Trying to become "The World’s Cosiest Airport"

A Case Study on Customer Experience Management from a Service Delivery Network perspective

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Abstract

The practical relevancy of Customer Experience Management is increasing. The research on the topic has still not found common ground in all areas. Most scholars still fail to see the advantage of adopting a broader perspective of Customer Experience Management and integrating factors that lie out of the focal company’s control into the scope of the conceptual framework. The aim of this thesis is to clarify the principal elements that constitute Customer Experience Management and explore what role the Service Delivery Network plays in this context and how it can be managed more effectively with the help of IT/IS. To explore the problem empirically, a case study approach was used. The author had the possibility to investigate the Passenger Experience activities of Tallinn Airport which has the unique goal of becoming "The World’s Cosiest Airport". Summarizing the findings of the thesis very briefly, the following things should be noted. First, the case study has shown empirically that passengers’ experiences with different companies in a Service Delivery Network interfere with each other. Second, the findings suggest that Partner Management is an important part of Passenger Experience Management. Third, IT and mobile IT in particular are good means to manage Passenger Experiences. Especially, mobile applications have a huge potential to support a customer’s self-management and co-create an experience. A potential avenue for future research would be 1. to take on the passenger perspective on the topic and 2. to replicate the study or at least parts of it at other airports to allow cross-case analyses.
Acknowledgements

Writing this thesis was a great journey and very rewarding in many different ways. Conducting the research for this thesis, collecting the data, organising and analysing it, once again showed me how interesting and enjoyable research is. It also showed me how much attention and time it demands, which is not always easy for the people closest to you.

At this point, I would like to thank everyone who supported me during this journey. I am very grateful, that I got the opportunity to conduct my research in the SAP Research & Innovation Hub in St. Gallen. The environment provided by SAP and my colleagues was very inspiring and enjoyable. Moreover, it allowed me to get great feedback whenever I needed it. I want to thank all my SAP colleagues, especially, the A2D-project team and its project manager Oliver Kasten. Oliver was always available to help me restructure my thoughts and to give me a new perspective on things. The meetings and discussions with the A2D-team were always very interesting and helped me a lot to get the bigger picture on Customer Experience Management and generate new ideas.

I also want to express my gratitude towards Tallinn Airport, in particular to Eva Maarend and Sven Friberg. Eva and Sven were extremely open and helpful. It was a pleasure to interview them and listen to their elaborate narrations, without which the case study would not have been possible. I would also like to thank Rasmus Kabun (Tallinn Airport), Marcus Liimets (Estonian Air), and Monika Tubro (Inflight Service Estonia Eesti OÜ) for their contribution in the form of questionnaire responses. Of course, I am also very grateful to Milan Guenther, who brought me in contact with Tallinn Airport in the first place.

Furthermore, I would like to thank my supervisor Christina Keller. She was always, and I mean this literally, available for feedback and gave me valuable guidance throughout my thesis journey.

Finally, of course, my warmest thanks go to my family, especially, to my girlfriend for always supporting me, believing in me, and distracting me when I needed it.
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1 Introduction

Shortly before the millennium Pine and Gilmore (1998) published their work about the Experience Economy. They were claiming that this is the next revolution. Although, their prediction has not totally been right so far, the practical relevancy of Customer Experience Management has increased ever since. Also many other researchers have studied the topic and published in highly ranked journals (e.g., Gentile, Spiller, & Noci, 2007; Schmitt, 2003; Verhoef et al., 2009). Differentiation, as a source of competitive advantage, "extends beyond the physical characteristics of the product or service" as Grant (2013) highlights it. This is one reason why Customer Experience got into the focus of more and more companies from different sectors, because it considers more than the physical characteristics. As the research on Customer Experience "is still considered to be relatively in its infancy" (Laming & Mason, 2014, p.15), the study of its management is at best on a similar level.

The novelty of this thesis is the empirical investigation of the problem of complexity of interferences among experiences within a customer journey. The travel sector appears to be a very good example of an experience driven industry that is characterized by the involvement of multiple companies sharing a customer along a customer journey. This situation poses a problem that is identified by only very few researchers. In the conducted literature review, only very few articles brought up the problem, Tax, McCutcheon, and Wilkinson (2013) showed a very good conceptualisation with their Service Delivery Network to describe such a situation. A scenario to illustrate the problem could look as follows: Company A is a train company that is offering a coffee shop of partner company C in one of its wagons, and company B is an Airline. The customer’s experience with the train company is obviously intertwined with and potentially affected by the experience that the coffee shop operator is delivering, for example, bad tasting coffee. Furthermore, the Customer Experience with the airline might be affected by the train company, for example, through a delay of the train. This simple example shows the potential complexity of this matter. A preliminary review of the research on CEM indicated that there are no prior studies on interference problems at airports. The research of this thesis aims to fill this knowledge gap.

The purpose of this thesis is to clarify the principal elements that constitute Customer Experience Management, to explore what role the Service Delivery Network plays in this context and how it can be managed more effectively by means of IT/IS. In the empirical study of the thesis, the Service Delivery Network is represented by the case of Tallinn Airport.

Based on this research purpose the following research questions (RQ) are formulated:

RQ1:  What are the principal elements of Customer Experience Management in research?

RQ2:  How are passengers’ experiences with their Service Delivery Network interfering with the management of the overall Passenger Experience at Tallinn Airport?
RQ3: How is Tallinn Airport dealing with the interference caused by their passengers’ Service Delivery Networks?

RQ4: What IT solutions currently exist at Tallinn Airport to support the management of the Passenger Experience?

RQ5: How can interference problems in Passenger Experience Management at Tallinn Airport be facilitated and managed with the help of IT/IS?

**Delimitations**

The study focuses on one specific empirical case in the transportation sector, namely the CEM at Tallinn Airport. It should be pointed out, that CEM, in this case study, only concerns Passenger Experience. The airport company solely operates in Estonia, so the geographic focus is on one country only. However, because the airport’s passengers are international, the impact of the geographic focus on one country is limited.

The context of an airport is rather unique because it is not only an environment were end customers, namely passengers, are shared by many providers, but also the airport’s customer segments are quite diverse. On the one hand, that limits the scope of the study, on the other hand this strong focus enables in-depth insights to a problem that is in general not limited to the airport context. This is the (experience) management of customers whose *Job To Be Done* (Christensen, Anthony, Berstell, & Nitterhouse, 2007) is not fulfilled by one company alone. The interferences among the customer’s single experiences with the involved companies and the effect on the Customer Experience with one of the companies is of interest for this thesis. However, it is not studied on a psychological level why one experience has an influence on another, because that would require psychological insights that are outside the scope of this thesis.

After all, within the area of Customer Experience Management, the focus of this study is not the passenger. It is the process of the management of the customer’s experiences with a specific focus on the interference among different providers. Although the case study naturally also demonstrates the general way of how CEM is done, the reader should not expect to learn about the entirety of its many different aspects in the airport environment. Also it is not the goal to find out all instances of interference, but rather to study the most import instances and how they are dealt with. However, the theoretical aspects of CEM are presented in detail in section 2.

**Definitions**

The customer journey denotes "a series of touchpoints, involving all activities and events related to the delivery of the service from the customer’s perspective" (Patricio, Fisk, Falcao e Cunha, & Constantine, 2011, p.182).

The definition of *Customer Experience* that is used in this study, was established through the literature review. The short definition is as as follows:

The concept of Customer Experience basically describes a customer’s personal attitude towards a company and its offerings (Berry & Carbone, 2007), and how this attitude is formed through an evaluation process during the customer journey (Verhoef et al., 2009).
In the context of the airport the term "customer" would be ambiguous. That is why the related terms, used in this study, should be defined at this point. Customer, as in Customer Experience Management, is a very general term describing all types of parties to whom the airport offers a value proposition in return for financial means. In the context of the airport it would be ambiguous and could mean the airline, a passenger or also a retailer or other terminal tenant. This is why, from now on, the author always specifically states the type of customer when the focus is on the case study. The passenger is only called passenger or traveller. An airline is always referred to as an airline. All the concessionaires and terminal tenants, that also have a business relationship with the passengers or airlines are denoted partners. As mentioned before this thesis only focuses on the management of experiences of the passengers, however, the airlines and partners have a crucial role in this.

The concept of "Customer Experience Management" can be briefly defined as follows:

Customer Experience Management is the strategic management of the Customer Experience with the goal to consistently arouse a particular experience at every touch point, build sustainable relations with customers and turn it into financial success.

The concept of the "Service Delivery Network" is defined as:

(...) two or more organizations that, in the eyes of the customer, are responsible for the provision of a connected, overall service. (Tax et al., 2013, p.455)

In this thesis "Interference" denotes:

An influence on the Customer Experience of company A originating from a party B that is not or not entirely under the control of company A.

The remainder of the thesis is organized as follows. In the following section 2, the theoretical framework including the results of the literature review on Customer Experience, Passenger Experience, and Customer Experience Management are presented. Then, in section 3 the applied methods of data collection and data analysis for both the literature review and the case study are described. Then follows section 4, where the case report with the results from the investigations on Tallinn Airport’s Passenger Experience Management is presented. In direct relation with the previous section, section 5 is presenting the observational findings about the IT solutions, namely the physical artifacts (like app, website, etc.), that were examined during the case study. After that, the analysis of the results from the case study is dealt with in section 6. At this point the research questions that were formulated in the introduction section are answered. In section 7 the applied methodology, the findings, and their implications for research and practice are discussed. In particular, recommendations for Tallinn Airport are formulated. In section 8 the author concludes with suggestions for future research.
2 Theoretical Framework

This section is presenting the theoretical framework of this thesis. Based on a literature review, the state-of-the-art of research on Customer Experience, Passenger Experience and Customer Experience Management is presented. The field of CEM is rather new and researchers have not found agreement on its constituent aspects. This is why the theoretical framework is based on a literature review, to cover the different perspectives from multiple scholars (see subsection 2.1) and accordingly answer RQ1 by offering definitions including the principal elements of CEM (see subsection 2.2). The applied methodology is described in section 3. The results of the literature review are divided into four parts: the first about Customer Experience, the second about Passenger Experience, the third about the network perspective on Customer Experience Management and the last part about the applied theories and methods.

Table 2-1: Overview of research themes in CEM research (# = number of papers; details in Appendix 2)

<table>
<thead>
<tr>
<th>Focus</th>
<th>Reference</th>
<th>#</th>
<th>∑</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEM</td>
<td>(Berry &amp; Carbone, 2007; Berry, Carbone, &amp; Haackel, 2002; Meyer &amp; Schwager, 2007; Schmitt, 2003)</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Personalisation</td>
<td>(Glushko &amp; Nomorosa, 2013)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Challenges</td>
<td>(Neslin et al., 2006; Kwon &amp; Thompson, 2009)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Effects and Antecedents</td>
<td>(Rose, Hair, &amp; Clark, 2011, 2012)</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>- of being loyal</td>
<td>(Gwinner, Gremler, &amp; Bitner, 1998)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of consumer behavior</td>
<td>(Puccinelli et al., 2009)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of customer service</td>
<td>(Dixon, Freeman, &amp; Toman, 2010)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of CX</td>
<td>(Bartl, Gouthier, &amp; Lenker, 2013; Srivastava &amp; Kaul, 2014; Ding, Huang, &amp; Verma, 2011; (Grewal, Levy, &amp; Kumar, 2009)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>- of economic climate &amp; CX</td>
<td>(Kumar, Umashankar, Kim, &amp; Bhagwat, 2014)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of service failure</td>
<td>(Surachartkumtonkun, McColl-Kennedy, &amp; Patterson, 2015)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of waiting</td>
<td>(Bitran, Ferrer, &amp; Rocha e Oliveira, 2008)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- of knowledge management and culture</td>
<td>(Chakravorti, 2011)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>(Pine &amp; Gilmore, 1998)</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>CX</td>
<td>(Gentile, Spiller, &amp; Noci, 2007; Palmer, 2010; Frow &amp; Payne, 2007; Verhoeft et al., 2009; Gounaris, 2015; Bolton, Gustafsson, McColl-Kennedy, Sirianni, &amp; Tse, 2014)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Failure</td>
<td>(Zayer, Ottes, &amp; Fischer, 2015)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pre-purchase</td>
<td>(Edvardsson, Enquist, &amp; Johnston, 2005)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>(Helkku, 2011)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Experience Design</td>
<td>(Johnston &amp; Kong, 2011; Patricio, Fisk, &amp; Falcao e Cunha, 2008, 2011; Teixeira et al., 2012; Zomerdijk &amp; Voss, 2010)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Measurement of CX</td>
<td>(Kim, Cha, Knutson, &amp; Beck, 2011; Lemke, Clark, &amp; Wilson, 2010)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>- of the service experience</td>
<td>(Olsson, Friman, Pareigis, &amp; Edvardsson, 2012)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Networks - CEM</td>
<td>(Kwan &amp; Hotterm, 2014; Tax, McCutcheon, &amp; Wilkinson, 2013)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Stakeholder collaboration for CX</td>
<td>(Gopalan &amp; Narayan, 2010)</td>
<td>1</td>
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</table>
2.1 Literature review on Customer Experience Management - Themes and main findings

In the review of the literature, the following groups of general topics could be identified: the experience concept (or certain parts of it), the CEM process, experience design, effects (of different parts of the experience on the customer or for the company, or external influences on the experience), experience measurement, challenges to overcome, and the network perspective on CEM (see Table 2-1 for references). Due to the high relevance of the topic, a separate subsection (2.4) is dedicated to the network perspective. Further insights on purpose and findings of the reviewed articles are summarized in Appendix 2.

2.1.1 The experience concept

Pine and Gilmore (1998) are some of the pioneers of putting experiences into managerial focus. In their article they suggested that the "Experience Economy" is the next step after the agrarian economy, the industrial economy, and the service economy. Moreover, they introduced five design principles for experiences: 1) Theme the experience 2) Harmonize impressions with positive cues 3) Eliminate negative cues 4) Mix in memorabilia 5) Engage all five senses.

Verhoef et al. (2009) came up with a very extensive conceptual model of Customer Experience creation, which is based on the retail industry environment. This model includes the following determinants: social environment, service interface, retail atmosphere, assortment, price and promotions, and brand. Unlike most other scholars they also acknowledged the fact that there exists an interference between multiple channels and also with factors outside the companies control (Verhoef et al., 2009). Furthermore, they found that prior Customer Experiences also have a significant influence.

Gentile et al. (2007) empirically investigated the sensorial, emotional, cognitive, pragmatic, lifestyle, relational dimensions of some well-known products/brands, like Pringles, iPod and Swatch. Hereby they show the multidimensionality of the Customer Experience construct. Furthermore, they drew from Addis and Holbrook (2001) and differentiate the consumer value into utilitarian value and hedonistic value. The first refers to the functional features of a product, the latter to the experiential features (Gentile et al., 2007).

The concept of Customer Experience is taking into account emotions and changes in the customer’s perception and is thus able to overcome several of the problems that are typical to static measures of service quality (Palmer, 2010). However, Palmer (2010, p.196) concluded his review of Customer Experience (CX) literature, asserting "practical application of customer experience management may be difficult to achieve." One reason he mentioned is that Customer Experience is difficult to measure, because of 1. the complexity of context specific variables, 2. non-linearity of the experience, and 3. the difficulty in finding an optimal level of CX. One commonly used metric to measure CX is the Net Promoter Score (NPS) (Reichheld, 2003) which is described in more detail in subsubsection 2.1.5. One way to improve CX is to benchmark other companies that already deliver a superior CX (Frow & Payne, 2007). Frow and Payne (2007, p.94) pre-
presented two case studies that they claim illustrate "the process of creating a perfect customer experience". One of their cases is about the Guinness brewery which recognised that one of their major challenges was to motivate barkeepers to "deliver a perfect customer experience for their consumers" (Frow & Payne, 2007, p.96). Among other things they started educating their consumers "how to enjoy the consumption experience" (Frow & Payne, 2007, p.96).

Like Dixon, Freeman, and Toman (2010) and Bartl, Gouthier, and Lenker (2013) also Bolton, Gustafsson, McColl-Kennedy, Sirianni, and Tse (2014) wrote about "delight". Bolton et al. (2014) were taking a relatively broad perspective looking at examples from services like shopping malls, airports, cafés or a traffic police. Their main finding is that Customer Experiences can be enhanced by "small details that make big differences" (Bolton et al., 2014, p.253). One example of these small details is that the Hong Kong Airport is offering baggage check-in downtown and 24 hours before the flight. This is used for instance by business travellers that check-in their bag in the morning, then go to work and board the flight in the evening without having to carry their bags the whole day (Bolton et al., 2014).

While the above mentioned authors studied Customer Experience rather holistically, the articles that are following are concerned with specific aspects of an experience, such as failure in the health care context (Zayer, Otnes, & Fischer, 2015) or the pre-purchase phase of a customer journey (Edvardsson, Enquist, & Johnston, 2005). Also Helkkula (2011) reviewed literature to analyse the characteristics of service experiences.

Zayer et al. (2015, p.314) analysed the underpinnings of "consumers’ experiential framings of failure" in the consumption of high risk services, which mostly occur in the health sector, such as infertility treatments. The topic of this article shows how diverse experiences can be and how specific experiences alter the demand for action. A scope that is much more general has been used by Surachartkumtonkun, McColl-Kennedy, and Patterson (2015), who studied the effects of service failure.

Edvardsson et al. (2005) studied the possibility to simulate and test out services experiences in the pre-purchase phase. The study focused on the concept of experience rooms. As a case study Edvardsson et al. (2005) were using IKEA and its fully furnished "hyperreal" experience rooms. They developed a framework consisting of six design dimensions for experience rooms: physical artifacts, intangible artifacts, technology, customer placement, customer involvement, and the service experience itself through hyperreality (Edvardsson et al., 2005).

In the literature review conducted by Helkkula (2011) three categories of service experiences were identified. These are: phenomenological service experience, process-based service experience, and outcome-based service experience. Customer Experience literature was classified as considering the phenomenological characterisation of service experiences (Helkkula, 2011).

