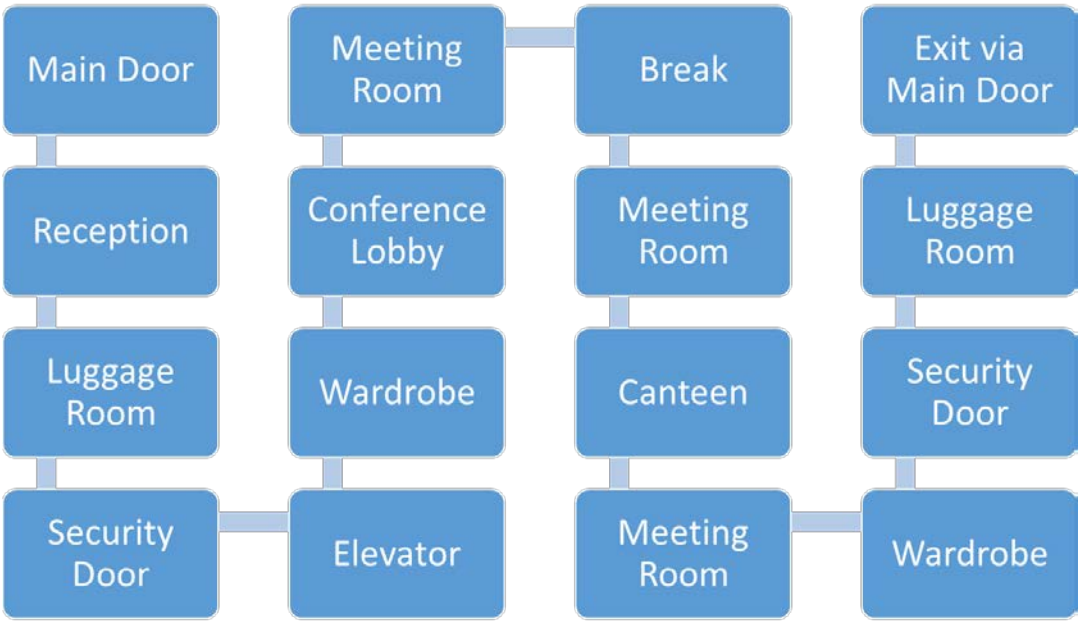

Figure 18 Current visitor journey

When the committee participant arrives at the main door of organisation Y, the visitor has received an email in advance with an invitation to the committee meeting, including date, location, draft agenda and a link to the travel company where flight and hotel can be booked. After the main door, on the 1st floor, the reception desk, in the main lobby has been automatically approached by all visitors observed. After receiving the visitor badge and being able to step through the security barrier, most visitors came to a stop and it was unclear where to go next. No sign indicated a direction. Only after the receptionist activated the revolving door for visitors, the journey was continued. Here, the movement of the door indicated the path. In moments when bigger groups, e.g. more than six people, arrived, a crowd formed in the main lobby. This is due to the tasks of the receptionist who performs the ID checks, hands out the visitor badge and activates the revolving door to enable the visitors to pass through the security barrier. Some of the visitors stored luggage in the luggage storage room, close to the reception.

Following findings, in addition to the touchpoints, have been identified that should be improved in the new journey.

- High demand in manpower between 8:00 and 9:00 when most of the committee participants arrive. 2 receptionists, 1 security guard to operate revolving door for visitors, 1 staff member to receive visitors to guide from revolving door to elevator, 1 staff in elevator, 1 staff member in conference floor, 2 staff members at meeting room entrance area
- Each touchpoint is a stop. Previous and upcoming encounters are not considered. The visitor is not guided to the next stop.
- No guiding signage visible.
- No information about meeting, meeting room or schedule available before arriving in the entrance area.
- Tasks are repeated. Signing is required twice, storage to leave big luggage and wardrobe for coats are in two different locations.
- Paper based system to sign in arriving participants. Staff in K3 conference lobby is not able to track if all visitors arrived, due to not all participants might be reimbursed.
- Peak in movement of participant in a group is not during arrival and departure but during breaks and lunch time.
- Over the course of the day, the info requested from the info desk changes.
- two types of visitors luggage storage requirements. Type A is heading straight to the meeting room and has only light luggage, e.g. laptop bag or handbag. Type B carries more and heavier luggage and has more stops along the journey.

For the design of the future journey and to increase the visitor experience, the points listed above will be taken into account at the respective touchpoint. Ideally, improvements can reduce the amount of touchpoints and streamline processes.

Workshop 1

In workshop 1, representatives of all teams were present. Aim of the workshop was to gain a) understanding of the service eco system and stakeholders around a meeting participant and how these are connected. To set the team members in a future stated mind-set, we collected input on what has, is and will change in the upcoming future. As main headlines, the findings showed that empowerment of the participants and digitalisation of tools are changes that will come.