Gounaris (2015) wrote an encyclopaedia entry with a comprehensive definition of CX and CEM, drawing from definitions of some of the most cited authors in the field,
2.1.2 Customer Experience Management

While the scientific publications are rather investigating certain aspects of Customer Experience or Customer Experience Management process, the consultants and researchers that wrote more practically oriented publications go some steps further. They provide management frameworks with multiple-step approaches to CEM (Berry et al., 2002; Berry & Carbone, 2007; Schmitt, 2003) or give descriptions of what CEM is, when it is used, how it can be monitored and who in the company should be dealing with it (Meyer & Schwager, 2007). Berry et al. (2002, p.2) introduced the approach of the so-called "experience audit" that is based on video capturing and interviewing to investigate experiences. Then Berry and Carbone (2007) developed the idea further and came up with a five step approach to manage the experience quality. The five steps of the approaches by Schmitt (2003) and Berry and Carbone (2007) are presented in Table 2-2. Both Berry et al. (2002) and Berry and Carbone (2007) used the term clue.

*Anything that can be perceived or sensed – or recognized by its absence – is an experience clue.* (Berry et al., 2002)

The experience motif suggested by Berry and Carbone (2007, p.31) is a collection of "feelings that customers desire in an experience", and it "serves as the unifying element for every experience clue." Very similar to this is the "experiential platform", which is a an "experiential value promise", a kind of theme for the experience (Schmitt, 2003, p.27). While the first two steps shown in Table 2-2 are rather similar, the remaining five go each into other directions. Schmitt (2003) continues with design and innovation, while Berry and Carbone (2007) are suggesting to further analyse the experience and take actions not until the fifth step.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Analyse the customer’s experiential world</th>
<th>Identify emotions that are able to evoke the customer’s commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Build an experiential platform</td>
<td>Create an experience motif</td>
</tr>
<tr>
<td>Step 3</td>
<td>Design a brand experience</td>
<td>Collecting and evaluating experience clues</td>
</tr>
<tr>
<td>Step 4</td>
<td>Structure a customer interface</td>
<td>Determine experience gaps</td>
</tr>
<tr>
<td>Step 5</td>
<td>Engage in continuous innovation</td>
<td>Close gaps and monitor the execution of the actions taken</td>
</tr>
</tbody>
</table>

No general CEM approach, but a comprehensive perspective on how to deal with the personalization of human and technologically enabled service encounters was offered by Glushko and Nomorosa (2013). The article is dealing with the question how service interactions can be substituted with information. Glushko and Nomorosa (2013,
p.34) found "that interactions and information are substitutes for each other" and built a conceptual model that enables analysis and design of both human service interactions and automated service systems. The proposed model is based on five components, three managers (1. a service model manager, 2. a customer model manager and 3. a recommendation system manager) and two systems (4. a learning system and 5. a service monitoring system) (Glushko & Nomorosa, 2013).

2.1.3 Experience design

One part of Customer Experience Management certainly is the design of Customer Experiences. Several tools exist to map out Customer Experience, for example, process mapping, service-blueprinting, customer activity cycles, and customer-firm touch point analysis (Frow & Payne, 2007). Some systematic approaches are described in the following.

A longitudinal study of four organisations from different sectors resulted in a road map of ten stages for Customer Experience design (Johnston & Kong, 2011). The ten stages of the road map were further divided into four phases: 1. planning and setting the direction, 2. research and setting the mindset, 3. development through involvement, and 4. implementation and embedding the changes (Johnston & Kong, 2011).

Zomerdijk and Voss (2010) analysed 17 case studies to test their set of experience design propositions. The design propositions that experience design involves customer journey design, touchpoint design, sensory design, and the designing of a dramatic structure of events were supported the most. They also identified "promising new frontiers in experience design" (Zomerdijk & Voss, 2010, p.67). These were the engagement of employees, the management of fellow customers, and the close coupling of "backstage employees" and "frontstage activities".

A more detailed and low-level approach of experience design was taken by Patricio, Fisk, and Falcao e Cunha (2008, 2011) with the development of the Service Experience Blueprint and later the enhanced version, the Multilevel Service Design method. It is based on a process model with swim-lanes and brings a technological perspective into service design (Patricio et al., 2008, 2011). While the first version was rather basic having the focus of multiple interfaces (Patricio et al., 2008), the second version included also a customer journey perspective on service design through introducing a three level model of Customer Experience (Patricio et al., 2011). The first level is the Value constellation experience, the second level the Service Experience and the third level the Service Encounter Experience. Teixeira et al. (2012) drew from the work by Patricio et al. (2008, 2011), found a need to integrate further elements, and developed the Customer Experience Modeling method which is supposed to be well suited for multidisciplinary design teams. As this topic is closely related with the Service Delivery Network perspective the further relevant details are presented in subsection 2.4.
2.1.4 Effects of and on Customer Experience

Dixon et al. (2010) investigated the effects of delight in customer service experiences. They found that delighting customers, for example through giving them a refund or a free product, is not the right approach when striving for customer loyalty. In fact, exceeding their expectations during a customer service call, is much less efficient in achieving customer loyalty than simply reducing their effort to solve the problem (Dixon et al., 2010). They claim that acting on this insight could aid to improve customer service, lead to a reduction in customer service costs as well as a decrease in customer churn. However, it should be noted that their research was limited to the service encounters with contact centre representatives or using self-service channels. Also Bartl et al. (2013) addressed the topic of delight, however, they investigated its effects only in the online environment. They found that delight has a significant positive impact on purchase intentions. As satisfaction and delight are distinct constructs, their effects on customer behaviour differ (Bartl et al., 2013). Website satisfaction did not show significant impact on purchase intentions (Bartl et al., 2013). Quality factors identified to increase chances of delightful online Customer Experiences were usefulness and entertainment, a necessity to evoke delight is surprise (Bartl et al., 2013). The theoretical underpinnings of "customer delight" were described in detail by Oliver, Rust, and Varki (1997).

Rose, Hair, and Clark (2011) studied the antecedents and consequences of Online Customer Experience and suggested a conceptual model, this work was resumed by Rose, Clark, Samouel, and Hair (2012) to further develop the model and test it. Their proposed model divides the identified antecedents into those that independently impact the Cognitive Experiential State and those that independently impact the Affective Experiential State. Further, they found satisfaction, trust, and repurchase intention as outcomes of Online Customer Experience. However, both repurchase intention and trust are only influenced via satisfaction as a strong mediator (Rose et al., 2012). This disagrees with Bartl et al. (2013), who as mentioned above, found no significant impact on purchase intentions through website satisfaction. While Rose et al. (2012, p.319) used the scale: "I am satisfied with my overall experiences of Internet shopping", Bartl et al. (2013, p.395) used the scale: "I am satisfied with the website".

Also dealing with an online environment, Ding, Huang, and Verma (2011) studied the effects of technology beliefs as well as customer-service interface evaluations and corresponding cognitive service experiences on customers’ behavioural intentions in e-brokerage services.

In the offline context, Gwinner, Gremler, and Bitner (1998) have studied the benefits of long term relationships with service firms from a customer point of view and found three primary types of benefits. First, loyal customers enjoy the psychological benefit of confidence, that refers to the idea that through long-term relationships customers know their experience will be good, they know what they can expect (Gwinner et al., 1998). Second, long-term relationships lead to social benefits, that includes for instance the emergence of a friendship between an employee of the service provider and the customer (Gwinner et al., 1998). Third, special treatment benefits emerge, these can be economic, for example, a price reduction or faster service, or it could be the offer of a customization, for example, a special additional service (Gwinner et al., 1998). The
results of this study become interesting for CEM because they showed that the benefits perceived as most important for customers are the confidence benefits (Gwinner et al., 1998). These findings underline that the management of expectations is a crucial part of Customer Experience Management.

Among the reviewed articles on effects, three are concerned with the retailing sector (Grewal, Levy, & Kumar, 2009; Puccinelli et al., 2009; Srivastava & Kaul, 2014). According to Grewal et al. (2009, p.1) a "superior customer experience" in retailing is contributing to higher customer satisfaction, more frequent visits, a higher propensity to consume, and also higher profits. Also Srivastava and Kaul (2014) found evidence that Customer Experience influences customer satisfaction. Their approach showed that Customer Experience takes a mediating role on the relationship between social interaction and customer satisfaction. Puccinelli et al. (2009) utilized the customer journey concept and the five steps: Need Recognition, Information Search, Evaluation, Purchase, and Post Purchase, in order to analyse different theoretical domains and the connected effects on consumer behaviour in each journey step. The different domains are 1. goals, schema, and information processing, 2. memory, 3. involvement, 4. attitudes, 5. affect, 6. atmospherics, and 7. consumer attributions and choices (Puccinelli et al., 2009).

Kumar, Umashankar, Kim, and Bhagwat (2014) dealt with the influence of the economic state on the effects of Customer Experience. They found that Customer Experience has a bigger impact on service purchasing behaviour when the state of the economy is better because the relative impact of price decreases.

Also failure may be a part of a Customer Experience process. Surachartkumtonkun et al. (2015) found that failure does not tend to let rage emerge immediately. The customer does rather carry on his negative feelings into further episodes of the service experience and rage arises when the issue remains unresolved. A spiral of negative emotions that were carried over and more resources being threatened propels the customer into rage (Surachartkumtonkun et al., 2015). Zayer et al. (2015) also dealt with the experience of failure, however, they were investigating aspects of very specific high risk service experiences, and did not focus on the outcomes.

Bitran, Ferrer, and Rocha e Oliveira (2008) investigated the effects of the temporal aspect of service encounter experiences, in particular the relationship between duration and profits. They pointed out that not only the service encounter itself has to be managed but also the timing of the delivery and the experience the customer has between multiple elements of the encounter.

Chakravorti (2011) proposed that knowledge management and organisational culture change management can positively affect Customer Experience Management, both together and in isolation. Also the reverse is true as efforts in CEM also affect organizational culture management and knowledge management positively (Chakravorti, 2011). They further suggested that a knowledge base needs to be "dynamically integrated across the organization and maybe even beyond" to allow that knowledge management can lead to organizational learning and the creation of added-value offerings for customers (Chakravorti, 2011, p.133).
2.1.5 Experience measurement

In the last subsections the main pillars of Customer Experience Management were introduced. However, an important part of CEM has not been considered yet, and that is the measurement of the Customer Experience and its outcomes. Many authors have called for a scale or tool that can adequately measure the customer’s experience (Frow & Payne, 2007; Palmer, 2010; Verhoef et al., 2009). In this section the articles that belong to the identified theme of Experience measurement are presented. Also contributions of the other articles towards this topic were considered.

Kim, Cha, Knutson, and Beck (2011) attempted to respond to the research call by Verhoef et al. (2009) who asked for a metric that captures all aspects of the Customer Experience. Kim et al. (2011, p.116) suggested a "parsimonious Consumer Experience Index (CEI)" that contains the following elements: environment, benefits, convenience, accessibility, utility, incentive, and trust. The authors acknowledged that the CEI is only applicable to general customer experience evaluations, but might not be able to lead to sufficient insights for specific service providers (Kim et al., 2011). Therefore, an adapted version of the CEI for specific providers would be needed.

Dixon et al. (2010) suggested a new metric for customer loyalty, namely the "Customer Effort Score (CES)", which is measured (on a scale of 1 to 5) by asking: "How much effort did you personally have to put forth to handle your request?". They defined customer loyalty as the "customers’ intention to keep doing business with the company, increase the amount they spend, or spread positive (and not negative) word of mouth" (Dixon et al., 2010, p.7). In a comparison with the widely used NPS and Customer Satisfaction (CSAT) on the basis of predictive power for repurchasing as well as for increased spending, the CES outperformed the others (Dixon et al., 2010). However, these findings are limited to the customer service environment. When it comes to the NPS, strong criticism was presented by Brandt (2007). It should be highlighted that none of the existing measures works in all specific contexts.

Another approach was taken by Lemke, Clark, and Wilson (2010) who tried to determine the Customer Experience quality. Unlike the other authors, they distinguished between B2B and B2C context in their investigations. The result of their work was not a scale or metric but a conceptual model of Customer Experience quality, which divides the experience into communication encounter, service encounter and usage encounter. These three encounters are set within an experience context and result in a value-in-use. From this value-in-use a relationship outcome emerges.

The measurement of service experiences as "context specific well-being" in the public transport sector was investigated by Olsson, Friman, Pareigis, and Edvardsson (2012, p.413-414). Using the Satisfaction with Travel Scale as a metric, they found that it is reliable and able to cover the cognitive as well as affective dimensions of the experience.
2.1.6 Challenges

Two articles found in the review (Neslin et al., 2006; Kwortnik & Thompson, 2009) were dedicated to challenges of the management of Customer Experiences.

The article about the challenges of multichannel customer management by Neslin et al. (2006) does not directly refer to CX. However, many authors from the CX field regard multichannel management as an important part of CEM (Frow & Payne, 2007; Grewal et al., 2009; Patricio et al., 2008; Verhoef et al., 2009). Thus, Neslin et al. (2006) contribute to the body of knowledge in CEM with their framework illustrating the linkages between different challenges. They identified five challenges, namely, data integration, understanding of customer behavior, channel evaluation, allocation of resources across channels, and the coordination of channel strategies (Neslin et al., 2006). As in most of the CX literature the customer journey also plays a role in multichannel customer management.

The challenges studied by Kwortnik and Thompson (2009) are of a different nature because they are considering internal challenges to service system development and management through the existence of organizational silos. Especially the missing integration of marketing and operations function is causing major problems (Kwortnik & Thompson, 2009). According to Kwortnik and Thompson (2009, p.404):

*Service experience management is fundamentally different from customer experience management because of its focus on management of the service operations system and experiential outcomes (as opposed to management of the firm-customer relationship).*

2.1.7 Applied theory and developed theory

Appendix 3 shows an overview of the theories and models that were applied and developed in the reviewed CEM literature. It becomes obvious that only few established theories were tested with the concept of Customer Experience or Customer Experience Management. In contrast, a lot of articles include newly developed theories, frameworks or models.

2.2 Framework and definitions of Customer Experience and Customer Experience Management

The following definitions of CX and CEM are proposals built from the insights gained in the literature review. The proposed definitions are validated through the application in the analysis in the case study.

*Customer Experience*

The concept of Customer Experience basically describes a customer’s personal attitude towards a company and its offerings, and how this attitude is formed through an evaluation process during the customer journey.
Customer Experience Management

Customer Experience Management is the strategic management of the Customer Experience (Grewal et al., 2009; Schmitt, 2003) with the goal to consistently arouse a particular experience at every touch point (Chakravorti, 2011; Lemke et al., 2010; Meyer & Schwager, 2007), build sustainable relations with customers and turn it into financial success (Frow & Payne, 2007; Schmitt, 2003).

In this sense it is a customer focused management concept impacting the whole organization and it is not restricted to marketing (Schmitt, 2003). It typically emerges from business and functional leaders (Meyer & Schwager, 2007), but follows an integrative approach to the organization and is tackling internal as well as external issues (Schmitt, 2003). The general process includes to recognize and monitor the clues the company sends to customers (Berry et al., 2002; Berry & Carbone, 2007), to capture what the customers think about the organization and distribute it to the responsible employees (Meyer & Schwager, 2007). Furthermore, new strategies and actions are developed and implemented for the creation of satisfiable expectations and better experiences, for example, through locating gaps to add offerings where experiences could not meet expectations (Meyer & Schwager, 2007).
Overall, Customer Experience Management is an enhancement of customer oriented management as described for example, by Bruhn (in Hinterhuber & Matzler, 2009). By slightly adapting the four proposed management phases by Bruhn, through separation into operational and strategic elements, the following phases result on the operational side: Measurement & Monitoring, Analysis, Action Definition, and Implementation. The strategic side is considered in the Goal setting phase, which is entered to analyse the measurement output under consideration of the goals. The goals might be adjusted according to the results of the analysis and the corporate strategy.

**Customer Experience Management Framework**

Based on the above definitions the following framework was established (Figure 2-1). The upper part of the figure illustrates the Customer Experience Management that happens in the company. It is divided into a strategic and an operational part. The implemented and executed actions (improvements/supportive actions) can influence the Customer Experience.

![Customer Experience Management Framework](image)

Figure 2-1: A Customer Experience Management Framework based on the definitions established through the literature review.

The lower part is showing the Customer Experience evaluation process (the arrows resembling the number eight) with the resulting Customer Experience attitude in the middle. The Customer Journey is included as well to show that the Customer Experience evaluation is continuing throughout the Customer Journey. In Figure 2-1 the
imaginary customer owning the Customer Experience is going to make a purchase. The left part (light grey with dashed lines around) of the Customer Experience evaluation process highlights that the company has only limited, if not no, control on a certain part of the experience evaluation process and thus on the Customer Experience. Finally, the right part (dark grey) shows the part of the evaluation where the company has an influence and the black parts show that the Customer Experience and including the expectations are, finally, strictly personal.

2.3 Literature review on Passenger Experience in the aviation sector - Themes and main findings

A literature review on the topic of Passenger Experience was conducted to built a theoretical framing for the later conducted case study. Unfortunately, the review indicates that quality research on Passenger Experience is rare. In particular only very few scholars consider an experience construct similar to Customer Experience. An overview of the results of the literature review on Passenger Experience can be found in Appendix 5. The overview includes main findings, type of applied method, the airport/airline in focus, the applied and/or developed theory, and the journal titles.

The largest proportion of the reviewed literature was concerned with satisfaction or service quality of the airport (Bogicevic, Yang, Bilgihan, & Bujisic, 2013; Fodness & Murray, 2007; Pabedinskaite & Akstinaite, 2014). Bogicevic et al. (2013) found that key satisfiers in the airport context are cleanliness and a pleasant environment. Further, they identified key dissatisfiers and these were the security-check, confusing signage and a poor dining offer.