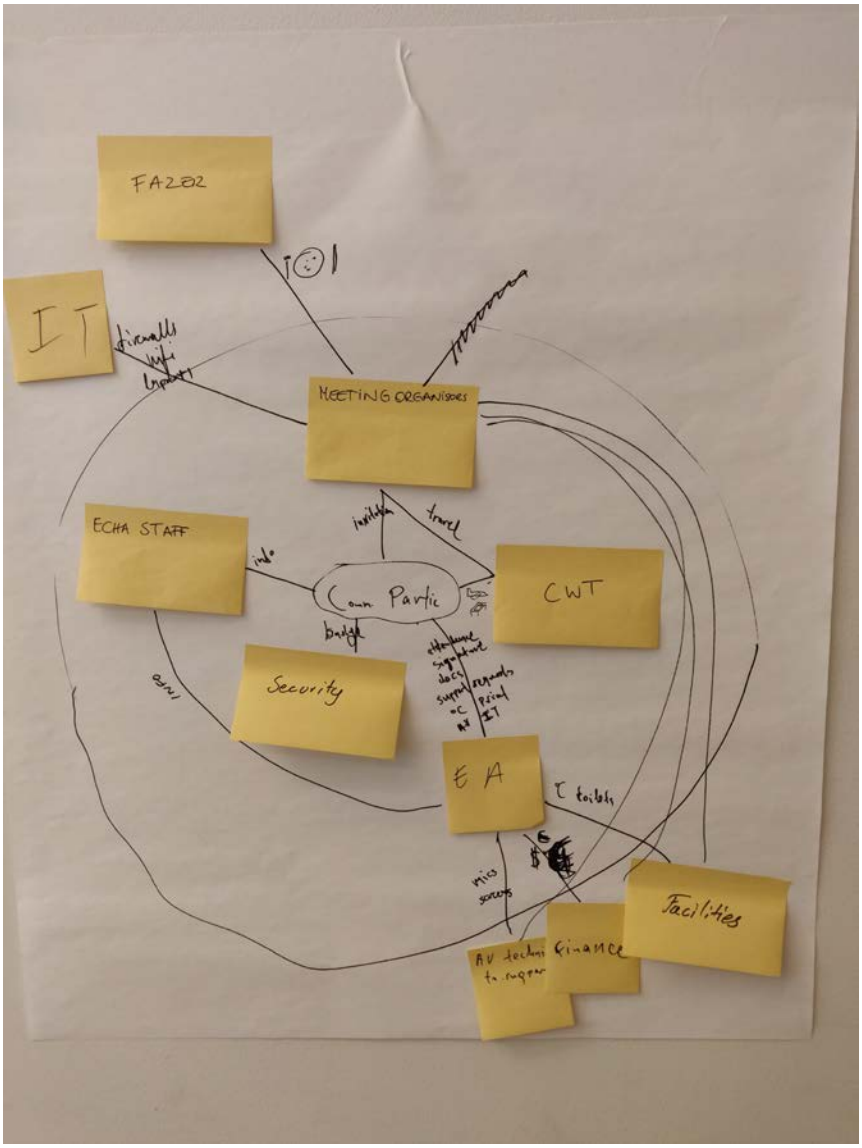

Figure 19 Committee Participant Eco-system

Around the committee participant, see figure 20, various services providers and stakeholders are involved in the meeting organisation. Closest to the participants are the meeting organisers, the travel agency CWT and security. Further out, are the Event Assistants (EA) and ECHA staff and in the furthest layer, IT, Fazer (the catering company at the time), Facilities, Finance and AV technicians are located.

Service provision between the stakeholders is as follows. Meeting Organisers are the central point for the organisation of the meeting. Their function is to host the meeting, manage the content, provide required information to the participants and request the necessary service from Corporate Unit Teams.

So the meeting organiser is the source of information and origin for all other stakeholders. It shows that in addition to the corporate service teams, see also figure 20, more stakeholders are involved. At the moment five teams within the Corporate Service unit provide the services, see figure 22.

Figure 21 Corporate Services Team Structure

Audio-Visual Services

Staff working in the audio-visual team is responsible for the function of the technical equipment in the meeting rooms and coordinate the room booking and availability of the three committee rooms. Further, the team provides also services for web streaming, audio or video recording and coordinate the maintenance for the AV equipment and hardware.

Catering

Catering is provided via an outsourced catering company and under supervision of the contract manager. Information regarding amount of participants and booked catering packages, e.g. lunch and afternoon coffee, is done by the event organiser directly via the online booking platform of the caterer. The contract manager assures correct communication and quality of the ordered items.

Event Team

Event assistants form the event team and are in close contact with the meeting organiser and meeting participants. Their role is to provide and collect information from the organiser to enable a functioning framework for the meeting. Close contact with the meeting participants is required for reimbursements and the provision of other required on site services.

Facilities Services

Facilities Services provide a safe, healthy, functional and comfortable working environment. The members of the team ensure that the parties involved in the meeting preparation and execution have an environment that suits the needs and manages the building related services, e.g. cleaning, maintenance, room preparations.

Security

The security team provides guarding of the premises, control of access and reception services. For the purpose of the meeting organisation, the security team assures access for the right person at the right timeframe.

Travel Agency

Meeting participants can book flights and accommodations via the online portal of the travel agency. On the online portal, participants can book see available hotels in the proximity of the agency and book their suitable flights.

In addition to these teams in the corporate service unit, further stakeholders in other teams are involved.

ECHA staff

Provide expert information on meeting content for decision-making, Hosting Participants, Can sit in committee rooms, if interest in topic and agenda allows

Finance Unit

Here, the reimbursements and payments that are prepared by the event assistants are processed.

Meeting Organiser

Organisation of the meeting, Coordination of meeting with service providers, Provide Agenda Participant list and seating plan

Committee Participants

Participates in the meeting, Represents stakeholders

ICT

Provides Wi-Fi, printing services and software used by the committees for document management

In the second part of Workshop 1, we looked into the various tools used by the teams, see figure 20, to understand how information is processed. Four tools that contain information or are used to organise a meeting have been identified that are used by the different teams.

- ELM (EVENT LOGISTICS MANAGEMENT) is a web interface used for the organisation of meetings with external visitors.
- Outlook Calendar is used to book the meeting rooms.
- Outlook e-mail is used to communicate with the meeting organiser. Each team has their own functional mailbox.
- Calendar in word format is used to keep an overview of upcoming meetings.
- Tilava is a web based service of the canteen provider and is used to order catering.
- CWT web page is used a) by the meeting organiser to block hotels and to offer participants to book flights and b) by the participants to do so.
- MS Visio is used to design the room layout, if a room without fixed furniture is used.
- Easy sign is used to circulate reimbursement/payment requests for approval.
- ABAC is used to execute payments.

Main findings of Workshop 1

- Each team has an individual way of processing and maintaining data.
- ELM is where the initial event "booking" is done, information agreed on in other sources does not go back to ELM.
- Calendars for event overview exist for each team, e.g. word, outlook, ELM, paper wall calendar.
- Information among the different teams flow is not guaranteed and can cause miscommunication.

Based on EN15521, the stakeholders are categorised for clarity, see table 4. The description of the categories is under chapter 3.1.1. Further user in this thesis will summarize the customer and end-user in the category "user".

Internal Service Providers	External Service Providers	Customer (ordering the services)	End-user (consuming the service)
• Event Assistants • AV Technician • Security Assistant • Facility Assistant • Finance Team • ICT	• AV back up technician • Security Personnel • Receptionist • Cleaning • Catering • Maintenance • Travel Agency	• Meeting Organiser	• Meeting Participant • ECHA staff • Experts

Table 4 Stakeholder Categories

Workshop 2

Workshop 2 identified the various touchpoints the user has with the company from street level until arrival in the meeting room. The approach chosen for the future stated journey was that a member of each team of the corporate service unit participated in the workshop. The validation of further stakeholders, e.g. meeting organisers or meeting participants, will take place after the conceptual journey has been established. This is due to the schedule of the ongoing procurement process for services and the timeline on the construction site.

In general the future premises of the company consists of two building. The office building contains all functions required for the staff of the agency to perform their tasks. The building consists of eight floors where the offices, lobby and a cafeteria is located. An archive and further storage facilities are located in the basement. It is not foreseen to host visitors in the office building. Within the conference centre, which forms the second building, all functions required for visitors, conferences, meetings and meeting organisation are located. Consisting of three floors, the various functions are laid out a follows see table 5.