Fodness and Murray (2007) analysed almost 1,000 passengers and found that their expectations of the airport’s service quality were mainly formed by three dimensions which are: function, interaction and diversion. The functional dimension refers to effectiveness and efficiency, the interaction dimension is concerned with passengers’ expectations about the airport staff, for example, availability. Diversion refers to the expectation to be distracted from being "trapped" in the airport through, for example, aesthetic stimulation (Fodness & Murray, 2007, p.501). While Fodness and Murray (2007) were concerned with the service quality offered to the passengers, Pabedinskaite and Akstinaite (2014) investigated criteria to assess the quality of the services offered to airlines. This could be seen as a move towards Business to Business (B2B) Customer Experience. However, unfortunately, Pabedinskaite and Akstinaite (2014) have not made any comment on future research possibilities themselves.

Correia, Wirasinghe, and de Barros (2008) were attempting to develop a method to collect passenger responses about the overall level of service. The four overall measures were: walking distance, total service time and two measures of orientation (actual walking distance/minimum walking distance and the tardity-differential, "defined as walking time difference between experts and novices (T), divided by the route length (D)") (Correia et al., 2008, p.338). All these previous articles have in common that they were not considering the passengers’ experience beyond the walls of the airport.
A study at a Malaysian Airport found a strong positive relationship between the airport’s image and passenger delight (Ariffin & Yahaya, 2013). In addition, they found that a design with a strong national identity can increase the effect.

After the discovery of a relationship between passenger’s time sensitivity and the degree of passenger engagement, Harrison, Popovic, and Kraal (2015) built a model for passenger segmentation. The segments, they identified, are:

- airport enthusiasts, who are engaged and not time sensitive
- time fillers, who are not engaged and not time sensitive
- efficiency lovers, who are not engaged and time sensitive
- efficient enthusiasts, who are engaged and time sensitive

One article about the airport Passenger Experience considered the IT dimension of airport operations and facilities and investigated the influence of IT innovation on check-in and security control processes (Kalakou, Psaraki-Kalouptsidi, & Moura, 2015). The IT innovations considered in this case study include biometric systems, NFC, Big Data as well as smartphones (Kalakou et al., 2015). The authors showed that in the case of Lisbon Portela Airport the full employment of the technologies could reduce time-to-boarding by over 80% for 90% of the passengers (Kalakou et al., 2015). Furthermore, next to process time gains also space could be gained in the security area (Kalakou et al., 2015).

Another article that was found through backward searching does not directly deal with the Passenger Experience but with the legal implications of the introduction of new IT at an airport (Baird, 2013). This is relevant because it also concerns the collection of passenger data and use of IT to connect to the passenger which might in turn influence the Passenger Experience, both positively and negatively. Baird (2013) discussed popular technologies and trends in three major areas: passenger data and cloud, wireless networks, and common-use IT equipment and infrastructure. He suggested three legal models of shared use IT infrastructure supply, from the common use model where different airlines and other parties share the infrastructure and there is no control for the airport, over a hybrid model where the airport joins the group of infrastructure owners, to a direct model where the airport owns the infrastructure and resells to airlines and other parties, and thus is liable.

**Airlines’ Passenger Experience**

The following articles about airlines’ Passenger Experience were considered as relevant as well because one is explicitly concerned with Customer Experience (Laming & Mason, 2014) and the other two are dealing with relevant IT topics (Budd & Vorley, 2013; Sinisalo, 2011). Laming and Mason (2014) applied the concept of Customer Experience to the airline context. In order to measure it they analysed data from 15 airlines for customer satisfaction, loyalty and advocacy and found that cabin features and the crew were important for satisfaction and inflight food and drinks were the most important for loyalty and advocacy. In their analysis they considered the different passenger interactions with the airline along the customer journey, these were: *the carrier’s website, reservations, check-in, airport lounge, boarding and departure, cabin and seat features, crews and*
pilots, IFE, inflight food and drink, and arrival" (Laming & Mason, 2014, p.17-18; IFE = Inflight entertainment).

Budd and Vorley (2013) conducted a survey of the functionality offered by 22 mobile apps from some of the largest passenger airlines. They proposed that

(...) the development of mobile technology is precipitating a shift away from eCommerce towards an enhanced system of anytime and anywhere mobile customer relationship management (mCRM) in which the emphasis is on individual customisation, flexibility and efficiency over face-to-face interaction (Budd & Vorley, 2013, p.41).

They assessed the apps according to the following criteria: Flight search, Flight booking, Manage booking, Mobile check-in, Mobile boarding pass, Flight status, and Loyalty programme. The criteria are based on the different customer journey steps. The result was that almost all apps offer full functionality across the stated criteria. Out of 25 surveyed airlines 3 had no app. All apps had a flight search functionality and all but one included a booking facility.

As such, the primary purpose of mobile apps created by airlines for business travellers was, and continues to remain, functionality relating to enhancing the travel experience from booking to boarding. (Budd & Vorley, 2013, p.47)

Also the mobile apps replace boarding passes, the future of this functionality could possibly lie in Near Field Communication (NFC) technology (Budd & Vorley, 2013). However, the success of the airline’s mobile ticketing efforts depend strongly on airports that need to provide the corresponding infrastructure and thus present an obstacle (Budd & Vorley, 2013).

While enhanced levels of automation across the aviation service delivery chain are inevitable, the challenge is to ensure that these are suitably joined-up and ultimately cost effective for airlines and airports alike. If the mobile technologies are not incorporated in a joined up fashion then the promise of efficiency in reducing the amount of time that customers spend on necessary but time-consuming check-in, transfer, and boarding procedures will be undermined thereby work against business travellers who are technology dependant. (Budd & Vorley, 2013, p.48)

For airports Budd and Vorley (2013) further saw the opportunity to use NFC as a possibility to customize the airport experience for individual passengers. There are opportunities in augmented reality and through synthesis and integration of other involved parties (Budd & Vorley, 2013).

Budd and Vorley (2013) also mentioned mCRM referring to mobile Customer Relationship Management (CRM), which was investigated in detail by Sinisalo (2011). His article contains a case study on the mCRM at Finnair. Sinisalo (2011) found that at Finnair the use of the mobile medium is depending on the phase of the relationship with the passengers and if they are in the travel process or not. Furthermore, Finnair did not integrate the mobile medium with their other channels which consequently made its role rather complementary.
2.4 A network perspective on CEM

In the previous subsections a significant amount of publications were reviewed in order to get a first understanding about the concepts of Customer Experience and Customer Experience Management. With regard to the case study, also Passenger Experience literature was reviewed and synthesized. Given that the aim of this thesis is also to advance the understanding of interferences in the context of the management of Customer Experience, the Service Delivery Network appears to be a suitable conceptual frame. In the following paragraphs, the reviewed literature about the network perspective on the Customer Experience is presented.

Many researchers like Frow and Payne (2007), Meyer and Schwager (2007) or Bitran et al. (2008) regarded the Customer Experience from a perspective of a dyadic service encounter between customer and brand or company. Verhoef et al. (2009) was among the first to recognize that factors outside the company in focus also impact the Customer Experience. Patricio et al. (2011) and Zomerdijk and Voss (2010) already started to incorporate the perspective of the customer journey and interactions with multiple providers into their views of the CX concept. In this perspective it is not one service encounter that is the focal point, but the customer that might have multiple interactions (service encounters) with different providers adding to the experience along a time frame (Tax et al., 2013). Patricio et al. (2011, p.185) denoted these "interactions between the customer and all service organizations that enable a given customer activity" as value constellation experiences.

In such circumstances, the customer’s interactions with other providers are likely to have significant impacts on the service encounters with any particular firm that contributes to the overall service. (Tax et al., 2013, p.454)

The different providers basically span a network centred on the customer, and although the different providers’ interactions with the customer occur separately, to some extent the customer bounds them together in her/his mind (Tax et al., 2013). Indirectly mentioned by Tax et al. (2013), customers do not typically interact with a provider for the sake of the service or product itself, but because they have a Job To Be Done (Christensen et al., 2007). To account for the need of a network perspective on the Customer Experience, Tax et al. (2013) have introduced the Service Delivery Network that they define as:

(...) two or more organizations that, in the eyes of the customer, are responsible for the provision of a connected, overall service. (Tax et al., 2013, p.455)

Figure 2-2 illustrates how such a network could look like for an air traveller. However, it should be noted that this illustration is not complete, but rather a kind of minimum example. The ties between the nodes of the network are only possible ties, it is not necessary that all providers have a relationship with each other. The necessary link is made through the customer. In general, the definition of the scope of a Service Delivery Network (SDN) is a challenging task (Tax et al., 2013).
Another example of a Service Delivery Network is the mobile phone industry, where device manufacturers, operating system developers, app developers, network services and so forth, come together (Tax et al., 2013). They either offer a bundled service or the leave it to the individual to co-create their own combination (Tax et al., 2013).

Tax et al. (2013) and Patricio et al. (2011) agree that the customer journey typically involves touchpoints on multiple levels of an organisation and also external partners. Another important aspect of the SDN is the fact that it only considers the network of an individual customer (Tax et al., 2013). It should be noted that different customers possibly have different SDNs. While customers from one firm, for example, an airport, have comparably similar SDNs, customers from another company, for example, a hotel in a large city, might have very diverse SDNs (Tax et al., 2013). Further, it is important to recognize that SDNs are dynamic (Tax et al., 2013). They evolve over time and thus new opportunities and threats might arise (Tax et al., 2013).

It is also important to know which partner companies to integrate into the SDN and which not. Tax et al. (2013) distinguished between suppliers who have no direct contact to the customer and the customer is thus unaware of its contribution on the one hand, and contractual suppliers that do directly deal with the customer on the company’s behalf on the other hand. The first are not included in the SDN, and the latter is, even if a company "may not portray such service providers as separate entities" (Tax et al., 2013, p.461). In any case it is important to note that network partners are important in shaping customer expectations (Tax et al., 2013). Even other customers, can under certain circumstances (when they significantly contribute to the experience) be included as a part of the network (Tax et al., 2013).

The following list presents several dimensions that can help to evaluate a SDN (based on Tax et al., 2013):

1. Degree of SDN commonality: similar vs. diverse SDNs
a) Formality of the service provider network: high formality (e.g., through multilateral contracts) vs. low formality
b) Customer’s goals: Transactional vs. relational goals
c) Choice of complementary providers: restricted vs. unrestricted
d) Complexity of the overall service: complex vs. uncomplicated

2. Degree of network coordination: leadership role of a company vs. the customer as "resource integrator" (Tax et al., 2013, p.460)

The dimension concerning the customer’s goal refers to a customers tendency to develop a rather loyal relationship to one service provider (e.g., a hotel) but having a purely transactional relationship with others (e.g., the hotel booking service) (Tax et al., 2013). The problem is that when different service providers compete for the most central relationship with the customer, the Customer Experience might suffer due to reduced cooperation between those providers (e.g., reduced sharing of information). Another challenge that can occur, is that customers blame a company for the service failure of a partner (Tax et al., 2013). This can be challenging because the company does not have the power to recover the issue, but it can also be beneficial if they manage to solve it (Tax et al., 2013).

In the relationship with the different providers involved in the network, the "customer may want to establish a primary resource within his SDN that remains stable over time — a "network captain"" (Tax et al., 2013, p.464). Adding to the theoretical underpinnings of Customer Experience in networks where service providers formed partnerships, Kwan and Hottum (2014) investigated value propositions for multiple-level engagements.

Typically value propositions were made and fulfilled by one company. However, the latter part has changed in many cases and value propositions are often fulfilled by a service system network of partners and contractors (Kwan & Hottum, 2014). This perspective does not set the customer in the centre of the network, like the SDN view does (Tax et al., 2013), but the value proposition which is offered to the customers (Kwan & Hottum, 2014). This could be a helpful perspective as a second step after analysing the Service Delivery Network and found that value propositions are co-created or could be co-created with other SDN parties. The most important things to consider when offering a B2X2Y value proposition, as Kwan and Hottum (2014) denoted the co-created value proposition, are to maintain consistency and communicate the value propositions/promises made.

One way to maintain consistency is to adequately manage customer’s expectations (Kwan & Hottum, 2014). In that context Service Level Agreements play an important role today, Trienekens, Bouman, and Van Der Zwan (2004, p.44) noticed a shift "of the goal of an SLA from being a financial and technical contract towards an instrument for the management of the customer’s expectations."

An information systems approach to managing the Customer Experience in a service system network, is to build a system that informs all relevant partners about the service promises that were made (Kwan & Hottum, 2014). In a service system network, if the
service experience as it is perceived by the customer is not the same as the promised experience (denoted Integration Quality Gap), it can have the following three reasons (Kwan & Hotum, 2014).

1. Network partners did not want to pass on all the information about the value propositions, for example, as contracts did not include a need for visibility
2. Information is deliberately left out in the communication, for example, because of proprietary information or customer confidentiality, etc.
3. An original service provider sold off subcontracts

Finally, another contribution to the network perspective comes from Gopalan and Narayan (2010) who dealt with the issue of stakeholder collaboration in the tourism sector, more specific in the tourist destination Chennai in India. They developed a framework for stakeholder collaboration, and a four phase measurement process for Customer Experience (or service quality respectively) that considers the "entire tourist experience", from the immigration desk at the airport to final departure (Gopalan & Narayan, 2010, p.102). Their framework is built around the Customer Experience and includes different types of stakeholder and the effect they have on the Customer Experience, it considers two effects of Customer Experience (first, that customers become promoters, second, that they become distractors), then it includes a periodic measurement of the experience, an analysis of the gap between distracting and promoting behaviour, and, finally, a forum for stakeholder collaboration and resource allocation (Gopalan & Narayan, 2010). Their four-phase measurement process consists of 1) Qualitative research, 2) Promoter-Detactor Gap Analysis, 3) Peer benchmarking, and 4) Analysis of the individual respondent effect. It is worth mentioning that in their writing, Gopalan and Narayan (2010) did not distinguish Customer Experience from service quality.

2.5 Applied research method, journals and journal quality of the reviewed literature

In the literature review the author considered not only the content as presented in the previous subsections, but also the source and the quality of the work were important, plus the applied research methodologies were looked at. The findings for these topics are presented in the following.

Customer Experience Management Literature

The review of Customer Experience Management literature reveals that literature reviews (10) and quantitative studies (7) were the preferred approach to tackle the field of CEM. The other approaches, thus Mixed method, Case Study and Qualitative research, were rather evenly distributed. The large amount of literature reviews gives an indication that the research on Customer Experience is still in a premature stage, as also other authors mentioned (Frow & Payne, 2007; Gentile et al., 2007; Verhoef et al., 2009). New knowledge is constantly synthesized and compared, so that common ground can be found. Appendix 4 displays the applied methodologies, the titles of the journals and their respective ranking result.
The quality of the reviewed literature was high, over 60% of the publications had a ranking of B or better. Most papers were A ranked (19). In total 25 of the 41 reviewed articles were published in Services and or Retail management journals. Five articles came from practitioners journals (Harvard Business Review, MIT Sloan Management Review, Quality Progress). The remaining publications were from the marketing and management field.

Only very few articles also discussed IT or IS issues. This shows that there is a need to start exploring the potential to support Customer Experience Management with IS.

**Passenger Experience Literature**

In the review of literature about Passenger Experience, the quality of the reviewed articles appeared to be much lower compared to the Customer Experience literature. Even of the finally selected articles, only one article (Fodness & Murray, 2007) was published in a ranked journal (Verband der Hochschullehrer für Betriebswirtschaft e.V., 2015). Of the eleven reviewed articles four were applying a quantitative approach, three used qualitative methods, and two used a case study approach. Only one was applying mixed methods. It should be mentioned that most articles used one or more airport or airline as a unit of analysis. An overview of the results of the literature review on Passenger Experience can be found in Appendix 5.

### 3 Research Methods

This section is concerned with the research methods that were used in this thesis. In the following subsections the data collection and analysis approach used in the literature review and the case study are described.

The research was conducted in the environment of the SAP Research & Innovation Hub St. Gallen (Switzerland). The author was part of a research team generally concerned with new corporate management approaches looking at intangible assets, in particular a company’s ability to delight. The general research topic of Customer Experience Management was provided by SAP. The author, however, had the opportunity to choose the specific topic and the research questions himself. Most importantly, the research was conducted independently and SAP employees merely provided feedback.

The general organizational problem that this thesis is seeking to solve is the management of experiences that are interfering with each other along a customer journey. Because of the nature of the research questions a qualitative approach is chosen (Yin, 2003). The problem is approached through an exploratory single embedded case study (Yin, 2003).

#### 3.1 Literature review

As mentioned before, the content of the previous section is based on a literature review. A review of relevant prior research is essential for any academic project (Webster & Watson, 2002). The review was conducted systematically using keyword-, forward- and backward searching for data collection according to the approach presented by Webster
and Watson (2002). Keyword searches were done using six different databases, namely ACM, EBSCOHost, Emerald Insight, Sage, Science Direct, and Springer Link. The utilized search terms are “Customer Experience Management” and “Passenger Experience”.

The author did not use any filters, except the ones to rule out not accessible articles. For the forward searching, the “cited by” function of Google Scholar was used. The selection of databases and keywords is aimed at providing a basis for the forward and backward search, which, finally, led to a good sample of the foundational work on Customer Experience Management in general and Passenger Experience in the aviation context.

In the process of reviewing the search results of the keyword search all material that appeared relevant from reading the title and abstract were shortlisted for a final review. The shortlisted papers were stored and organized using the reference management software Zotero. In the next step these shortlisted papers were reviewed thoroughly. During the reading process, the backward search took place. If a reference to other literature appeared relevant for the study it was searched through Google Scholar and was added to the database. The backward search resulted in 12 additionally selected articles for CEM and 2 for PX. After reading through all the papers, the last step of the search process was the forward search using the most cited and relevant articles as a basis. The forward search ended with 9 additionally selected articles for CEM and 2 for PX. Zotero made it easy to handle the large total amount of shortlisted articles. An overview of the literature review can be found in Table 3-1.

Table 3-1: Overview of the literature review (search results, shortlisted articles and final selection)

<table>
<thead>
<tr>
<th>Database</th>
<th>ACM</th>
<th>EBSCO host</th>
<th>Emerald</th>
<th>Science Direct</th>
<th>Springer Link</th>
<th>Sage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Keyword:</strong> &quot;Customer Experience Management&quot;</td>
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<td>64</td>
<td>58</td>
<td>18</td>
<td>64</td>
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</tr>
<tr>
<td>Shortlisted</td>
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<td>2</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>30</td>
<td>43</td>
</tr>
<tr>
<td>Selected</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Backward Search</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forward Search</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Reviewed articles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Keyword:</strong> &quot;Passenger Experience&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Results</td>
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<td>32</td>
<td>20</td>
<td>95</td>
<td>51</td>
<td>16</td>
<td>231</td>
</tr>
<tr>
<td>Shortlisted</td>
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<td>0</td>
<td>3</td>
<td>15</td>
<td>0</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Selected</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Backward Search</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forward Search</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Reviewed articles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

The shortlisted articles were then reviewed for the final selection. The quality of the article was judged by carefully reading the articles’ methodology chapter and by using the latest VHB Jourqual3 ranking (Verband der Hochschullehrer für Betriebswirtschaft
e.V., 2015). The VHB Jourqual3 is an extensive ranking of journals and conference proceedings from the area of business administration and economics, also including journals from related fields like business informatics. The final selection consisted of 41 articles in the review of CEM literature and 11 articles in the review of Passenger Experience literature.

In order to make the rationale for the final selection of articles more clear the author followed the advise given by Okoli and Schabram (2010) and listed the criteria for inclusion and exclusion of an article. If one of the following criteria was met an article was included in the analysis:

- An elaborated definition of CX or CEM was presented
- Passenger Experience, CX or CEM were the focus of the study
- The study contained relevant aspects about IT solutions for CX or CEM
- The study contained relevant aspects about the management of partners and networks

The criteria after an article was excluded were the following:

- VHB Jourqual3 ranking (Verband der Hochschullehrer für Betriebswirtschaft e.V., 2015) result worse then C
- No VHB Jourqual3 ranking (Verband der Hochschullehrer für Betriebswirtschaft e.V., 2015) result (this criteria was not applied to articles concerning the aviation context)
- Obvious flaws in the methodology or its description
- Not peer reviewed (an exception was only made in the case of literature about the airport context, here also chapters from scientific books were included)

The selection criteria for literature about the aviation sector or, in particular, airports were chosen to be less strict because the literature base would have been too limited otherwise. Another exception was made for Gounaris (2015). This encyclopedia entry was included because it provided a relevant definition for CX.

The analysis of the articles included to extract the purpose and the main findings (Appendix 2, 5), the utilized theories or models and the developed theoretical contributions in form of frameworks, models and theories (Appendix 3, 5) and, finally, the applied methodologies (Appendix 4, 5).

### 3.2 Case study

At the outset of the investigations, a rapid review of different industry sectors took place. The goal was to find a sector that clearly presented the occurrence of potential inferences of different companies across a customer’s journey. From that sector a company to be analysed as a case study should be found. A case study approach was chosen based on the rationale explained by Yin (2003) that case studies are an appropriate research strategy at the early stages of theory development. The travel sector appeared to be a good example, as the typical travel process not only includes multiple different providers, but
is naturally very experience driven, as it includes many different interactions and stimuli across a time frame of several hours, or even days or weeks.

With that idea in mind Milan Guenther was contacted and presented with the ideas of the thesis. Milan Guenther authored a book about strategic design in complex environments, and is also consultant in that area. He was identified as an adequate expert and advisor because his book (Guenther, 2012) includes several references to the topic of Customer Experience, he has a broad network of contacts from multiple industries and is regularly attending relevant conferences for practitioners from the Customer Experience field. After the presentation of the general idea of the thesis as well as the interest in the travel sector, he suggested Tallinn Airport as an interesting company for a case study. During the Design Management Europe Award ceremony 2013 in St. Etienne, he got to know a representative of Tallinn Airport (Eva Maarend) who received a price for the airport’s efforts in design and Passenger Experience Management.

Tallinn Airport was chosen because, first, airports in general are a good example of environments were customers are shared between different providers and thus the potential for interference is given. Second, the Airport Tallinn declared to improve the offered Passenger Experience and consequently was honored for its efforts by a jury of recognised Design Management experts during the Design Management Europe Award ceremony 2013. Third, the Marketing department of Tallinn Airport agreed to be available for interviews, to provide documentation about their Customer Experience Management efforts, and, very importantly, to assist to connect to the other parties involved in their environment.

The creation of the case study for this thesis is mainly based on the guidelines specified by Yin (2003). The research design is that of a single embedded case study. The overall case is the Passenger Experience Management at Tallinn Airport. The embedded units of analysis in the context of the airport are the Customer Experience Management efforts of different departments (Marketing, IT, Sales) of Tallinn Airport and partner companies that are active in the environment of the airport (retail shop, airline). However, the data collection sources, in terms of respondents, are restricted to three departments of Tallinn Airport and two partner companies. More details about the validity of the data collection follows in the next section.

3.2.1 Data Collection

The data collection for the case study is based on interviews, questionnaires and documents, as well as physical artefacts (for a complete overview see Table 3-2). The interviewees, or respondents respectively, were selected based on a purposive sampling strategy combined with a snowballing strategy (Miles & Huberman, 1994). This enabled to capture the big picture of the complex customer journey in the airport environment and allowed to get early access to respondents that were previously unknown (e.g., the IT Manager of Estonian Air). Because the topic is relatively novel, the nature of the interviews was rather exploratory and the approach of unstructured interviews was used at the beginning. Later in the process the interviews were more structured and questions were based on emerging patterns and the corresponding literature.
Eva Maarend, Tallinn Airport’s Marketing Specialist, can be considered as the key informant (Yin, 2003) of this case study investigation. She was an appropriate key informant because she is the operational responsible for Passenger Experience Management and directly reports to the CCO. She was the first contact point and later continuously facilitated the research process, for example through forwarding questionnaires or being available for follow up questions. Finally, it would have been interesting to also gather insights on the passenger’s perspective, however, that was not possible as the author could not get access to the passengers at Tallinn Airport.

The data collection started with a preliminary interview without any fixed agenda besides the introduction to the general research questions. Then the following interviews were conducted, after the respondents received an interview guideline with a short introduction to the thesis topic and a number of open questions (see appendix 19). This allowed them to prepare and search for additional information if necessary. Each interview took approximately 1 hour to 1 hour 30 minutes.

### Table 3-2: Overview of data collection: Case Database

<table>
<thead>
<tr>
<th>Evidence</th>
<th>Unit of analysis</th>
<th>Respondent/Type (Appendix)</th>
<th>#</th>
<th>Duration (h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>Tallinn Airport Ltd.</td>
<td>Marketing Specialist</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT Manager</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>Tallinn Airport Ltd.</td>
<td>Marketing Specialist</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT Manager</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estonian Air</td>
<td>Head of Sales Department</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inflight Service Estonia</td>
<td>IT Manager</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eesti OÜ</td>
<td>Shop Manager</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Documents</td>
<td>Tallinn Airport Ltd.</td>
<td>Passenger Experience design overview (2)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>DME Award presentation slide set (3)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>DME Award poster (4)</td>
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<td></td>
<td></td>
<td>PAX Survey (5)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>PAX Survey results (6)</td>
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<td></td>
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<td>Lounge Survey (7)</td>
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<td></td>
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<td>ACI BEST Airport application (8)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Annual reports 2009-14</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Project plan: Online shop</td>
<td></td>
<td></td>
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<tr>
<td>Physical artifacts</td>
<td>Tallinn Airport Ltd.</td>
<td>Tallinn Airport website</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tallinn Airport app</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Social Media pages</td>
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<tr>
<td></td>
<td></td>
<td>Screenshots of Intranet</td>
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<tr>
<td></td>
<td></td>
<td>Screenshots of/Manual for the Extranet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The interviews were conducted using Skype’s voice call function. They were digitally recorded with the permission of the interviewees. Finally, the recordings were transcribed verbatim for analysis.

Questionnaires were used as well. The IT manager first answered a preliminary questionnaire and was then contacted again for an in-depth interview. The airport’s Head of Sales, as well as the shop manager and the IT manager of Estonian Air received solely a questionnaire. For one respondent, namely the Marketing Specialist, questionnaires were used for follow up questions after the interviews. A follow up questionnaire was also sent to Estonian Air’s IT manager, however, no response came back.

The main questions of the interviews and questionnaires were oriented around the themes of Passenger Experience and relations, partner relations, partner communications, IT systems, processes, and innovations as well as trends.

3.2.2 Data analysis

The analysis of the data was conducted in four major steps. The organisation of the data, the content analysis, writing the case report and, finally, the reflection of the findings based on the literature review. In the following the steps are explained in more detail.

Organizing the data

The first step consisted in organizing the different pieces of evidence, namely transcripts, questionnaire results, notes on the examined documents, and screenshots of and notes about the physical artifacts. This step was fundamental in getting an initial overall impression of the data. As no appropriate qualitative data analysis software tool was available free of charge, Microsoft Excel was used to organise and analyse the collected data. When the data was not text (e.g., screenshots), it was archived in a dedicated folder structure and indexed in Excel through hyperlinks.

Qualitative content analysis

Following the approach to content analyses of interview texts proposed by Graneheim and Lundman (2004), the second step consisted in the coding and categorization of the data with subsequent theme building. The unit of analysis was text, namely the interview transcripts and questionnaire responses. At the beginning of the analysis the data was copied into one column of an Excel sheet.

The process started with the identification of meaning units of half a sentence up to 2 sentences, which were then each copied into a separate cell within the column. In total 1336 meaning units were identified for further analysis. After a check for relevance, the meaning units were then summarized into condensed meaning units of 1-5 words. These were written down in the next column. The next step was to create a code of 1 or 2 words for each condensed meaning unit, which got another dedicated column. These codes were then first categorized and then broader themes were developed from these categories. The last step consisted in reviewing the categories again, to check whether they fit into another theme as well.
Writing the case report
The third step consisted in writing the case report. The main structure of the case report is based on the sources that provided the information. This approach was suggested by Hancock and Algozzine (2006). Within the corresponding sections the structure is based on the categories and themes that were found. The content is extracted from the meaning units and condensed meaning units. During all prior steps the author extracted certain direct quotes that appeared to be of superior meaning or could not be rephrased without bias. These were then integrated in the case report. To complete the interpretation a draft of the case report was sent to the key informant, the Marketing Specialist Eva Maarend as well as to the IT Manager Sven Friberg. They mostly agreed with the author’s interpretations and suggested minor changes that were then incorporated in the case report.

Reflection of the findings
The reflections resulting from this iterative process are reported in section 6. Based on the theoretical foundation found in the literature review, the case study findings are critically reviewed. The author used a pattern matching approach (Yin, 2003). The guiding perspective was that of a Service Delivery Network (Tax et al., 2013). Furthermore, the general literature found on Customer Experience Management and Passenger Experience was tried to be matched with the patterns found in the case report. The author concluded the analysis by considering practical as well as theoretical implications that can be learned from this research.

3.2.3 Quality evaluation of the research design
Construct validity, internal validity and external validity are considered as relevant tests in evaluating the quality of a research design (Yin, 2003). In the following paragraphs the applied tactics to deal with these quality criteria are presented.

Construct validity
As suggested by Yin (2003) the construct validity was assured through the use of multiple sources of evidence, an established chain of evidence and the review of the case study report.

As it can be seen in Table 3-2 the author used evidence from interviews, questionnaires as well as documents and physical artifacts which allows data triangulation (Yin, 2003). The interviews and questionnaires were directed at both internal and external people involved at the airport. When applicable, facts were validated through asking different respondents the same question. The questions asked were based on the prior research and the continuous analysis of the results to assure investigating the relevant contents. The information that was collected about facts outside of the company was validated through online searches (e.g., the information that Luxair owns the shops at Luxembourg Airport).

To establish chain of evidence the case report states all the sources from the case database (Yin, 2003). The publishable parts of the case database are appended (Appendix 2 and the following) and the circumstances of the collection are indicated (Yin, 2003). Finally,
two of the informants (Eva Maarend and Sven Friberg) validated the draft of the case study report including the author’s own illustrations. According to Yin (2003) this minimizes the likelihood of reporting false data.

**Internal validity**

To increase the internal validity of case study research, Yin (2003) suggests to use a pattern matching strategy during the data analysis. The author applied this approach, by using theory found in the literature review. The guiding theory during the analysis was the Service Delivery Network perspective and the foundations from the Customer Experience Management literature.

**External validity**

As recommended by Yin (2003) case studies aim at analytical generalization, not statistical generalization. Because the suggested tactic of the replication logic is not applicable on a single case study, the use of theory is the advised approach to increase the external validity of a case study (Yin, 2003). Therefore the author conducted an extensive literature review at the outset of the research process (see subsection 3.1). Thus, the author acquired the necessary theoretical knowledge to pose informed questions and interpretations in the case study process.

### 3.2.4 Research ethics

The interviewees were always asked if they consent to the digital recording of the interview and the publication of their contributions in the form of the thesis. The recordings were transcribed verbatim to assure that no relevant data got lost.
4 Results: Case Study on Passenger Experience Management at Tallinn Airport

The following subsections present the results of the case study. In order to introduce the case study, the industry setting and the company are presented in a general manner at first. This introduction is based on a composition of information from multiple of the collected sources, first and foremost on the interviews with the marketing manager and the annual reports. Then the information gathered from each interviewee and questionnaire respondent is summarized in separate subsections. Finally, the information gathered through the review of documents and online resources is presented in another subsection.

4.1 Case setting: The Airport industry

Historically airports are operating in the infrastructure business, which is still true. However, more and more airports are engaging in commercial and service activities. There are point to point airports, like Tallinn Airport and there are also bigger hub airports like Frankfurt or Dubai. Some airports own the retailers and restaurants, like Abu Dhabi Airport, others rent the premises out and/or get concessions from the tenants like Tallinn Airport. A relatively uncommon example can be found at Luxembourg Airport, where the strong home carrier LuxAir owns the shops.

Airport revenues are generally divided into so-called aeronautical-revenues (or aviation-revenues) and non-aeronautical-revenues (non-aviation revenues). Aeronautical-revenues include user charges, for example, passenger charges and charges for aircraft landing and parking. All other revenues are considered as non-aeronautical revenues, that is for example the income from concessions, rentals and advertising, as well as other airport services as parking.

4.2 Company background: Tallinn Airport

The organization in focus is Tallinn Airport, which is the biggest airport operated and owned by AS Tallinna Lennujaam. It was opened in 1936, as Ülemiste Airport, at its current location about 4 km south-east of Tallinn’s city centre. It operates international flights since 1989. In 2005, the annual passenger number exceeded 1 million for the first time.

The sole shareholder of AS Tallinna Lennujaam is the Republic of Estonia. The responsible government department is the Ministry of Economic Affairs and Communications. Although the company is state owned, it is not a public institution, it is a commercial enterprise and its goal is to generate profits. Being state owned brings some critical restrictions, for example, that they cannot simply choose to have a new shop in the terminal. A tender is necessary.

Compared to one of the major European airports, like Frankfurt, Tallinn Airport is very small. In the year 2014 it served 2 million passengers. Frankfurt, in comparison easily breaks the 50 million passengers mark. The group AS Tallinna Lennujaam which
includes Tallinn Airport and 6 much smaller regional airports employed almost 600 people in 2014. Being small allows a certain agility in the processes and there are not as many structures and policies as in big international corporations. While big hub airports are competing with each other for connecting passengers, that is not what Tallinn Airport is fighting for. Eva said:

*The passengers are not really directly our customers.*

She states that Tallinn Airport is "fighting as a destination with other destinations for the Airlines, not for the passenger." Tallinn Airport’s home carrier is Estonian Air. Because the word customer obviously involves some ambiguity, CEM is rather called Passenger Experience Management.

The following list is an overview of Tallinn Airport’s major particularities in terms of the general setting (in no specific order; this list presents aspects, found in the interviews, that appeared relevant and might not be complete):

- It is a state owned company
- It is a point to point airport
- It has its own Ground Handling (GH) company as a subsidiary
- There are no other GH companies operating at Tallinn Airport
- Estonia’s digitization, including the use of digital signatures

The fact that Tallinn Airport is located in Estonia also brings some particularities with it. Estonia is a small country with only about 1.3 million inhabitants. First, the airport is very crucial to the whole country and it has no competition nationwide. Thus the ability to communicate with the public is facilitated, for example, Tallinn Airport easily gets national media coverage. Second, documents are processed digitally. In Estonia the digital signature is a legitimate way of signing and it also has to be accepted in all countries of the European Union. However, a lot of foreigners are not aware of this. All documents (contracts, permissions, offers, tender documents, etc.) circulating in Tallinn Airport are digital, new documents, even contracts, are generated digitally. All other relevant paper documents were digitized, so there is no such thing as a paper archive anymore.

Despite these particularities, Eva Maarend, the Marketing Specialist at Tallinn Airport notes that the case is generalizable in many ways:

*I would say, that, the things that we discuss is something that you would hear from any airport. Because, we (...) are dealing with the same problems, we are dealing with the same segments, with the same different (...) stakeholders in the industry. It just depends on how big of an airport you are (...).*

4.3 The interview and questionnaire respondents

In the following Table 4-1 the respondents, their positions and the year that they started working for their respective company are presented.
4.4 Tallinn Airport’s Marketing specialist

Eva Maarend is Marketing specialist at Tallinn Airport. She works in the Marketing department at the airport since 2011. She is reporting directly to the airport’s Chief Commercial Officer (CCO) and board member Erik Sakkov. The corresponding organisational unit is "Marketing and sales management" (see Appendix 7). Recently she was responsible for the Tallinn Airport app that was launched in November 2014. Currently, her "big project" is the new website of Tallinn Airport, which she is really excited about.