Floor	**Functions**
1st floor	Conference Reception Canteen Multi-use Conference Room (capacity for ~520 participants)
2nd Floor	Committee Room 1 (~108 seats) Info desk Various large and medium meeting rooms
3rd floor	Committee Room 2 (~80 seats) Committee Room 3 (~70 seats) Temporary Info desk Various large and medium meeting rooms, Luggage Room

Table 5 New premises functions

The rooms foreseen for the use of the committee meetings are located in the second and third floor, Committee Rooms 1, 2 and 3, see also table 5. In addition, during some meetings additional large or medium meeting rooms are required for breakout groups, meetings focused on specific topics or as a waiting area for experts or Non-government organisations (NGO) that are only allowed in the committee room for their specific presentation or case. To provide a supportive and positive meeting environment, Research question 1 focuses on the user journey from the participant's point of view and aims to determine the crucial touchpoints for the committee participant.

To simulate a committee meeting, the participants were handed out a meeting agenda of a two day meeting and drew on post-its their mode of transportation, e.g. plane, bus, walking, taxis, and the type of luggage, e.g. luggage, cabin luggage, backpack. Several workshop participants have not seen the floor layout of the future conference centre in advance. In this case it was very beneficial, as it gave the proper "first contact" feeling of a visitor arriving for a committee meeting at the new conference centre. Simulated on A0 print outs of the conference centre floor plans, a plastic figure was moved over the plans representing a visitor. Following touchpoints, see figure 23, have been identified in this walkthrough exercise. Due to limited time and availability of participants, the journey ends at the lunch break. Blocks in light green are added to complete the journey until the visitor exits the premises.

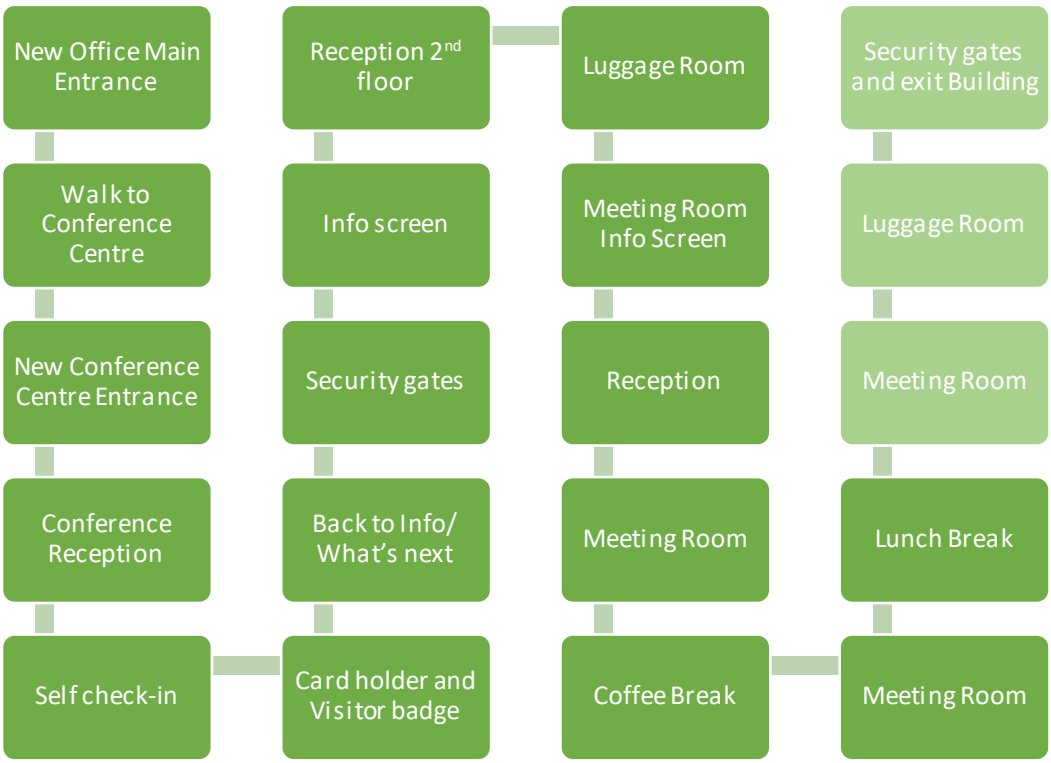

Figure 22 New user journey touchpoints prototype

Workshop 3 investigated the requirements of the user and respective facility services for the various touchpoints. At each interaction, the users have different needs, requirements or tasks to perform. Workshop 3 identified the various actions required from the facility service provider to enable the users to perform their tasks. A detailed overview is available under Appendix 2. The user experience is created under the theoretical framework in the physical, digital and social environment. Touchpoints listed, see figure 22, are all touchpoints a user interacts with over the time of their visit. At each touchpoint, the interaction can be physical, social or digital. A physical touchpoint is e.g. the security gates or the new conference entrance. Social touchpoints are found at the receptions where, most often, a face to face interaction takes place with staff from the facility service provider. Digital touchpoints are the info screens and the self-check-in kiosk. These two digital touchpoints are physical in its appearance, but the content and interaction is in a digital and virtual environment.

Figure 22 shows all interactions of the user within the conference centre and is the prototype. For an excellent user experience, all points need to be set up with a high usability to add value to the journey. Based on discussions in Workshop 4, the touchpoints can be divided into touchpoints with fixed and touchpoints with dynamic information. This feedback on the prototype was used to refine the journey.

WORKSHOP 4 DISCUSSION OF FINDINGS

Subject of workshop 4 was to determine the crucial touchpoints for the user and facility service provider. The results from the previous workshops were presented to the team leaders following a discussion. Initial feedback showed, that some identified touchpoints of the journey are considered as fixed by the service provider, information remains the same, and some touchpoints of the journey are considered dynamic, information changes.
Workshop 4 discussed also potential improvements at each touchpoint to also optimise the service delivery process.

The discussion continued further with questions regarding the tasks the user performs at touchpoints, and what information has to be maintained by the back-office. Following the service design methodology, these would be the front-end activities, back-end activities and support processes. To evaluate what touchpoints are crucial to the user journey, the parameters of fixed/dynamic information and demand of resources (e.g. staff, software) were applied. Another important aspect discussed in workshop 4, is the understanding that the user journey starts already before the arrival at the premises of case organisation Y. As the future premises consist of two buildings, there is a high risk that users go first to the office building, see figure 22, and need to be redirected. Hence, the invitation as the first touchpoint was added to the touchpoints listed in figure 24 below as it can contain guiding instructions.

Following touchpoints have been selected as being crucial for the user and service provider journey, see figure 24. The light green touchpoints are assumptions as in the workshops only touchpoints until the lunchbreak were analysed due to time limitations.