Before she came to work at Tallinn Airport in 2011 she perceived the airport as "a big place or a little bit confusing", she was "always a bit anxious to come here". But now it feels like her own apartment, when she goes from one place to another and knows everybody. She actually cannot be a normal passenger anymore, when "going on a holiday trip I am always looking at, how the signs are put at the airport and what are the flaws and what we could do and all these kind of things".

Eva is responsible for the digital marketing at Tallinn Airport. Her ideas for digital marketing innovations come from what she would like to have as a customer. She has no IT background or deep technical knowledge, however she is knowledgeable about user interfaces. She manages projects that make use of IT, but she never writes any code herself. When she has an idea, she goes to the developers and asks if it is feasible. When she experiences IT issues during her daily work and has to call the IT support team, she likes to research things online. This helps her to understand what the IT support is explaining her to do. With the knowledge that she gains like this, she sees herself ahead of most of her colleagues in terms of IT understanding. In general, she likes to teach herself about digital issues.

4.4.1 Relationships within the Service Delivery Network of Tallinn Airport

In general, Tallinn Airport has divided the responsibilities for the different types of partners and operations towards partners as follows:

HR: Internal communications (internal includes other companies operating on the airport’s premises)
Sales: Contractual work with partners, sales monitoring and monitoring of compliance with contracts

Considering the different types of companies at Tallinn Airport the power relations are rather complex. In summary, on the one hand, the airlines have a huge power towards the airport, and on the other hand the airport has strong influence on the service providers and tenants. The airlines are basically dictating the airport what to do. This includes, for example, opening hours of check-in and luggage restrictions. The airport has no influence on that, they have to implement the airline’s rules. In contrast, the airport is dictating rules, product assortment, and design to the service providers and tenants. They are bound by contracts.

The tenants on the airport premises can be categorized into 3 types according to their contract:

Rent: Only rent is paid, typically tenants that do only exhibit and have no sales, but also car rentals

Concessions: Only concessions are paid, typically shops (but rarely used in general)

Combined: Both rent and concessions are paid, typically Food & Beverage (F&B) and also shops

The type of contract a partner gets, depends a lot on the kind of service or products they are offering. In general, concessions are a major part of the non-aeronautical revenues and that is evident at many airports.

The airport’s airline relations

The headquarters of almost all airlines are elsewhere, only Estonian Air has its headquarters at Tallinn Airport. The others only have some offices at Tallinn Airport. The airline industry is very competitive. Airlines struggle with similar issues as the airport does, the big questions for both are: "Who owns the passenger? (...) Whose client is the passenger?". In contrast, one fact is clear for the airport: "The airline is our customer." The airport alone would be irrelevant. The passengers seem to be the airlines’ clients, but then the passengers become the airport’s visitors. Then it is up to the airport what to do with them.

The airport is having simultaneous talks with different airlines, to acquire new ones or to convince existing airlines to increase the frequency of flights or the plane size. All to increase the number of people coming to the airport.

Airlines ask themselves where to fly. That is why the airport provides them with business plans about new routes to Tallinn. These business plans include research on the market, the potential pricing, the airline’s fleet, the types of aircraft they are using and which one to put on the route.

The data gathering is very extensive. One example, that Eva gave, is that they are looking into flight data about how many passengers are flying to a specific destination using connections at other airports. If this would become a direct flight, even more passengers could be acquired. If the airlines request more data, the airport is keen to provide it. Eva
The services the airport is providing to airlines are the following:

- Ground handling (e.g., check in, load control, luggage handling, gate boarding, etc.)
- Aviation marketing (e.g., route development)

Especially through owning the GH, a lot of steps of the passenger journey are controlled by the airport.

**Partner relations · inside the terminal**

All the retailers and F&B at Tallinn Airport are owned by independent companies. The airport is only providing and managing the rental space. If they want a new shop or restaurant in the airport they are starting a tender process, which can also include the invitation of a certain provider to participate. However, a direct selection is not allowed because the airport is state owned. To open a shop at the airport, companies must participate and be accepted in the tender process. The tender process includes that the airport provides the candidates with passenger numbers and the average amount of purchases that they are making. Based on this, the candidate hands in a concept with an estimation of concession payments and the planned product assortment. If an agreement is reached, a contract is made and the right to sell their specific products is not given to any other partner. The goal of these exclusive contracts is to avoid competition between the terminal tenants.

Typically, the shops are operated by small independent businesses, without a big franchisor behind it. However, some of the shops are owned by the same provider, one example would be *Inflight Service Estonia Eesti OÜ*. Entering the airport as a business is expensive because it requires security clearance and special training for the staff.

The airport is also providing the partners with the possibility to advertise their offers via the airport’s webpage and app. For that purpose they have created an information package that indicates the appropriate format and other guidelines on what they need to provide. Although the airport supports this possibility, the partners do not use it to the full potential.

When it comes to the contracts, Tallinn Airport is really strict. Everything that is in the contract is monitored to assure compliance, from design to product assortment. The airport even intervenes sometimes with directions that go beyond the contract. Although they can, of course, not force anyone. The contracts assure things like that no two products are sold in different stores. Of course there are also exceptions, for example, for basic products.

Sales monitoring is done by the sales department. They get weekly reports and can also request meetings at any time. The airport does not, however, have real time information about the sales of the terminal tenants. Eva said, that the airport could not ask everything from its partners. If a shop struggles particularly strong then the CCO
might even attend the meetings. Lower sales of a shop lead to lower concessions for the airport. In such a case, contracts can be revised and changed for a certain time, to take pressure off of them. Also other ideas are created and discussed together. Because the airport is flexible, they might offer extra promotion space in front of the shop or give away empty advertising space for free.

In order for us to work together for the same result (...) we can provide these things (...).

Tallinn Airport’s small size makes them more agile in reacting to these issues.

**Partner relations · outside the terminal**

Outside the terminal, transportation is a crucial factor. The airport must offer the availability of taxis, that is why the operations follow the flight schedule. When there is a wave of passengers coming out of the airport, taxis must be available. For that reason Tallinn Airport has official taxi partners under contract that are required to provide high service quality on the standards of the airport. The partner taxi companies pay a certain drive-in-fee when entering the airport premises. In return they get a predicted and constant flow of clients when flights are arriving.

**Partner relations · The Airport Community**

The airport community counts about 2,500 people, that are all employees of all companies working on the premises of the airport. Some years ago, nobody knew what the others were really doing. Eva illustrated the situation:

We were like the same organism but with (...) many heads.

To tackle this issue, for a couple of years now, Tallinn Airport engages in community relations activities. The responsible department for these airport internal communications is the HR department. They delegate tasks and invest a lot of resources each year, to organise the series of events "KOOS PARIMAKS" which is Estonian for "Better together". This series of events is for all the involved companies, from Air Navigation Systems to Cargo companies whose offices might even only be around the airport, but their planes are landing there. The goal is to bring all of them together, so that the airport can introduce itself and that they all get to know each other better.

We are doing these things to (...) get through the idea, that one cannot exist without the other.

Usually, there are three to four events, where all companies are presenting a team that are competing with each other in different games, like a treasure hunt through the airport. In the end, the winning team, the "Airport Dream Team", gets an award. All this creates a sense of community that is priceless.

Furthermore, this improved relationships facilitate the everyday business with the partners. Because there are also issues when having so many tenants. One time, the rent is too high, and another time, the WiFi quality is poor. It is easy to blame the airport. In this context, Eva remarks:

We are not sure who is our partner and who is our client or where the line really is been drawn.
4.4.2 Customer Experience Management at Tallinn Airport

The responsible for Passenger Experience Management at Tallinn Airport is Erik Sakkov. He is CCO (translation suggested by Eva) and one of 4 board members. His three main areas of responsibility are:

**Sales:** Ad spaces, rental spaces  
**General marketing:** External communications, Passenger Experience  
**Aviation marketing:** Route development

All commercial activities are under his supervision. According to Eva, he is a great innovator and:

*He is a brilliant marketing person and a really well-known figure in the Estonian (...) press and all (...) people know him. He is the face of the airport (...).*

When he came to work at Tallinn Airport, he initiated the Passenger Experience project.

**Understanding of the concepts of CX and CEM at Tallinn Airport**

To assure a mutual understanding the author asked for a definition of Customer Experience and the meaning that Customer Experience Management has for the airport. Her definition of Customer Experience is:

*There is probably very many definitions out there, that I could just copy. But for us it’s the overall opinion of the transitions through the airport that the passenger has. So it’s combining the whole journey, or let’s say the part of the journey that includes getting to, through and out of the airport.*

And, according to Eva, for Tallinn Airport, Customer Experience Management means:

*I would like to concentrate on the Passenger Experience, because customer for us (...), one could argue that is the airline (...) or our concessionaires (...) for us it’s more about the (...) Passenger Experience. The management of that experience for us is influencing and manipulating the opinion, the overall opinion that the passenger has about the journey, including the airport. So for example, the manipulating part is to even out the negative aspect of the journey with the positive ones, and kind of create an outcome which would be on the plus side.*

When mentioning the negative aspects, she added that the passenger journey naturally contains parts that the airport cannot change or influence, one example would be the compulsory procedures.

**Passenger Experience Management strategy at Tallinn Airport**

As mentioned before Tallinn Airport received an honourable mention in the Design Management Europe Award contest (DME, 2013), lately it was also "highly commended in the ‘under 5 million passenger’ category" (ACI EUROPE, 2015).

As described above there was a high pressure coming from the airlines, to lower their fees. So the airport had to find an additional way to make profits. The solution was
to increase the non-aeronautical revenues. To do that they needed a new strategy. In 2008 the terminal building was reconstructed and extended. This made a complete redesign necessary. The airport collaborated with a design agency and created a totally new passenger passage through the airport. Back then there was no specific design goal beyond keeping a passenger centred mindset. Then in 2012, after generic feedback brought up that passengers like the cosiness of the airport, Tallinn Airport decided to play on its strength and implemented cosiness in its strategy.

We realised, we couldn't be the biggest or the most innovative airport of the region, so we decided to make our size work for us, to prove that it is not all that matters.

Tallinn Airport decided that their objective is to become "The world’s cosiest airport". In Estonian the slogan says: "Koduseim lennujaam maailmas" which translates to "the airport that feels most like home". So the next step was to systematically integrate the idea into their Passenger Experience design. The rationale behind the strategy is that "a happy passenger is a paying passenger". The desired outcome is that passengers spend more money while they are at the airport.

The "cosy" Passenger Experience is supposed to...

- be "as pleasant as possible"
- relieve stress, "make them feel at ease and welcome"
- show the airport’s empathy for the passenger
- be cohesive

**Passenger Experience Management issues and solutions at Tallinn Airport**

To assure that the passengers perception of the experience is as the airport wishes it to be, Tallinn Airport is taking the following actions along the customer journey.

**Prior to the arrival at the airport**

The traveller’s journey begins already at home.

*Our work, or my work already starts (...) when (...) the passenger get(s) the thought about travelling and how we can help it.*

The airport does not directly sell tickets, but they have an interface on their website where passengers can enter their destination and are then linked to an online booking agency. Otherwise, information is very important for the passenger at this point. For example, passengers want to know how to get to the airport or how to navigate within the airport as well as when and where to do the check-in. There are many things they want to know and they can find it all on the website and in the app.

One important means of getting to and away from the airport is taxis. To avoid that passenger’s have a bad experience with the taxi ride, for example, that they pay too much, the airport has contractual partners and official taxi lanes.
At the airport

Major obstacles and "moments of truth" to the delivery of the cozy Passenger Experience are the compulsory procedures. It starts with the check-in via the security check and ends with the boarding procedure. For an arriving passenger there might be the border control. All these negative things regarding air travel come together at the airport.

Relieve stress...

All passengers have to check-in before the flight. Many wonder why it is even necessary and they do not have any understanding for it. The simple explanation is, that is necessary for the load control for the aircraft and thus for safety reasons. It cannot be skipped, but as all of these compulsory procedures it causes stress for the passenger. They might even get angry, for example if they run late and know that the check in counter is closing early. The passengers only perceive:

Why did you…? The aircraft is still on the ground, and you tell me that I cannot board. Why is that so?

When the passenger goes on to the equally compulsory security check, the stress level will not easily decrease. Having your bags screened and maybe even the liquids tested or taken away is not avoidable. These procedures are required by EU laws. The only thing the airport can do, is to have the latest equipment and make the screenings and tests as fast as possible. The same is true for the border control which is necessary in the case of a non-Schengen zone flight. The compulsory control is done by the police and thus the airport’s influence is very limited. The only thing the airport can do, is lobbying so that the police installs the latest equipment, such as automated border control systems that can speed up the process and thus limit the passenger’s stress.

Be pleasant...

In counteracting the naturally unpleasant experience in the security check the interior design and small amenities play a very important role. The airport basically designs a cozy experience around all compulsory procedures, that includes appealing wallapers and carpets, homely lamps in an special Estonian design as well as plants in the security check area. When the passengers need to get out of their shoes they can get disposable slippers. Moreover the airport is lobbying for the passenger by asking the security company to offer amenities like free minigrip bags. Furthermore, the airport is soon installing mirrors so people can properly dress up again after they left the security check. The only problem that still needs to be tackled is the limited space that the security area offers for the passengers, for example, to repack their hand luggage. But there are already plans to expand the airport and then relocate the security check area. This is part of a plan to make the whole journey through the airport more logical. This means to go straight through all areas instead of a S-formed path. This plan includes to locate all stores in front of the gates, which is aimed at producing more revenues.

Be cohesive...

In order to come across as one unit the airport sets strict contractual rules for their partners. These concern the visuals, the name and all other relevant attributes. For example, every change of the interior design has to either match the existing or it improves the
experience. The partners pay, but the airport needs to confirm it. Furthermore, the selection of partners is very particular. Tallinn Airport would, for example, not let a "greasy fast food" restaurant chain open a franchise in the Terminal. They rather want the passenger to "feel the smell of fresh bread" from a provider of healthy sandwiches. Providing something for the different segments is important for Tallinn Airport.

When leaving the airport

In 2013 Tallinn Airport recognized the problem that the passengers were getting off the aircraft and straight to the baggage claim area. In that area, all they can do is waiting because there are neither shops nor cafés. Moreover, they cannot go back to the shops and cafés because it is behind the "point of no return". The airport lost the opportunity to turn them into paying customers for the terminal tenants and the passengers perceived their waiting times longer because there was nothing more to do.

After an ideation phase, the marketing team decided they wanted to evoke the idea in the passenger’s mind, to spend "the time until their baggage arrives pleasantly, by shopping or sitting in a bar or a café." The solution was to show the passengers an estimated waiting time until their baggage arrives before they leave the shopping and F&B area. They discussed this with the IT department and found that the actual time tracking of the baggage would be too difficult. Thus, they decided to use an indicative countdown time that is started after the aircraft is "on dock". Today, the countdown is displayed on large screens at the path from the arrival gates to the baggage area. The technical implementation of this solution, was done by the IT department.

Behind the doors

The implementation of the cosiness theme required the airport to overcome numerous obstacles. There was and is "so much that has to be done behind the doors". A major obstacle was "to get the idea of the cosiest airport into every employee’s mind." They needed to be convinced that it is not just a "stupid idea" from up there in the office, that they "have to smile to everybody".

A couple of years ago there was a problem that some airport employees were hiding their badges when walking through the terminal. They did not want to be asked for help by the passengers. This was an alarming sign for the airport. Additionally, employees, especially the office staff, had the undesired attitude to call the cleaning staff when they saw litter on the floor, instead of just picking it up and throwing it away.

To achieve a change of culture and attitude Tallinn Airport was very engaged in motivating their employees to internalise the goal to be the cosiest airport. Especially, the CCO played a crucial role as the leader of the initiative. After he joined Tallinn Airport and got to know the company, the improvements became tangible quickly. One important way to internalise the idea, was that every employee was encouraged that they should

(...) treat the passengers as you would treat the quests at your home. And at the same time you treat the terminal like your home.

Furthermore, the Sales and Marketing department moved some offices to the terminal, to show that they do not hide and are approachable. Also the "Better together" event
helps to be "like a united front to the (...) consumer". According to Eva the cosiness idea was able to change the culture at the airport completely.

*Passenger Experience Measurement*

The success of the Passenger Experience activities is mainly measured in financial results. The measurement is conducted by the sales team. They are responsible for the incomes through renting, advertising, concessions, etc. The results are compared with the activities. The key performance indicator that provides evidence is the non-aeronautical revenue per passenger and per square meter. According to Eva, it is not possible to relate the numbers solely back to the Passenger Experience activities. A change in revenues is also related to the overall economical situation, the addition of certain airlines and destinations, and so forth. But for Tallinn Airport the evidence shows that the results have been really strong since the cosiness idea was implemented.

Twice a year, Tallinn Airport is conducting an elaborate Passenger Survey covering various topics to get insights on the passengers (see appendix 11 for the questionnaire). They pick a diverse sample and offer versions in Estonian, Russian and English. The questions concern also how much and for what the passengers are spending money. Then the numbers are compared with the actual results, which were matching so far. While it was handed out as paper questionnaires a couple of years ago, they are now using tablet-PCs with online forms for that. This enables the direct transfer into analysis tools. The analysis, statistics and conclusions of the survey results are generated by a Marketing Analyst in Tallinn Airport’s Marketing department. The survey is conducted by Tallinn Airport’s own employees, which receive prior training for that. The results of the passenger survey are "almost a bit embarrassing to see (...) because it is just like telling yourself 'Oh, we are so good'."

Tallinn Airport prides itself with the sixth place in the ranking of The Guide to Sleeping in Airports (2014). They are happy to use it as marketing material, but the website, which also includes passenger reviews, is not used for further analysis. The reason for this is that they do not have any background information on how the data is created. In contrast the feedback received via Social Media is utilized and responded to.