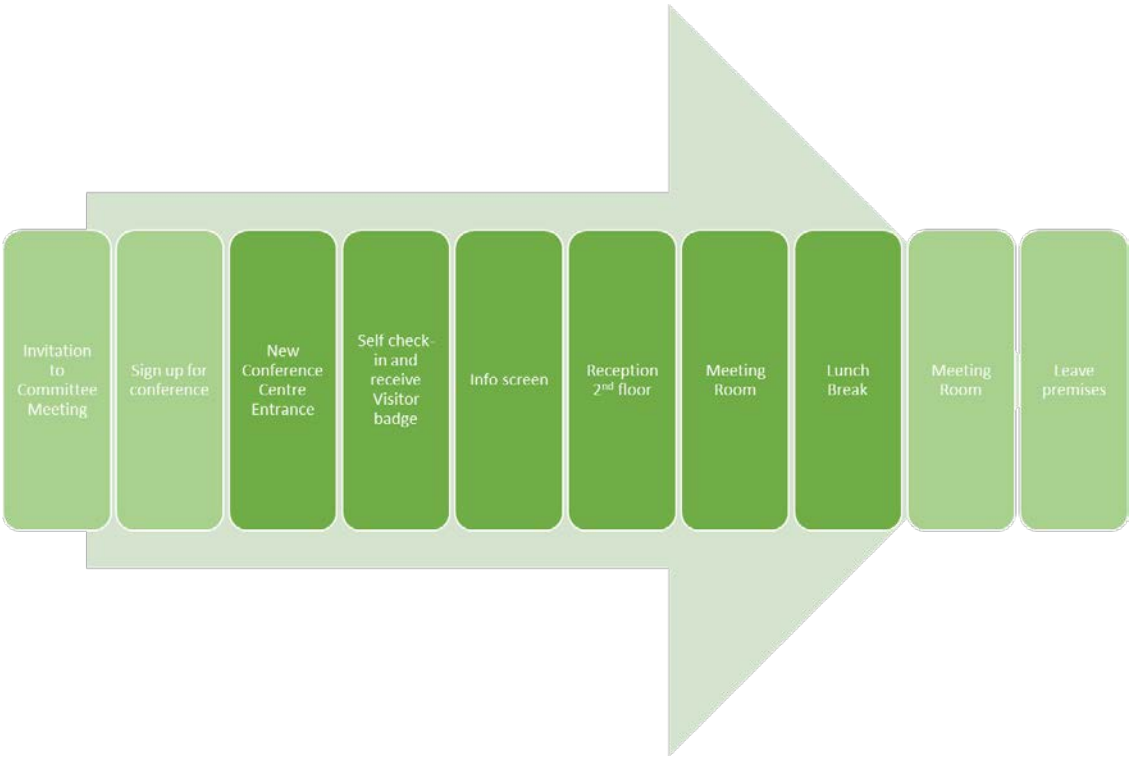

Figure 23 User Journey - Crucial touchpoints

In case of organisation Y, the crucial touchpoints for users also define the crucial touchpoints for the facility service provider. All of the services above are under control of the teams of the corporate services unit, see figure 22. Responsibility for provision of the facility services with a high usability, see figure 10, and a suitable physical environment, see Figure 9, lies within the unit. Understanding of each role in creation of the journey can support a better understanding of the interdependency of facility services and expectations of the users. Based

4.6 Delivery of the concept

The concept of the defined user journey, see figure 24, aims to provide a holistic journey and to combine expectations and requirements by the user on the physical, social and virtual environment. Embedded in the theoretical framework and to understand the creation of user experience, the concept of the user experience, see figure 14, in relation to the user journey, see figure 24, is shown below in figure 25 and displays the concept of the future stated journey.

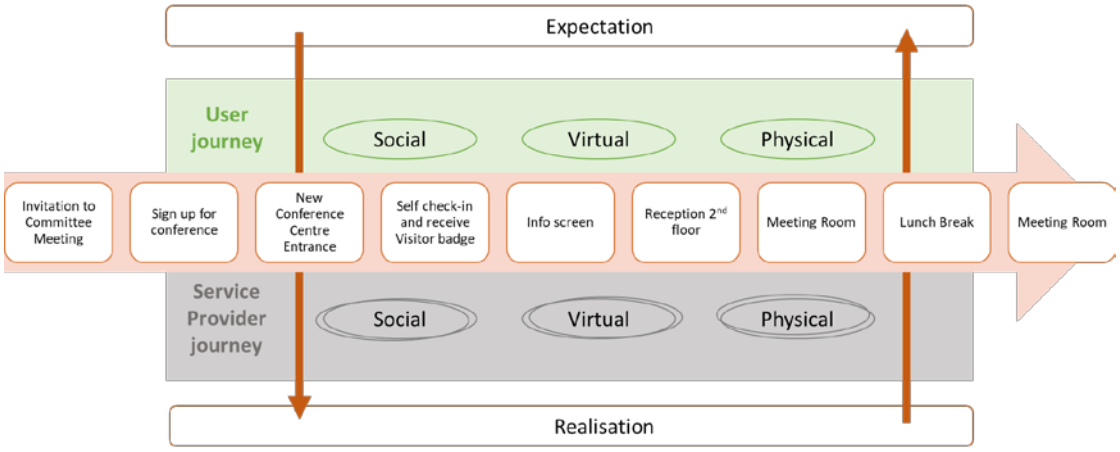

Figure 24 User experience and journey concept

Embedded in the established framework, the facility service provider must assure that the services provided match the expectations. Following the ISO 41001:2018 definition of Facility Management, the facility service provider must integrate people, place and process within the conference centre to improve the committee meeting experience of the users.

4.7 Results

Results and findings, see figure 25, define all together 10 crucial touchpoints along the journey in the new premises for committee participants. Each touchpoint is selected carefully and requires further design and planning by the various teams of the corporate service units to assure functional und usable interactions.

The following, see also figure 25, lists the requirements for touchpoints that will be used as further implementation guidelines.

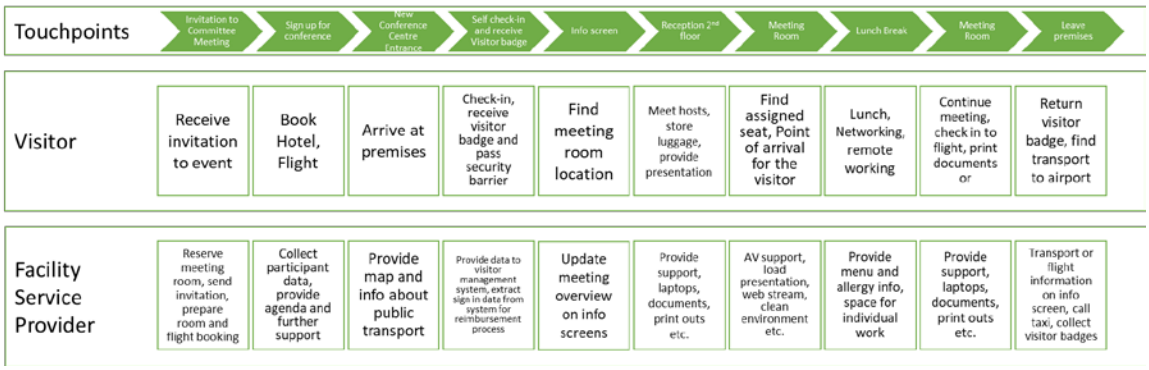

Figure 25 Future stated user journey

CENTRALISE SERVICES

Touchpoints that take place before the arrival at the premises of organisation Y contribute to the planning phase of the event. Here, all required data for the organisation of flights, hotels, reimbursement, agenda and participation is collected and exchanged between the various stakeholders, see also Figure 20. Most interfaces, e.g. flight and hotel booking, provided by external service providers. At the moment of the analysis and gathering of information, it seemed more beneficial, if this task was executed by the corporate service unit. One of the main contact points for the committee participants is the meeting organiser, see Workshop 1, as the meeting organiser prepares and provides the information that is sent out for the meeting organisation to the participants. If this process, the process of organising a meeting, is well organised and structured, it will positively impact on the committee participant's experience.

INFORMATION EXCHANGE BETWEEN THE CORPORATE SERVICE TEAMS

The information exchange among the teams would benefit from a centralised system and unified ways of processing and maintaining data related to event organisation. By using the same tools and updated information, better knowledge exchange and meeting preparation is made possible. Further, this point also refers to data available to teams through other systems, e.g. visitor management system. Data available here, can replace tasks, that created an additional stop for users and have only little benefit to the information collection in regards to the amount of work caused and resources required. This refers, e.g. to automated attendance lists or digital signage of required non-disclosure documents.

TECHNICAL IMPLICATIONS

Following a discussion about attendance lists, required signatures, physical security regulations and information available from the visitor management system, it became clear, that scanners reading the visitor badge are only required to enter the premises. Information regarding departure times of users or presence in the building is not required for financial process or security. The strongest argument used for badge scanner in both directions when crossing the security barrier, that in case of a fire alarm this system would show who is still in the building, is not valid. In case of a fire alarm, the emergency exits are used, which do not scan badges.

VISITOR BADGE AND INFO SCREENS

The info screens and visitor badge are used to provide information to the visitor and used as part of the guidance system in the building, see figure 26. Visitor badges are used to identify visitors and their role in a committee. In addition, the visitor badges can contain meeting information to guide the visitor. Ideally, the QR code on the visitor badge that is used to pass the security barrier, also contains further information, e.g. free lunch or coffee, and can be

scanned by the canteen service provider. The info screens are close to the main entrance and visible to the users at the entrance. Available information on the displays can list the name of the meeting, room number, direction and starting time of the meeting.

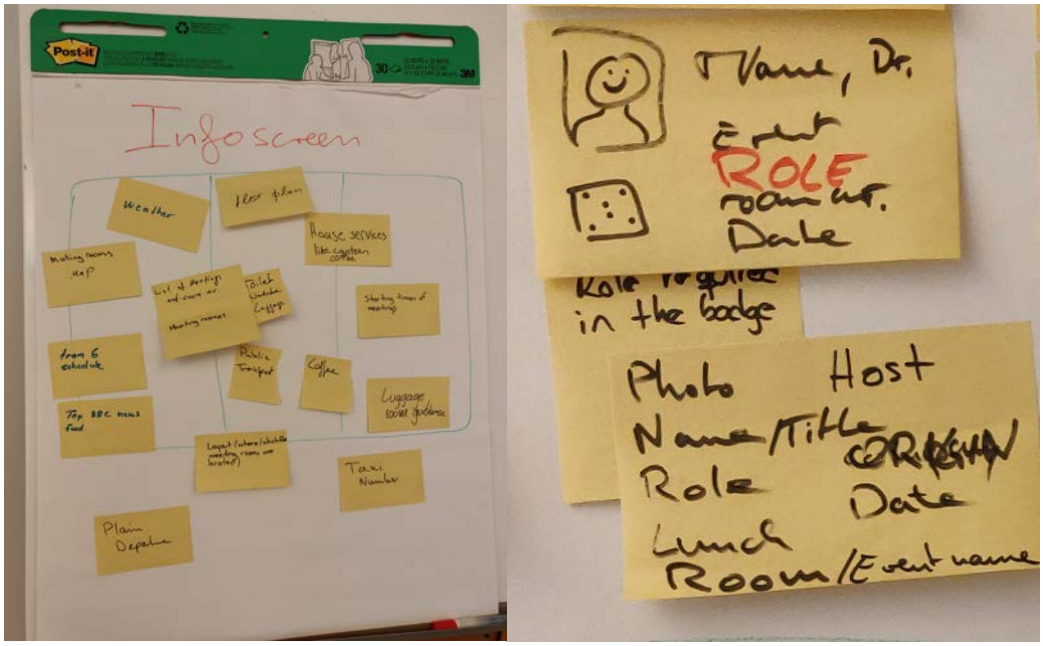

Figure 26 Infoscreen and Visitor badge

WHERE DOES THE JOURNEY START AND END

The journey starts with the first contact, the meeting invitation, and ends with the last contact, e.g. a survey via mail. As the first touchpoint, the invitation to the meeting sets the first impression for the meeting experience and further contact with organisation Y. Based on findings from workshop 4, the corporate service unit and its teams need to extend their understanding of providing service within the premises, to an understanding that aims to support the experience from first to last contact. So the teams can control expectations, provide information and support a fluent user journey. Additional information on upcoming touchpoints, e.g. security check and how it works, can make users aware of the environment and prepare accordingly.

5 Summary and conclusion

Purpose of this thesis was to enable organisation Y to gain an understanding on how to provide an excellent meeting experience in their new environment. The meeting experience is created through the interaction between the facility service provider and the users. Organisation Y can influence this experience though the provision of service at the various interactions, which over time create the user journey and form the experience. An examination of the various touchpoints and which ones are crucial for the journey of the user and the Facility service provider is the outcome of this thesis.

Summarising the results and answers to the research questions are defined. The crucial touchpoints committee participants and the service provider are defined, see figure 25. Contrary to the expectation that two journeys would be the result, one for the participant and one for the service provider, the process has shown that both parties follow the same journey, only from different aspects. The alignment of the touchpoints and interactions between the parties an essential aspect for the creation of an excellent meeting experience.

As such, the results are in line with the theoretical framework establish. With the aim to create an experience, the profound understanding of how to create an experience helps to establish the need and desire to provide facility services that match user's expatiations. The theoretical background searches a methodology that creates a holistic meeting experience taking into account the physical, social and virtual environment. While the identification of the crucial touchpoints establishes an order and timeline, the theoretical background provides more in depth information that supports the definition of the various needs for each.