4.4.3 Interference between different steps of the passenger journey

The passenger’s experiences with the partners of the airport have a significant influence on the overall experience that is attributed to the airport. Managing the partners is an important aspect of Tallinn Airport’s Passenger Experience Management and its goal to provide a cohesive and seamless experience.

The passengers perceive the airport and its different providers typically as one because they don not know who is operating what. They are not aware of the different responsible parties.

They don’t necessarily care. (...) They don’t even have to care. (...) it is only natural that that’s what they expect, that they don’t make the distinction (...).

The airport is typically the most stressful part of travelling, many things can go wrong. For example, if luggage gets lost, they typically think it is the airport’s fault. Passengers
do not even have a contract with the airport. In the first place, they are the airline’s customers.

Table 4-2: Interference between single external experiences and overall Passenger Experience with Tallinn Airport

<table>
<thead>
<tr>
<th>Interference (issues)</th>
<th>Reason</th>
<th>Partner / External</th>
<th>Current solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Taxis without partnership contract</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overprized taxi ride</td>
<td>No laws for price limits; no partnership</td>
<td>External</td>
<td>Partnership with some Taxi companies; Exclusive Taxi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>lanes; App/Web (Warnings)</td>
</tr>
<tr>
<td><strong>Late passengers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various issues</td>
<td>Unknown</td>
<td>External</td>
<td>Information desk</td>
</tr>
<tr>
<td><strong>Stressful compulsory check-in</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of understanding, opening hours</td>
<td>Load control</td>
<td>Airlines</td>
<td>App/Website, Self Service Check-in</td>
</tr>
<tr>
<td><strong>Luggage drop-off &amp; claim</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra fee (overweight)</td>
<td>Regulations, load control</td>
<td>Airlines, External</td>
<td>App/Website</td>
</tr>
<tr>
<td>Lost luggage</td>
<td>Various</td>
<td>Airlines</td>
<td>App; Fast GH</td>
</tr>
<tr>
<td><strong>Stressful compulsory security check</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration, food &amp; drinks get removed, unpleasant</td>
<td>Laws; regulations; Safety</td>
<td>Security company</td>
<td>Cosy design/culture, use of latest technology, App/Website</td>
</tr>
<tr>
<td><strong>Shopping &amp; catering experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience does not match expectations</td>
<td>Values</td>
<td>Terminal tenants</td>
<td>Careful selection of partners, community events</td>
</tr>
<tr>
<td><strong>Stressful compulsory border control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration, unpleasant</td>
<td>Laws; Safety</td>
<td>Border control (Police)</td>
<td>Lobby for use of latest technology, App/Website</td>
</tr>
</tbody>
</table>

The main issues arising from the interference between experiences are presented in Table 4-2. First, there are examples where the overall experience with the airport is influenced by external parties like taxi companies that are not in a partnership with the airport. Although, official taxi lanes exist that have only restricted access, those taxis can still enter the parking lot if they pay the fee. The airport cannot hinder them.

*And if you get a bad taxi experience then (...), however clean the airport was, nobody cares anymore (...).*

Second, also scenarios where the reason for a problem is not clear are possible, so "if the passenger is late, (...) our agents (...) at the information desk are the ones getting the first kind of reaction." The airport did not cause the problem but must deal with the consequences. Third, there are examples where experiences with partners impact the
overall experience, like the check-in which is required by the airlines. Here the number and type of possible check-in options depends on the airline. In this case, the airport can only inform passengers about the regulations and options in advance. Fourth, the example of the extra fee for the overweight luggage shows that also two parties, an internal and an external one, can be important.

(...) for example they just came from the bus and they would say, 'Yeah, I just came from a bus nobody was asking me extra for that.'

When passengers have to pay the extra fee, the experience they had with an external service provider like a public transport or private bus company can interfere with the airport experience. The staff at the check-in counter is from the airport, but they have to act according to airlines’ regulations and the fees are also charged by the airline.

And you also get angry at the airport agents because they are the ones that actually charge you with that.

The list of potential points of interference goes on, for example, with the car rental providers, the shops, the restaurants, the currency exchange counters, the postal office. Eva remarked:

If you get a bad experience (...) the bad customer service experience from there, you would add to your airport experience, you won’t add it to the Estonian Postal Office experience. Because you don’t really care who is doing what, and you should not care as a passenger.

4.4.4 IT related projects at Tallinn Airport supporting Passenger Experience Management

The discussion of the use of IT for CEM brought up two main categories of systems, the ones that are passenger facing and the ones that are supporting processes for the employees.

Passenger facing IT related projects

There are currently two major IT systems at Tallinn Airport that are directly supporting the Passenger Experience Management. The mobile app is already launched and the new website which will be published in the second half of 2015. The Windows 8 version of the app is furthermore planned to be used for two touchscreen kiosks that will be placed in the terminal.

When it comes to dedicated CEM software, Eva replied that they are not using any digital monitoring systems. However, she is going to have a meeting with a sales representative "who would like us to start using it." But making "a passenger do another move, that they don’t want to do or to press another button that they don’t want to press" is not what she wants.

Also the more common CRM software is not used; her comment on this: "We don’t have any CRM (...) and you would be surprised how many things we are doing on the go".
The website project

The three responsible employees for the project of the new website are Eva, the communication manager, and the commercial manager. The content is managed by Eva and the communication manager. The new website strategy, currently includes that:

- There should be a "balance between what we want to tell to the customer or the passenger and what information they want to get from the airport".
- Provide a seamless experience and not interrupt the visitors’ information search that brought them to the website in the first place.
- The design needs to have the same vibe and visuals consistently, to present "the cohesive look of the airport".

According to Eva, people often consult the airport’s website to look for information about destinations and airlines. This information is not the airport’s data, however, they provide it online. They even hope to be able to buy tickets there. Tallinn Airport is not selling tickets, but has a contract with an agency who is doing online ticket sales. The agency’s search form is integrated in the website. It is her understanding that passengers are not very interested in who is flying them, for them “it is just getting from point A to point B, not caring about what kind of aircraft it is.” She believes that passengers "don’t even know the airlines" and often passengers end up in another airline anyway, when two airlines do code sharing.

The old website is from the year 2008, built on a tailor made Content Management System (CMS), which was not atypical back then. Nowadays, the users perceive such a website as a mess, it has no responsive design, information is hidden and things that do not necessarily go together are in one menu. Also the information is excessive and partially unnecessary. For the prospective travellers this is currently a bad entry point for their Passenger Experience. For Tallinn Airport it is also far from good because it is hard to be used for advertisement and maintenance is difficult. Larger changes require huge effort because the additions have to be developed from scratch. Lastly, desktop and mobile sites are currently independent from each other with two different CMS.

With the new website things are supposed to be different. It is going to be developed by external web developers based on the CMS WordPress. The use of this popular CMS makes it much easier to maintain and improve, especially thanks to many ready-made extension solutions. Furthermore, content wise, there is supposed to be more relevant information for the passengers about, for example, the shops, restaurants, VIP service reservation, etc. Partners should get more incentive to make promotions on the website. Furthermore, the plan is to have a different section for airlines. The airlines should be able to showcase their destinations and information about where passengers can book flights, etc. A new business section is to market advertisement spaces, provide information about office rental prices and relevant contact data. Also airlines should be able to find, for example, passenger profiles there. The goal is to have a separate business environment for parties, other than passengers, that want to do business with the airport.
When it comes to the *design of the website*, it will be prettier and also responsive. The responsive design allows to get rid of the mobile site, by adapting to different screen sizes in 5 steps. For tablets they chose to use the full website. However, according to Eva *"nowadays, there are a lot of hybrids between tablets and mobile phones and it is quite difficult to keep track."*

The *content management* of the website is solely done by Tallinn Airport, no partner has access to the CMS so far. The only other permitted users are the external web developers. Tallinn Airport wants to have the last word about what partners, like shops and cafés, put on the airport website, so that they can maintain the consistency of the offered web experience.

Also for the future, there are no plans to give anyone else access to the CMS, Eva does not see a need for that. There was, however, the idea to give user accounts to the airlines. But other airports made some experiences with that and it turned out to be not so popular among airlines to use the access. Thus, an introduction of airline CMS accounts is unlikely.

The *measurement and analysis of the website traffic* is done by the web development agency, by means of using Google Analytics. They are not only making sense of the data and provide insights to the Marketing department, but also offering Search Engine Optimization. Search Engine Marketing is not done because Tallinn Airport is *"not selling directly to the end customer"*. Furthermore, general feedback about the airport’s services, like ideas and problems, is collected through the website’s feedback form.

*The app project*

The app, which is actually *three apps* for three different operating systems (Android, iOS and Windows 8), is the latest Customer Experience innovation of Tallinn Airport. The app is promoted, for example through a download suggestion before entering the mobile website of Tallinn Airport. The Android and iOS apps were developed with the common purpose to enable the passengers to manage their journey better. Tallinn Airport realized that the passenger journey already starts on the way to the airport. The app is aimed at relieving stress. With its help *"you know (...) you will be on time and all these kind of things, how long the security line will be"*. The app also is a means to promote the different partners, for example, the concessionaires at the airport. The app’s user experience and exit points are *monitored* closely using Google Analytics.

For the airport the app is a marketing and sales tool, that is why the involvement of Tallinn Airport’s IT department was very limited. The iOS and Android app were developed simultaneously, both read the content directly from the website. This allows to make small updates simply through changes on the website, which requires an internet connection. Only major changes, like adding a new airline or layout, must be done through separate updates for both operating systems. Great ideas and problems to be fixed are gathered through the app’s feedback function.

The *Windows 8 app* needs to be distinguished from the other two because its development was initiated by Microsoft Estonia. When Windows 8 was released, they *"wanted
to have some reference points in the Estonian market". According to Eva it was developed quickly and with few resources, so relatively large investments were necessary to improve it. As it was developed in collaboration with Tallinn Airport’s external web developers, it also reads the content from the website. However, major updates need to be developed for another platform. A good point is, that it also runs on desktop computers now, after it first only supported tablet computers.

In the app project, the IT department was neither involved in the product development nor the UX development part. However, they were always available and willing to answer questions. Also they provided the external developers with codes to enable the app to read the flight plans.

The Kiosk project
Making use of the self-refined Windows 8 app, two big touchscreen kiosks will be set up in the terminal. The kiosk’s purpose is to guide the passengers. One is placed at the landside, the other at the airside. It will provide passengers with guidance through a terminal map, flight plans, etc. The app already exists, the touchscreens are stored in the maintenance room, they only need to built the exterior facing around it. The app was only modified so it would jump back to the front page after a passenger has used it and it is idle for some time. The exterior facing is design by Tallinn Airport’s Advertising agency and produced by a local manufacturing company, so "It's really a multidimensional project".

IT systems supporting collaboration at Tallinn Airport
The Intra- and Extranet
A kind of Intranet has always been there, it was the place where the employees could find all the contacts. But when it was outdated a tender for a combined solution, with both Intra- and Extranet, was initiated. The project was executed by the HR department and it "is also done kind of separately from our IT because (...) it's not an IT project!". However, the IT department collaborated with the solution provider during the technical implementation phase of the project, to assure security as well as the integration and compatibility with other systems. So the Intra- and Extranet were introduced several years ago, in form of a 100% custom-made solution. The access to the system is regulated through different permissions for various users and document types. They currently regret that it was custom-made because every little change needs new coding. This is not only time consuming but also makes it expensive to maintain. However, currently there are no plans to replace this system.

The functionality of the Intranet includes contacts and document management. The Document Management System makes up a huge part of the Intranet, it allows the company to upload and archive all documents. As mentioned in the case introduction, Estonia uses digital signatures which makes it possible to have all forms, tender documents, etc. in digital format. To illustrate how the system is used, Eva gave the following example. Assuming that the airport management makes changes to the customer service standards, they can assign it to the corresponding group of service employees and let them confirm that they have read it and understood it by signing it digitally.
The *Extranet* is the interface to communicate with all the companies at the airport, the so called airport community. It is a communication project, not an IT project. It is among other things, used to promote passenger feedback, because often the airport receives feedback or complaints with which a partner should be credited with.

### 4.4.5 The role of IT and the IT department

The IT department at Tallinn Airport is organised under the Chief Operating Officer who is a board member. The IT manager Sven Friberg is leading a team whose members are separated by responsibilities and systems. There is no dedicated CEM responsible in the IT team. The *main tasks* of the department are IT support for Tallinn Airport’s employees, maintenance of hard and software as well as assuring the reliability of the systems. In the airport business reliability is very crucial. The team is present at the airport, to be able to react to hardware or software problems. The IT support is available 24/7.

The IT team takes care about the flight plans for the dispatch, as well as flight schedules and plans and their connection to applications. Furthermore, they are responsible for all the computers, phones and equipment like the luggage belt, and if something is broken, they fix it. When new hardware is installed they are also responsible for the wiring. Although the IT department has not been directly involved in the app, website and Intra-/Extranet development, they have taken care of all the links to the different airport systems and interfaces. There is no software development in-house.

In addition to the standard IT infrastructure like computers and phones, the airport also has many different screening machines in use, there are huge server rooms, the luggage belt that shows flight numbers etc. "So it’s a… it's a big, big network that has been built here at the airport."

One last major IT element is the free public WiFi. In order to assure its reliability, speed and quality, the data capacity, number and type of devices as well as the number of sign-ins to the network are monitored. With the help of those measurements, decisions about WiFi maintenance and/or enhancements are made. Individual user tracking does not take place. The commercial use of the WiFi is limited to some advertisements on the landing page and a branded WiFi network name.

*The relationship between Marketing and IT department at Tallinn Airport*

Eva describes the relationship between Marketing and IT as difficult:

> Because we want a lot of things, we want them quickly, we have lots of ideas, and somebody else has to do them because we simply don't have the know-how. (...) It's love and hate. We love what they do, but they very often don’t like what we want.

She further illustrates the relationship by describing that the two departments are living in completely different worlds. Furthermore, Eva expresses in a smiling tone:
Sometimes there needs to be an interpreter, between the IT guys and the marketing person because we simply cannot understand. I am of course generalizing, but it is like that.

She realizes that this is a problem that they have not coped with yet. In addition, she mentions that there are usually those kind of "friendly conflicts between these, marketing and also, I would say, other departments, but mostly marketing." She remarks that other departments, like finance, usually have the same issues again and again. Marketing is special because they are always generating new problems. She gives an example, in which she is obviously slightly exaggerating:

*Like right now, I already, I am (...) building up courage to go to the IT department and ask them to draw me some data wires to the place where I want to have the touch screen (...) guides.*

The IT team was neither directly involved in the website and app project, nor in the Intra/Extranet project. But in the end, they "always rely on them". In the description of the app project Eva mentions, that there are different perspectives on the involvement in projects:

*I was (...) sensing that perhaps the IT wanted to be also a part of it, since they know more about apps (...), but for me and for the airport it's a marketing and sales tool. Hence the reason why it was initiated by us.*

In some later phase of these IT related projects, the IT department typically gets involved to a certain extent, when some technical questions come up for the implementation. The main issue is, that the question at which point the IT department should be involved is not clearly answered. In that context Eva remarks:

*The point WHEN it (the involvement) has to be done is something that we have to work on (...).*

When it comes to things related to the technical implementation and requirements for compatibility nobody outside the IT department has the knowledge.

### 4.5 Tallinn Airport’s IT Manager

Sven Friberg is the IT manager at Tallinn Airport. He started in 2001 as the airport’s Systems Administrator (back then it was called IT specialist) and in autumn 2002 he was promoted to Head of IT department. He is managing 11 people in his department.

The IT department belongs to the "Operational management" unit within the organisational structure (see Appendix 7). This implies that Sven is reporting to the COO Einar Bambus. In general, the responsibilities of the IT department concern everything that includes IT: PCs, servers, access control, security/X-ray systems, flight and weather information, parking system, departure control system as well as networking, WiFi/internet connection and so forth. Software development is entirely outsourced and only the management of the software is still done by the IT team. They are providing their services only to Tallinn Airport and the Ground Handling subsidiary. Except
for the internet, that is provided to all partners. His main mission is to manage his department and help Tallinn Airport to achieve its goals via IT. This includes to provide support for other department’s projects that involve IT.

The performance of the IT department is measured based on stability and effectiveness of the systems. A problem could easily delay flights and have a bad influence on the passengers.

4.5.1 The IT manager’s perspective on the airport’s ability to innovate in terms of Passenger Experience

When the author asked about the IT department’s innovation activity with respect to the passenger journey, Sven replied:

*The main issue is, that we can’t do it. (...) Airports don’t have access to passenger data.*

According to him, the lack of passenger data limits the airport’s possibilities to improve the Passenger Experience through IT. In his opinion, it depends solely on the airlines, and the airport can only support their decisions and install the corresponding hardware. He remarks that passenger relations are controlled by airlines. The reason why the airlines do not share the passenger information with the airport were unknown to him, he suggested that it is "critical business information for the airlines." And for the airport it is just not necessary for its operations. However, he acknowledges that in theory extra services would become feasible through full access to the passenger data. But practically innovations happen where the big carriers are, for example, in Australia RFID innovations were made (automatic check-in via RFID tag) by the airline and the airport enabled the installation.

The airlines have more power with regard to these innovations because they own the underlying systems. Airports can only support these innovations. The airport cannot create anything for the individual passenger, only for every passenger.

In the discussion of his feedback on the final draft of the case report, Sven added the following relevant points. He emphasized that the main barrier to major IT innovations for the Passenger Experience is the small size of the airport. Implementing and creating large systems for an airport with only 2 million passengers per year seems not feasible for him because of the limited budget. Also regulation and motivating the stakeholders to share data would be difficult. But on the other hand, he points out, that he is very open to innovation and if an opportunity would arise, he would take it. He further remarks that he likes to think outside the box and supporting other department’s projects in the airport. However, he also believes that the other departments might not perceive the IT department as a source of innovation, rather as a support function. Although, he thinks that nowadays IT is the "main innovator of business".