Chosen approach took only members of teams from the Facility service providers into account. This has major impacts on further implementation. Firstly, the user acceptance. Within the new journey, the order of touchpoint compared to the "old "journey is fairly similar, but he execution of services at some of the various touchpoints changes drastically and requires a change of the work process of several users as well as the introduction of new tools to the users. This can lead to resistance to change. It is possible that crucial aspects and information is not taken into account an can require changes at a later stage. In itself this is not a major issue and desired under the need for constant improvement. Second aspect is the narrow point of view available. Knowledge collected and decisions made in the workshops did not include any users. The decision taken during the setting of the scope of this thesis, to involve at this stage only staff of the corporate service unit, As the preparation and set up of the journey is currently at the moment of implementation, a broader point of view and input from users could have provided more depth to the available data and information. For successful implementation and to create this journey into daily business, the various teams have to change their service delivery. Stickdorn (2018, 274) points out that that change management is an important factor here. Reviewing the framework, indication of a methodology for successful implementation could be useful, but would be out of the scope of this thesis.

Results of this journey are highly valuable to organisation Y and are implemented within the coming months. Identification of the crucial touchpoints avoids a copy of service delivery from the old premises 1:1 to the new premises, but supports the improvement of service delivery and adaptation of the service delivery process to the new environment. Various finding provide a framework for the definition of new work instructions and next steps for the teams

to work on the practical implementation. As the committee participants are only one of many user groups of the premises, the framework, methods and tools can be used for further research and design of experience creation of the other stakeholders, e.g. staff members, maintenance companies, short term visitors, Trainers etc.

The user journey is strongly predetermined by the physical environment. A holistic understanding, by adding social and virtual aspects, creates a more refined and layered journey. To provide an excellent user experience, it is crucial to also fill the needs during the times the users are "free to move", e.g. breaks, lunch time or after the meeting and support before and after the meeting, e.g. for arrival and departure. Further development of organisation Y should consider the establishment of service blueprints and the design of each service. For further refinement of the user journey, the future stated journey of this thesis needs to be verified and validated. As soon as the implementation takes place, methods to Also, additional layers should be added to the journey, e.g. work profile for each tasks, outsourcing possibilities, critical tasks etc.

Research questions 1 and 2 aim to understand and define the crucial touchpoints for the users and the facility service provider for the purpose to design an excellent meeting experience in the new premises. The results show, that there are 11 crucial steps, see figure 24, that form the user journey. By understanding expectations and matching the realisation, see also chapter 3.3.3, the corporate service unit will be able to create an excellent meeting experience. Further development should also look into a system to measure the success of the services. With service design often comes a change to the current way in the service delivery process that requires change management. To measure the success, Polaine (2013, 161-162) writes that the measurement needs to be done over time and across the touchpoints. It needs to be measured, if the delivered service meets the customers' expectations across the process. The measurement tool needs to "measure people's experience as they move between touchpoints because this reveals the relationship between expectations and experiences" (Polaine 2013, 162).

I hope this thesis, the results and findings provided and the workshops held with the service design methodology have shown the various team members new possibilities in service provision and ways to improve their service. Contrary to the user journey in the current premises, the future journey should enable fluent transition between the touchpoints and enable and empower the user to independently arrive to the meeting.

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Figures

Tables

Appendices

Appendix 1: Site observations – current journey

Site observations – current user journey

3.4.2019 – 7.45-9.30 - Participant Observation Reception

7.45

- Can't find badge, search for space to put down bags
- Main door doesn't open, pull by hand
- 1 receptionist before 8, 2 receptionists after 9
- Kids passing with parents (staff) though lobby (leaving from office)
- Staff going straight to staff revolving door
- Visitor to reception, looks for time, signs paper, receives visitor badge, enters through visitor revolving door, gets stuck
- Visitor to reception, hands ID, signs paper, no space to leave bike helmet while searching bag, reads info material, checks phone
- Main door doesn't open, visitor looks for assistance, goes to reception, receives badge, goes through door
- Receptionist tells visitor which door to use

8.30

- Person finishes phone call before entering
- Main door not opening
- Looks for badge, puts bag on nearby table to search bag
- Only one door leaf opens of main door
- Visitor announces event, shows ID, gets badge door rotates
- Guard always check visitor's name from paper list that shows meeting participants
- Visitor comes in, stops in middle of way,

8.35

- Never both door leafs open at the same time
- Visitor hand ID, gets badge, waits on sofa, then realises to enter
- Visitor stop in way to search ID, show ID to reception, get badge, go through door

8.37

- 3 visitors arrive, hand Id, get badge, wait on sofa

8.40

- 3 more arrive, block pathway to search ID
- All wait on lobby after receiving badge
- Visitors ask what room event is in, unclear that they can go inside

8.40

- Visitors hands ID, gets badge, waits on sofa
- 3 visitors arrive, show ID badge

8.42

- 4 more visitors arrive, most wait on sofa
- 3 visitors arrive, show ID, get badge
- Unclear where to go next, other visitor says they can just enter and follow through door

- 8.43
- Door stops, visitor confused, but doesn't go to reception to ask about door, waits at sofa
- •Group of people waiting, unclear if for reception or else
- New people just wait in line
- Guard asks people if here for certain event to enter and manually activates revolving door
- Visitors taking off jackets while waiting
- Sort stuff on sofa, start chatting with each other

8.47

- Guard again asks certain event visitors to enter. Opens revolving door manually
- Main door opened by hand

8.49

- 12 visitors arrive, just stop in middle of way
- Receptionists check ID, the additional guard is needed to activate visitor revolving door
- Phone at reception rings, slows down check in process
- More visitors arrive
- Visitors sign for badge

Observation after entering through visitor revolving door

- Staff member welcomes visitors and takes them down to conference floor

- Waiting for mor3 elevators
- Floor and room unclear
- 3 staff members needed to bring people to conference floor

Conference floor

- Staff holding door open to conference area
- No signage
- Visitors drop luggage and coats

Conference lobby

- Unclear if all visitors check in already, event organisers ask from staff who hosted visitors down
- Catering arrives to bring cups, lots of noise
- Signature required, need to remind visitors
- 1 Participant is not announced and is missing from Event organiser list
- Participant is in hurry to sign due to being late
- Visitor checks seating plan before entering room
- 1 event organiser goes back to main entrance lobby to host more visitors, in case more arrive late
- Reimbursement role unclear from ELM, participants missing from list
- Staff enter room late
- Name badge visitor badge needs to be created and added in the meeting room for unannounced participant
- Count of signature list needed to count actual participants. Planned list does not have accurate information.

Notes on what happens during the day

- Return "pocket"
    - Reimbursement requires, confirm bank account
    - Flight tickets, public transport tickets etc.
- Printing documents/flight ticket
- Meet ECHA experts/colleagues
- Ring bell during coffee breaks to get people back in room
- Conference reception staff available until 17 o'clock

Appendix 2: Touchpoints Future Visitor Journey

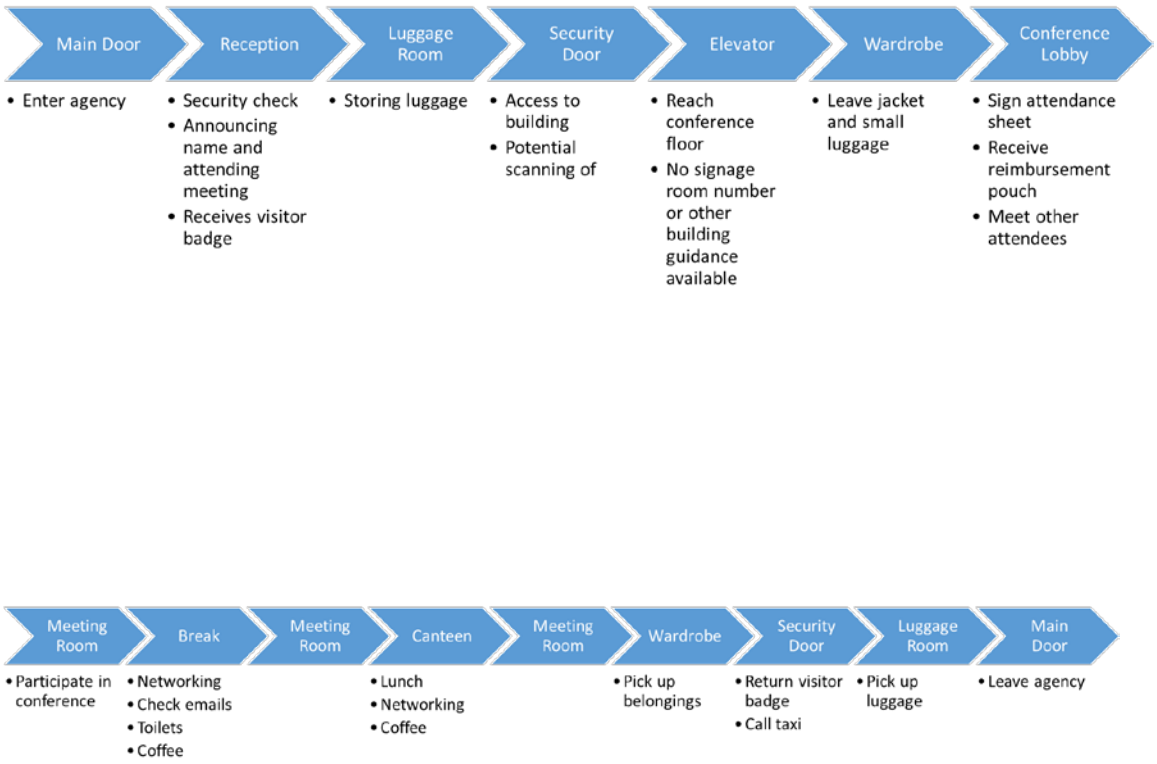
Nr.	Touchpoint	Visitor Needs	Facility Services	Ideas and comments
1	Main entrance Office	Visit needs access to Conference centre	Guidance to conference centre. Map of buildings sent before arrival Sign on Bridge/ outside office building.	Additional signs/ posts during first months after opening of new building.
2	Walk to conference centre	Find door	Arrival by taxi in front of door.	Leave barrier down.
3	Access to conference centre	Access to building.	Program door open.	Guidance signs outside door.
4	Info Desk	How to register? Where is the room? I need a badge? I am replacing someone Paperless/ paper invitation.	Reception Services during event times. Sign in with self-service kiosk. Add new visitor to visitor management system.	
5	Self-check-in kiosk	I need my badge No ID with me How do I check in?	List of preregistered visitors. Metadata of visitors. Check in kiosk maintenance and consumables (badge holders/paper roll) Sign NDA. Live view of arrived visitors to EA. Arrival notice to host.	This touchpoint can take over several tasks. In the current journey, visitors need to sign NDA's, reimbursement papers and attendance sheets and stop at 2 desks. Possibly the signatures can be all collected at this kiosk.
6	Grab card holder and badge	Where's the meeting room? Can I now get in? Where is the toilet? Where drop luggage?	Colour code for the badge (lunch) Identify what info should be on badge Instruction slide how to enter through gate	Badge can include meta data, e.g. free lunch or else.

7	What's next?	What's next?	Sign "go to gate".	Final slide of kiosk to show meeting room number and floor.
8	Back to info desk	Info about directions to meeting room, WC, cloakroom etc. I can't find myself in system.	Signage/ phone number or receptionist required Meeting Organiser adding person to visitor management system	Process to add new visitors to kiosk.
9	Show badge at Security Gates	Access to Building Take off badge to show to QR reader	Maintenance of speed gates Communication between visitor system and access control system.	Badges preferably not sticking to clothes, but in badge holder. QR reader for badges only required for incoming traffic.
10	Info screen	Guidance. What's my meeting room? Where's my meeting room? Where can I leave coat, luggage? Coat room is full? How much time until the meeting starts?	Meeting name, Floor, Room Nr., times Toilet, wardrobe luggage House services (canteen, coffee) Top BBC news feed Public transport, taxi number Weather Plain departures Signage based on your destination Events in Helsinki	Info screen is an important stop and has daily changing data. Efficient content management required.
11	Reception 2nd floor	Drop luggage and coat in luggage room Sign attendance list, if needed Find meeting room	Building signage Sign participant list Reimbursement pockets Hearing aid head phones	Too little coat space based on space planning. More coat racks to be added though furniture plan.

		Receive reimburse-ment pocket	Provide Customer service Cleaning Maintenance of premises Wi-Fi/Printer Ergo equipment Storage cabinets Office supplies	
12	Meeting room entrance info screen	Find assigned seat number and seat on seating plan	Room entrance screens. Name of meeting. Seating Plan. Agenda. Program door lock-ing.	Screen needed to display seating plan. Currently paper on flipchart is used, this should be avoided.
13	Meeting room and seat (point of ac-tual arrival)	Where is my seat. Wi-Fi password. Meeting documents. Socket for charger. Who is next to me. When is coffee break.	Announce house rules, Wi-Fi pass-word, chair adjust-ment Seat number visible Pre-check AV equip-ment and rooms	Seat number to be visible from both sides. Common sys-tem to be used, e.g. cinema numbering.
13	I am missing some infor-mation	Can't hear, hearing aid required	Provide hearing aid head phones	
14	Coffee Break	Can't hear, hearing aid required Print boarding pass Return reimburse-ment documents Request to dispose documents Loan laptops Where/ How can I print Snack needed "Networking"	Catering Loan Laptops Public printer	

		Identify other meeting participants Find toilet Have private phone calls Read mails		
15	Lunch Break	Where is my special diet food Check with meeting secretary about presentation and give her latest version Networking Airplane information News Look for canteen Go to food line/ grab food Go outside for fresh air Come back to meeting Can I visit luggage room on a lunch break Print boarding pass	Info when event continues If presentation is not working, AV provides support Ensure that the facilities are provided (canteen, quiet place, sofa areas) Provide public printer Display flight info on screens Ensure the proper food labelling and the space in the canteen Access control on both sides of speed gate? Signs for canteen Lunch info is in the badge Same badge should provide access to premises during the meeting dates	

Appendix 3: Current User Journey



Step 1 Main Door

Visitor enters the building. Automatic door opening does not always work, visitors pull door at handle to open.