4.5.2 Passenger Experience Management and potential innovations

According to Sven, the airport’s main focus with regard to the Passenger Experience is the reduction of stress along the passenger journey. The occurrence of the different
stress levels depends on the options that the passengers choose, for example, if they arrive by car or not, if they checked in online or not. In general, the stress tends to be high before and at arrival at the airport. The first possible rise of the stress level in the airport environment comes at the parking lot. There are many uncertainties, people do not know if they find a parking and where, or how much it costs. The next possible stress level increase comes at the check-in because people do not know where to check-in and how. Then the security check is causing stress. After that there is typically time to calm down. People can go shopping and their only concern is not to miss their flights.

The only solution that Sven can think of is to provide passengers with flight information. Passengers can access it on the app, the website and see it on screens in the airport, so they can assure themselves that they are not missing their flight. He remarks that making the whole journey seamless and using NFC phones could provide an improvement. Nevertheless, he has security concerns about the latter and is rather sceptical.

When the author prompted Sven to comment on the idea to replace the existing parking fee calculator with a parking reservation system to facilitate the Passenger Experience, he explained that such a system is planned. He believes that the vendor of the parking system that they currently use is offering a corresponding solution. He knows about that because his team is offering support for that system. It needs to be discussed again with the Head of the department for parking. They have just updated the system and are also building a new parking deck. An additional idea is to implement number plate recognition as well, but there are some issues with those systems (e.g., when it is snowing). They are planning to start with this in two years from now.

Sven also commented on feedback mechanisms. He stated that the security company has feedback buttons installed after the security check. He assumes the results are shared with the security manager of the airport. The airport itself has no feedback buttons and also never asked the IT department about the possibility. So it is currently not an issue.

Although Sven clearly states that the IT department is not engaging in any innovation activities, he gave a short outlook into future possibilities. For example, he mentioned loyalty cards that could enable passengers to purchase fast track access. However, this is still questionable,

(...) because we have all agreed that our (...) our main policy would be to get the people in as fast as possible, so we don’t want to make money on some people who are paying on the fast lane, we want to have everybody in as fast as possible.

Because when the passengers are behind the security check they can generate revenue through shopping, drinking, and so forth. This is also the reason why they are planning to relocate and enlarge the security check area, to get people in faster. Of course, this is also connected to more costs, that is why it needs to be thought through carefully. The finance department is currently doing that.

4.5.3 Passenger data

At the security check the passengers are asked to show their boarding pass, so their name and destination is known. But the problem is that this does not make them uniquely
identifiable. In general, some of the airport’s employees have access to parts of the passenger data (e.g., passenger list) via their computer screens. However, this is only to read it, they do not own it, so they cannot export it or use it in any way. This situation comes up because the airport is providing the check-in and boarding agents that handle the check-in system and boarding system that is owned by the airline.

As mentioned before, the access to passenger data could enable new service offerings from the airport’s side. But Sven believes that having the passenger data is not so important in the case of Tallinn Airport, because it “very small and all the gates are basically 5 minutes away.” For bigger airports it is more useful to some extent. Sven gives the example of a big airport that was monitoring passengers with the help of boarding pass scanning in the shops. They discovered shopping patterns and used the information to relocate stores to the gates with the highest proportion of the corresponding target groups.

Another possibility to collect passenger data is to monitor the WiFi usage. Currently, this is not done because there was no request to look into it from the Marketing department. There are also significant obstacles. Sven is sensing that it would be "a very political thing." In general, it is conceivable for the future and they "will definitely start digging into that area." Technically, the measurement would function by scanning the network for connected devices and identifying them via their distinct ID, which is the MAC-address. This would generate insights on usage statistics like amount of users and duration of usage. One problem is that these numbers would create biases depending on what is measured. For example, if the goal is to measure the duration the passenger spent in the airport, it is not know if the passenger is actually having the WiFi activated the whole time. Also all the staff, the taxi driver who are using WiFi would have to be filtered out and distinguished from everyday travellers somehow. Furthermore, most of the Estonian people are very privacy concerned. For example, at the airport in Helsinki, the free WiFi can only be used under the condition that the airport is monitoring the usage, in terms of where and what users are doing.

"But I think if we would do it in Estonia, all hell would break lose.

Many people would not accept to be kept under surveillance. The Estonian digitization (e-government, digital signature, etc.) has made people aware about the risks connected with IT. Furthermore, it would create legal issues. There would be a strong need for regulation because Estonian people know that it is traceable back to the human.

4.5.4 Software to support Passenger Experience Management

Regarding software support for Passenger Experience Management Sven commented on both CRM and CEM solutions. There have been talks about CRM software between a software vendor, the marketing department and the IT department. Marketing states the requirements and IT provides the support and knowledge about compatibility. However, no CRM was bought. Sven believes that "CRM was ditched (...) worldwide actually." He thinks that customers rather "want to meet you, to go and have a drink with you (...)." Regarding, CEM solutions Sven remarks that there are "a million ideas", but again the passenger data would be needed. In his opinion data mining could be useful,
but "it's actually more ... not an IT question ... but a question for Marketing." In addition to that, there would also be privacy issues that are coming up.

Comments on the Extranet

The Extranet is a current project. The Intranet was used for internal information exchange for some time now, currently they are dealing with implementing the same functionality into the Extranet. The Extranet brings up security questions because there is such a huge amount of people working at the airport. In addition, there is also fluctuation in the amount of people, which makes the maintenance of user accounts difficult. At the moment, the easiest solution, which is also the one they are adopting, is to give one account to each company that can be shared between the employees.

All partners and relevant parties (destination airport, authorities) have access to the flight information through a form of Extranet, some also have their dedicated screens. The security company, for example, is planning their work and the need for staff based on the flight information.

4.5.5 General outlook and trends

A general trend is that internet check-in numbers are increasing. Some airlines have 90% of online check-ins. Basically, passengers just come to the airport, give away their bag or, when they do not have one, go directly to the security check. Then they go through the stores and at the gate the boarding will be also automatic, at least to a certain extent. So the only human touchpoints would be the security check, the sales people and then the stewardess. In this development he sees the airports drifting even further away from the passenger data:

So the airports are not so much in the business, in the future, of passenger data at all. I would (...) say.

The processes get more and more digitized. Sven suggests:

(...) so you could of course already order services before you come to the airport, and so on, but that's also for the marketing department.

4.6 Tallinn Airport’s Head of Sales department

The Head of Sales department, Rasmus Kabun, is responsible for approximately 50% of Tallinn Airport’s non-aeronautical revenues. His main task is selling advertisement. He has two colleagues in his department, one is responsible for terminal tenants and the other one for the tenants outside the terminal. The management of the tenants includes constant monitoring of their actions and the design of their premises, and "naturally we do direct it all in order to be the cosiest airport in the world."

Passenger touchpoints can be direct and indirect. The passengers are indirectly exposed to stimuli of his department’s work through touchpoints such as word-of-mouth, news or social media. Because his department is not responsible for transportation and parking, the first direct touchpoints to his work for a departing passenger include the advertisements in the check-in area and the cafeteria. The next step which could not be
missed is the branded security check area. Then, when the passengers continue to the airside, they will be exposed to a lot of branded spaces and advertisements. The biggest are the branded gates. Furthermore, the shops and F&B are touchpoints influenced by the work of the Sales department because design and product mix of the terminal tenants is approved by the Sales team.

When the Sales team is deciding to have a tender for a new partner, their main considerations focus on "services/ products, which we yet don’t have, what would not compete directly with existing ones and what could be beneficial for passengers." Furthermore, passenger feedback and the match with the cosiness theme is integrated in the decision making. When it comes to the tender process itself, no information was given, apart from the fact that it is done according to the law. If they know they want a specific partner they also send invitations to participate in the tender.

The biggest challenge in the work with the partners is their commitment:

\[ In brief, the biggest challenge is to find a partner, who would really want and like to contribute. Who would not (...) take it like just another business. \]

Otherwise, the Sales team’s work with the partners consist of info meetings that are held every three months "to share the latest news, info about future projects, survey data etc.", or also have daily updates with them if necessary. In addition, he also mentions the "Better together" community event which is aimed at improving the community relationships.

### 4.7 The partner’s perspective

#### 4.7.1 Estonian Air’s IT manager’s perspective

Marcus Liimets is IT manager at Estonian Air. He has more than 20 years of experience in IT.

Estonian Air is collaborating with Tallinn Airport on many different levels, including IT, Marketing and Management. Information, also about passengers, is shared as long as it is required for operations. However, they "have no right to share any personal information" about passengers with the airport. With regards to IT systems integration, the airline’s check-in system is installed in the airport’s Common-use terminal equipment (CUTE) environment.

Marcus is describing the relationships between the different companies on the airport’s premises as good. Partnerships with other airlines enable Estonian Air to reroute their passengers in case of a necessary flight cancellation. When the author asked him, what he believes the airport should do to improve the Passenger Experience, he remarked that the queues at the security check are sometimes a problem during peak times.

The cosiness theme introduced by the airport does not play a role in Estonian Air’s strategy. Their goal is to be a good and reliable airline. Marcus points out that the airline recently won a punctuality award from Sheremetyevo Airport in Russia (Tere, 2015). They aim at a Passenger Experience that is as easy as possible and all services should be
accessible online. The main IT touchpoint for the passenger is the Estonian Air website, other minor touchpoints are located at the airport. They try to impact the Passenger Experience through extra offerings of hotel rooms, rental cars, and an insurance in one single step with the flight booking.

For the future of technological solutions for Passenger Experience Management, Marcus regards the "One Order" of Passenger name record (PNR) and electronic ticket as an important innovation.

4.7.2 A shop manager’s perspective

Moonika Tubro is shop manager in a travel retail shop at Tallinn Airport. The shop she is managing belongs to Inflight Service Estonia Eesti OÜ. Moonika started in the shop as a sales person in 2004. She was then trained to become a shop manager. She holds that position since 2008.

Inflight Service Estonia Eesti OÜ is operating at Tallinn Airport since 1999. In addition to three retail shops at the airport, they are also operating at Tallinn Port. At Tallinn Airport they have a combined lease and concessions contract. In total 25 employees work there.

When she was asked about the role of CEM in her company, she replied that they are continuously working on customer satisfaction. In her opinion, the idea to become "The World’s Cosiest Airport" is very good and she notices the benefit in the form of happier and more relaxed customers. In general, the relationship with the airport is good as well, and they are having weekly calls or meetings together.

The shops are collecting passenger information on destinations for sales analysis. However, according to Moonika they are not collecting any personal information. She further states that they are not using any information systems.

4.8 Documents: Passenger survey results

As described above Tallinn Airport is conducting an extensive passenger survey twice a year. The questionnaire of the survey 2013 can be found in Appendix 11. In this subsection the major results of the survey 2014 are summarized. For the complete results see Appendix 12.

In 2014 Tallinn Airport surveyed 986 people, of which the biggest proportion were business travellers (46%), the second biggest segment were holiday travellers, and the third biggest segment were visiting friends/relatives (15%). The proportion of those segments remained relatively stable over the last years (since 2012). In 2014 56% of travellers were of Estonian origin. The biggest proportion of passengers arrived at the airport by Taxi (44%), 25% arrived by car (short stop) and another 17% arrived with public transport. Only 6% used their car and the parking. In the next step, only 34% of passengers used the check-in counter and 15% used the kiosks, the majority of 49% used online check-in.
The survey showed also that 57% of the business travellers and 73% of the holiday travellers stayed longer than 1.5 hours at the airport. Holiday travellers make almost 50% of purchases from the store, compared to 34% of purchases that come from the business travellers. Regarding F&B purchases both are around 20%.

With regard to the effects of the Cosiness strategy, the survey showed evidence that the Passenger Experience efforts have made "good commercial sense". In detail, the customer satisfaction scores have increased steadily each year since 2010, the same is true for the amount passengers spent at the airport. Table 4-3 shows, while the growth in satisfaction was 0.1 absolute (or ~3%) each year in the time before the cosiness theme was introduced (2012), the growth was 0.4 absolute (or 10%) in the year directly after the introduction. The total increase in satisfaction from 2010 to 2014 was ~18%, the increase in spending per departing passenger was ~47% in the same time frame (these are the survey results, the accounting numbers can be seen in Table 4-4). In relation to that, the survey results also showed that the proportion of passengers visiting the stores and actually buying something went down from 49% in 2011 to 40% in 2014.

Table 4-3: The comparison of satisfaction and spending per departing passenger over five years (*real, January-October; numbers adopted from Appendix 12)

<table>
<thead>
<tr>
<th>Year</th>
<th>Satisfaction score (5 is the best)</th>
<th>Spending (€/Departing passenger*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4.5</td>
<td>11.75</td>
</tr>
<tr>
<td>2013</td>
<td>4.4</td>
<td>11.17</td>
</tr>
<tr>
<td>2012</td>
<td>4.0</td>
<td>10.50</td>
</tr>
<tr>
<td>2011</td>
<td>3.9</td>
<td>9.41</td>
</tr>
<tr>
<td>2010</td>
<td>3.8</td>
<td>7.99</td>
</tr>
</tbody>
</table>

The survey results further indicated that satisfied passengers are willing to spend more money. In fact, those that rated the experience as "good" spent 14€ on average and those that stated it was "great" spent 20€ on average.

In Tallinn Airport’s passenger survey, the criteria that were presented to be underlying the satisfaction with the shops and F&B were taken from a study by the consulting company DKMA (2013). The criteria that were rated to have the highest influence on satisfaction were: first, the selection of products, second, the atmosphere of shops, third, the selection of shops. According to the survey results the least important were speed of service, friendliness of staff and ease of finding shops. For F&B satisfaction the most important criteria were: first, the menu selection, second, the selection of restaurants, and third, the quality of food/drinks. The least important criteria were friendliness of staff, cleanliness of facilities and availability of seating.

4.9 Documents: Annual report 2014

The annual report 2014 demonstrates the financial results and describes background information to the Passenger Experience activities. In the following subsections the
relevant topics that are presented in the annual report 2014 are summarized (Tallinn Airport, 2014).

Figure 4-1 shows the eight largest customers of AS Tallinna Lennujaam which accounted for 60.2% of the sales revenue in 2014. The second biggest customer in that list is a retailer in the passenger terminal and the fifth biggest customer from the hangar premises service segment. These two are both ranked among the non-aeronautical revenues of the airport.

<table>
<thead>
<tr>
<th>Service segment</th>
<th>Sales revenue 2014, million EUR</th>
<th>Percentage of turnover</th>
<th>Sales revenue 2013, million EUR</th>
<th>Percentage of turnover</th>
<th>Rank of customer in 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonian Air AS</td>
<td>5.7</td>
<td>18.0%</td>
<td>6.0</td>
<td>19.7%</td>
<td>1</td>
</tr>
<tr>
<td>Inflight Service Estonia Eesti OÜ</td>
<td>2.5</td>
<td>7.8%</td>
<td>2.4</td>
<td>8.0%</td>
<td>2</td>
</tr>
<tr>
<td>Lufthansa German Airlines Estonia</td>
<td>2.4</td>
<td>7.6%</td>
<td>1.9</td>
<td>6.3%</td>
<td>6</td>
</tr>
<tr>
<td>Flybe Finland OY</td>
<td>2.1</td>
<td>6.7%</td>
<td>2.2</td>
<td>7.1%</td>
<td>3</td>
</tr>
<tr>
<td>Magnetic MRO AS</td>
<td>2.1</td>
<td>6.5%</td>
<td>1.9</td>
<td>6.4%</td>
<td>5</td>
</tr>
<tr>
<td>Air Baltic Corporation AS</td>
<td>2.1</td>
<td>6.3%</td>
<td>2.0</td>
<td>6.6%</td>
<td>4</td>
</tr>
<tr>
<td>SmartLynx Airlines Estonia OÜ</td>
<td>1.6</td>
<td>5.0%</td>
<td>1.4</td>
<td>4.5%</td>
<td>7</td>
</tr>
<tr>
<td>Aeroflot-Russian Airlines-Joint Stock Company</td>
<td>0.8</td>
<td>2.4%</td>
<td>0.7</td>
<td>2.4%</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total group sales revenue</strong></td>
<td><strong>31.9</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>30.3</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4-1: The eight largest customers of the AS Tallinna Lennujaam group in 2014 and 2013 (Tallinn Airport, 2014).

Cosiness is a guiding principle for the airport and its employees. They pay great attention to assure everything is in order, clean, and available for the passenger. Tallinn Airport is monitoring very closely which products are being sold in shops and restaurants. For each new product they reflect “as to how, in addition to earning revenue, it would improve the airport and make it cosier.”

4.9.1 Efficiency

In 2014 the average aircraft turnaround at Tallinn Airport was 30 minutes. After the start of the luggage unloading, the first luggage arrived on the baggage claim carousel in 4.6 minutes on average. When aircrafts are container-loaded it takes on average 8.3 minutes. One of the most crucial measures for comparison of aircraft ground handling providers is punctuality of the departure of the aircraft. In 2014 the service punctuality to the largest providers was consistently above 97%.

With such results Tallinn Airport continues to be among the top 5 airports in the world in the on-time performance rankings.

4.9.2 Non-aviation revenue

In 2014 non-aviation revenue accounted for 61% (and a total of € 19.5m) of the group’s turnover, growing at a rate in excess of 9% during that year. The largest factor for the
revenue growth was the lease of a new hangar complex. Revenue generated through concessions, car parking and advertising sales also grew.

Table 4-4: Average spending per departing passenger in 2013 and 2014 (Source: Tallinn Airport (2014))

<table>
<thead>
<tr>
<th></th>
<th>Retail</th>
<th>F&amp;B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>9.80</td>
<td>2.63</td>
</tr>
<tr>
<td>2013</td>
<td>9.12</td>
<td>2.44</td>
</tr>
</tbody>
</table>

The average spending per departing passenger in both retail and F&B sales grew compared to the year 2013 (see Table 4-4). According to the annual report the airport aims at selling Estonian products:

*It is important for us to be able to give opportunity for passengers to purchase Estonian art, souvenirs, sweets, food and music.*

### 4.9.3 Advertising and its impact on the Passenger Experience

The positive reputation as well as the diverse and flexible options to advertise are highlighted. According to the annual report the advertising activities also positively influence the Passenger Experience.