Step 2 Reception

At the reception several services are required, ID check, visitor badge, activation of security door, access to luggage storage, info about meeting room locations etc.

To enter the premises, all visitors are required to wear a visitor badge. The badge shows the visitors name, name of the committee and function and indicates the area the visitor can move within without a host.

After identification, the receptionist checks the daily visitor list and if listed, the visitor receives the badge, signs the visitor sheet and is allowed to pass the security barrier. Some of the visitors have bigger luggage items with them and are asked to store the luggage in the luggage storage close to the reception.

Step 3 Luggage storage

For the duration of the visit, visitors can store bigger luggage items in this storage.

Step 4 Security door

With the Visitor ID badge, the security barrier, revolving door, can be passed. Revolving doors are manually activated by the receptionist. During the arrival of bigger groups, the door is not activated directly after handing out the visitor badge and it is not clear for visitors that they have to enter the door.

Step 5 Elevator

Behind the security barrier, the visitor is in the semi-public area of the company. The first host from ECHA guides the visitors to the elevator. In the elevator, a second hosts guides the visitors to the K3 level where the conference centre is located.

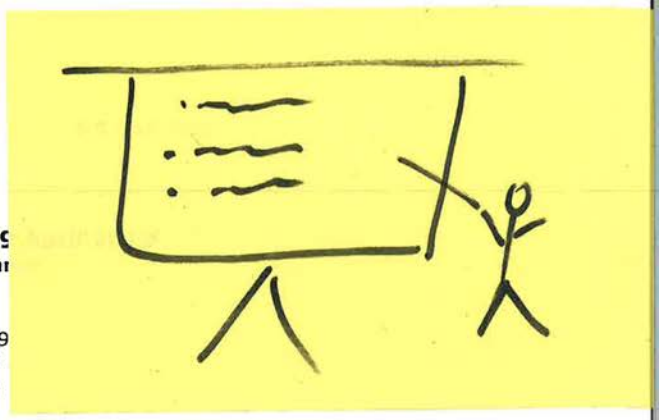
Step 6 Wardrobe

A third host welcomes the visitors and guides to the wardrobe and meeting conference lobby.

Step 7 Conference Lobby

In the conference lobby, further hosts welcome the visitor, show the seating plan to identify the seat number. Event assistants request the committee participants to sign the attendance sheet and, if required, hand out reimbursement pouch. Based on regulations established by the company, defined participants holding certain functions, receive reimbursement for hotel, flight and a daily allowance. The reimbursement pouch holds all documents necessary to carry out the payment, e.g. confirmation of bank account, flight tickets etc.

Appendix 4: Workshop agenda



Facilities Network Meeting 8-9
Improving Environmental Performa

Date	8-9 April 2019
Timing	Start: 9:00
	Finish: 16:00
Location	[redacted] -

DAY 1	**Global Trends & Opportunities**
08:30-09:00	**Guests arrive**
09:00-09:15	**Opening of the event**
09:15-09:30	**Welcome by the host**
09:30-10:00	**European Collaboration in Facility Manageme**
10:00-10:30	
10:30-11:00	
11:00-11:30	
11:30-12:00	
12:00-12:30	
12:30-13:30	
13:30-13:50	
13:30-14.30	
14:30-16:00	

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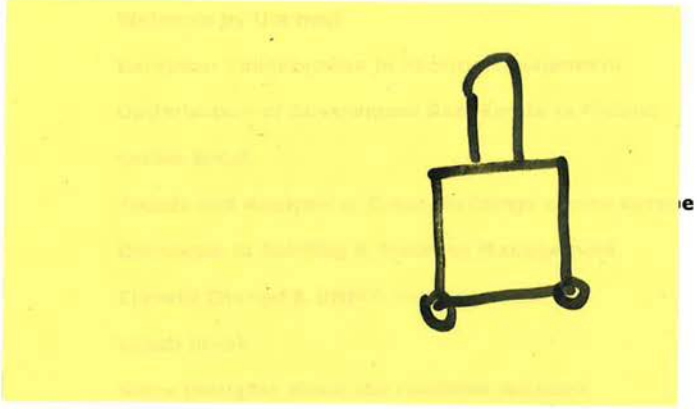
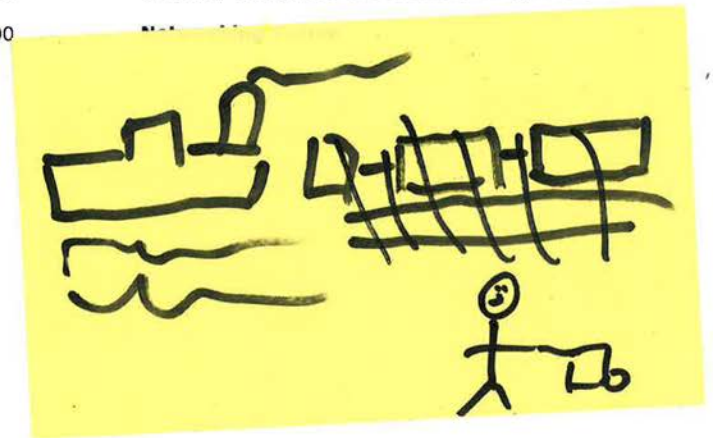
Facilities Network Meeting 8-9 April 2019
Improving Environmental Performance

Date	8-9 April 2019
Timing	Start: 9:00 Finish: 16:00
Location	[redacted] CR1

DAY 1	**Global Trends & Opportunities**
08:30-09:00	**Guests arrive**
09:00-09:15	**Opening of the event**
09:15-09:30	
09:30-10:00	
10:00-10:30	
10:30–11:00	
11:00-11:30	
11:30-12:00	
12:00-12:30	
12:30-13:30	
13:30-13:50	
13:30-14.30	**Update/ Initiation of Benchmarking Exercise**
14:30-16:00	





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