*The aim of new advertising projects is to add cosiness and offer additional value to passengers.*

It is remarked that the design of waiting areas and also the cooperation with G4S (the company responsible for the security check) to add warmth to the security control area is showing this effort. Additional value is also created through the collaboration with Porsche. Passengers booking the VIP service get a luxurious ride from the passenger terminal to the aircraft.

*We try to be clever and convert even the most unexpected locations into humorous advertising space in collaboration with the right partners.*

For example, together with an advertising partner they installed a comic strip themed men’s toilet.

### 4.9.4 Ground Handling

Tallinn Airport’s ground handling subsidiary provides the following services:

(...) handling of aircraft and serving passengers, leasing of transport equipment and special equipment, providing cashier services, acting as an intermediary selling various services to airlines and passengers, and selling and preparing passenger and cargo transport documents.
The subsidiary’s strategic quality objective for the period 2014 to 2018 is "to become the highest quality provider of ground handling services in Northern Europe." They are continually improving their quality management system to accomplish this objective. Moreover, customer feedback is analysed regularly "to develop the service standards of the company to meet customer expectations even better."

4.9.5 App

Almost 50% of the people who access Tallinn Airport’s website do it from a mobile device (incl. phones and tablet PCs). This created the idea to extend the mobile channels with an app. The goal was

"to enable passengers to access information on their flight at all times, and that important messages would be transmitted as a notification without them having to actually visit the airport’s website or check the information screens at the airport."

According to Tallinn Airport (2014) the app, that was launched in November 2014, was downloaded almost 7,000 times after three months. They had initially set a goal of 10,000 downloads within 3 years.

4.9.6 Airport community

In the annual report it stated that there were 80 companies in the airport community in 2014. The total number of employees was almost 2000. It is highlighted that Tallinn Airport has

"(...) been engaged in improving the cohesion of airport community to support the positive image of the airport and to clarify the mutual goals to the employees of partnering companies."

It is crucial for the airport to manage communications between the different partner companies and to increase the sense of community. Finally, this has a positive impact on "the big picture that is the airport’s general image".

Tallinn Airport created a "Airport Users’ Committee" which consists of the companies using the airport and operating on its premises.

"The objective of the committee is to share information with interested parties about the developments and operations at the airport."

4.10 Document: ACI EUROPE Best Airport Award application

Tallinn Airport’s marketing and sales department is working on the improvement of the passenger journey with the goal to increase the non-aeronautical revenue. To do that,

"the best passenger experience design principles need to be followed throughout the whole passenger journey from parking to shops and cafés."
Airlines are treated as guests and partners. The airport celebrates new route openings, airlines’ anniversaries, and also passenger volume milestones.

Some major points along the passenger journey, that is designed in cooperation with Estonian businesses, include:

- Free WiFi (which is offered since 2001),
- Waiting areas that introduce Estonia to foreigners (a bridge with forest decoration and a 3D bog on the floor),
- A gate that is basically a living room (incl. sofas, plants and a TV)
- Boudoir-themed Women’s restrooms ("80% of women use a restroom while passing through. The experience influences the overall opinion of the airport")
- A self-service sandwich table for late night travelers (where travellers pay as they wish)

The gates were all transformed into "comfortable conceptual lounges, considering different passenger groups."

Although Tallinn Airport is small, it has the highest social media engagement of the airports in its region. The number of Tallinn Airport’s "Facebook followers per 100,000 passengers is 620, followed by Copenhagen and Riga with 263 followers."

5 Results: A closer look on existing IT and IS solutions for Customer Experience Management

There are different levels on which IT can support Customer Experience Management, for example, we can separate the macro and micro management of the Customer Experience. On the macro level the customer journey can be managed (e.g., consistency, completeness, alignment with the strategy, communication with partners) and on the micro level the impact of individual interactions can be managed (e.g., emotional & cognitive impact, contact & process quality).

5.1 Technological solutions for Passenger Experience problems at Tallinn Airport

5.1.1 IT during the passenger journey

During the journey the passenger interacts with several technological devices that are presented in Figure 5-1 using four general steps of the passenger journey as a categorisation. The app and Social Media are available for certain interactions or functions throughout the whole journey, however, neither of them can support all journey steps entirely (this is why their border line in Figure 5-1 is dashed).
5.1.2 Mobile Application

The Tallinn Airport Mobile Application follows the passenger through the whole journey. Figure 5-2 to 5-6 show an exemplary customer journey and what a passenger could do with the mobile app. Before the booking of the flight (Figure 5-2) she can browse through the airlines and can click on a link to the airline webpage to book a flight, the same is possible for rental cars to rent a car.

Figure 5-2: Tallinn Airport App Screenshots - A selection of typical functions for the passenger journey phase before booking a flight.

Then when the flight is booked (Figure 5-3) she can start to check out the airport facilities on the map and read through all the important informations about the compulsory procedures. Then she thinks about going to the airport by car and looks for the parking information and, finally, for the parking calculator. Here she might be surprised that she cannot reserve the parking but can only see the price.
Figure 5-3: Tallinn Airport App Screenshots - A selection of typical functions for the passenger journey phase before getting to the airport.

Then at the airport (Figure 5-4) she can browse through the different service providers and register her flight for notifications. When she does this she has the possibility to see how long the expected waiting time at the security check will be or how the weather at her destination is at the moment. However, she will only see the indicative time "medium". This is making her still a bit nervous because she has no benchmark about what "medium" really means. When she is in the line for the security check she can browse through the list of shops that await her.

Figure 5-4: Tallinn Airport App Screenshots - A selection of typical functions for the passenger journey phase at the airport.

In the next step, she has only a few minutes left before boarding (Figure 5-5), she feels hungry so she checks out one of the offers from the list of F&B providers and gets a cake. Now she gets the notification to proceed to the gate for boarding.
Figure 5-5: Tallinn Airport App Screenshots - A selection of typical functions for the passenger journey phase before boarding.

Now we change the scenario, to a foreigner who has never been to Tallinn and just arrived (Figure 5-6). The first thing he did when he arrived is to check the Tallinn City map to see how far it is to the centre. Although, it is not so far he thinks a Taxi might be the better choice because of his heavy bags. Then he notices the warning that some Taxis charge enormous prices. He finally, decides for the bus. When he arrives at the hotel he notices that he lost something, so he accesses the app again to check out the telephone number of the lost & found office at Tallinn Airport.

Figure 5-6: Tallinn Airport App Screenshots - A selection of typical functions for the passenger journey phase after the arrival.
5.1.3 Intranet and Extranet

The Intranet is the information and communication portal for Tallinn Airport and Tallinn Airport GH employees. It is used daily and is set as the landing page of the browser. According to Eva it is used intensively for news as well as information, and as access to the document management system. Also the forum and discussion function is similarly popular. From the Intranet’s start page the following functionality/information is accessible (the list is limited to the points that the author assessed as potentially relevant for Passenger Experience Management):

- A forum for any sort of discussion
- A discussion board showcasing ongoing discussions
- Feedback & Suggestions (which are directed at one of 6 selectable departments, which are Real-estate & Maintenance; Customer Service; Work Environment; Environment; Security; Safety)
- Airport’s sports club
- Compliment a colleague
- "Better together" series of events
- Document Management System
- Service quality agreements

The Extranet is a community communication channel for all airport community members. It is a web-based interface which makes it accessible regardless of the user’s location. The Extranet is not entirely functional yet, however, the following functions are supposed to be available according to a user manual with screenshots:

- News
- Calendar with events, deadlines and birthdays
- Former and new colleagues presentation
- Praise maker (to praise colleagues or events or whatever)
- Contests/Competitions
- Useful links
- Picture gallery
- Forum to create discussion boards
- Matrix showing absences of people (incl. reason: vacation or business trip)
- A search function
- Suggestions and comments

Tallinn Airport did not allow to publish the screenshot material.
6 Analysis

In this section the analysis of the results is presented. The patterns found in the case study are compared with the results from the literature review.

6.1 The consequences of interference for Passenger Experience Management at Tallinn Airport

RQ2: How are passengers’ experiences with their Service Delivery Network interfering with the management of the overall Passenger Experience at Tallinn Airport?

In seeking to answer the second research question we will first look at the network of partner companies at Tallinn Airport. An overview of the most common interferences was presented in Table 4-2 in subsubsection 4.4.3. Then we will expand the view to the SDN perspective. As Tax et al. (2013) noted, each customer, or in this case passenger, has his/her own SDN. Because no passenger research was done, it is not possible to look at the variations of the different SDNs.

In general, a rather large SDN is built around a traveller. As Eva remarked, the journey already starts when the passengers “get the thought about travelling”. Also it ends first when the passenger has arrived back home without having anything left at the airport. During that time (which could be weeks) the customer journey continues.

In Figure 6-1 the value exchange of a small sample of partners within the airport network, representing the main types, is presented.

Figure 6-1: Value exchange within the airport environment (own illustration).
In the interviews, Eva mentioned that one main question for the airport network partners is whose client the passenger is. According to the network perspective introduced by Kwan and Hottum (2014) the airport partner network is offering a co-created value proposition to the passengers. The business model would be denoted as a B2B2C model in which the first "B" is the airport, the second "B" are the different partners including the airlines and "C" is the passenger. From that perspective they should all consider the passenger as their customer. They all depend on each other, Eva said about the airlines and passengers: "without them, there would be nothing." This can be seen in Figure 6-1, if the airport would be without its partners and, in particular, without the airlines, then most probably no passenger would come to the airport only for parking or the lounge or to feel cosy. In this scenario, the VIP Service would not even make sense anymore (e.g., there would be no aircraft to drive to with a Porsche).

Thus, the value proposition of the airport is heavily dependent on the partner network, and so is the Passenger Experience.

Tallinn Airport’s decision to follow the mission to be "The World’s Cosiest Airport" has important implications for the management of the Passenger Experience. It would not be enough for the airport to simply provide a good Passenger Experience at the touchpoints that they directly own. But they have to cooperate and communicate with all the different partners involved to make them provide the same or at least a matching experience to the passengers.

The SDN perspective goes a step further as it includes all responsible parties, that "in the eyes of the customer, are responsible for the provision of a connected, overall service" (Tax et al., 2013, p.455). In the case of a traveller at the airport that could extent to a huge network of service providers, where, for departing passengers, a large part would most probably be abroad and mostly out of the airport’s reach.

To reach a better understanding of the SDN Tax et al. (2013) suggested some dimensions to analyse a network.

First, there is the degree of SDN commonality, which refers to the diversity of the networks (Tax et al., 2013). Here it depends on how the scope of the customer journey is set. Is the journey limited to the passenger getting from A to B, or does it include the whole travel experience including the activities the Passenger Experiences while at point B and then on the way back to A. From the evidence found in the case study, Tallinn Airport rather considers the first option. This already creates very diverse SDNs because the airport has so many different airlines that all fly to numerous international destinations. Including the broader perspective would make the networks even more difficult to trace.

But only through looking at the fact that passengers go to various international destinations brings up the potential of interferences. As travellers will naturally experience other airports services after they arrive at their destination airport or before they leave it, this has an influence on the expectations that the passenger has towards Tallinn Airport. As Verhoef et al. (2009) mentioned, the Customer Experience also includes elements that are outside of the company’s control. It was also shown in the case study that the
experience from the bus ride to the airport influences the experience with the airport (the overweight baggage example, see Table 4-2).

The overall network is relatively diverse, however, when reducing the scope and looking at the airport environment, we find a high formality of the service provider network (Tax et al., 2013). All the companies on the airport’s premises have a contract with Tallinn Airport. This also implies that, as soon as the passenger is at the airport, the choice of complementary providers is extremely restricted. At the time where the passenger is at the airport, he is almost literally locked in and can only chose from the airport’s partners. However, as soon as the passenger leaves the airport, the restrictions are gone. Although partner taxi companies exist, the airport cannot totally exclude the other taxi providers to offer their service to the passenger. This experience then often clashes with the promised service quality of the airport and it thus disrupts the overall Passenger Experience. Taking all the possible transport services to the airport, the numerous companies involved at the airport, and the various destinations into account, shows that the complexity of the overall service is rather high.

When it comes to the customer’s goals there is no evidence that the airport has built up any closer relationship with the passengers (Tax et al., 2013). The airport has no loyalty programme, however, the airlines do have them (e.g., Estonian Air, Lufthansa, etc.). So the passenger’s goals, with regard to the airport, can be seen as rather transactional.

The last dimension (Tax et al., 2013) suggested to analyse a network is the degree of network coordination. Here the evaluation is twofold again. Considering the high power towards the partners, the airport has a good position to coordinate the service. However, the airlines’ network power is so strong that they can always interfere. In general, while the airport has a comparably large impact on coordinating the different providers at the airport, the coordination role is lost outside the airport. The different travel steps outside the airport walls are all organised by the passengers themselves or a third party (e.g., a travel agency). Thus the passenger would in most cases be a "resource integrator" (Tax et al., 2013, p.460).

Further, the author identified 4 different types of interferences, when looking for patterns in the discovered examples. The categories are as follows:

- **External & known source of influence** - Taxis that do not have a contract
- **External & unknown/unpredictable source of influence** - Passenger that is late and seeks help at the info desk
- **Internal (partnership) & known source of influence** - check-in procedures
- **Internal (partnership) & unknown/unpredictable source of influence** - bus experience affecting the airline experience which is perceived as the airport experience
6.2 Applied solutions to the interference problem in Passenger Experience Management at Tallinn Airport

RQ3: How is Tallinn Airport dealing with the interference caused by their passengers’ Service Delivery Networks?

**Partner management**

*Partner selection and contracts*

The careful partner selection and the strict contracts that Tallinn Airport closes with its partners are what Tax et al. (2013) refers to as network coordination. Tallinn Airport tries to have its partners’ values aligned with the airport strategy and to offer a seamless and cohesive experience. Similar rules also apply to the selection of advertising partners. As discussed by Tax et al. (2013) and Kwan and Hottum (2014) contracts are a good way to increase the control in a network. Tallinn Airport is using contracts to influence the experience offered by their partners. The formality of these relationships allows the airport to set strict rules concerning the delivery of service (e.g., quality) and implement the cosiness theme beyond the borders of its own organisation. The new contracts that are made include the design rules to set a certain standard of cosiness at the partners’ premises.

*Performance monitoring and support*

Regular meetings and committees are utilized to sustain the goals set in the contracts, to communicate values and motivate the partners’ commitment. If a partner’s performance is below expectations, the airport is providing support. Furthermore, the passenger survey (Appendix 11) is used to discover previously unknown sources of dissatisfaction with the experience offered by the partners.

*Lobbying*

In order to assure an efficient flow through the compulsory procedures, Tallinn Airport is trying to persuade its partners to always have the latest technology available. By that the airport tries to reduce the increase in stress levels caused by the compulsory procedures.

*Community relations*

A very important role is played by the culture that is present in the airport community. Commitment of all partners to the goals of the community is needed, thus making the Passenger Experience as cosy as possible in order to positively influence the purchasing behaviour. To increase the partners’ commitment and the sense of community the airport introduced the series of events "Better together". Also the cosiness theme is utilized to influence the culture by conveying that the airport should be treated like home and passengers like guests. The positive effect of strategically influenced culture on customer satisfaction and financial outcomes is shown in several empirical examples in the literature (Chakravorti, 2011). Furthermore, the Extranet was introduced to facilitate the communication with the partners.
Design Management

Another important solution is the design strategy that follows the cosiness theme. Through designing a nice environment around otherwise stressful experiences Tallinn Airport tries to make the unpleasant procedures (e.g., security check, boarding and border control) more comfortable and less stressful. Zomerdijk and Voss (2010, p.68) support this idea and state that it is a possible way to influence customers’ perceptions and behaviour through "sensory design".

Information

Through the information delivered through various channels the airport attempts to help and educate the passengers to make the best out of their experience at the airport and to get safely on board or home. This topic is discussed in more detail in the following subsection.

6.3 IT supporting Passenger Experience Management at Tallinn Airport

RQ4: What IT solutions currently exist at Tallinn Airport to support the management of the Passenger Experience?

First of all, the case study has shown that information systems do not play a major role in the process of Passenger Experience Management at Tallinn Airport. A lot of the management steps are done "on the go". That means there is no large scale IT platform for CEM or CRM in use. According to the respondents, the reason for that is the small size of the airport. However, IT/IS are used for certain parts of the Passenger Experience activities at Tallinn Airport. The major IT solution that is utilized is the recently launched mobile application. It is soon joined by an optimized website that is aimed at improving the Passenger Experience through easy accessible information. The existing website is currently rather downgrading the Passenger Experience (mainly due to a lack of structure). The other IT solutions that are used or will soon be used are included in the following list:

At any time during the passenger journey:
• for passenger relations/information/education: App, Website and Social Media

Only inside the airport:
• for passenger relations/information: Touchscreen kiosks, countdown screens (for baggage arrival time, before entering the baggage claim area)
• for passenger entertainment: free WiFi, Skype, and Tablets
• for process optimization: electronic boarding pass readers
• for internal and external (business related) communication: Intra-/Extranet

Furthermore, the security company providing the security check is using feedback buttons after the check is finished. The police has installed electronic passport readers to make the border control more efficient and thus less stressful.
In general, when looking at the existing solutions, it becomes evident that the large majority is directed at the passengers’ self-management of their experiences. On Tallinn Airport’s side, only the Intranet/Extranet is somewhat going into the direction of a direct management of the Passenger Experiences by offering a communication channel for multiple involved parties. Following, the approach Kwan and Hottum (2014) is suggesting, an information system should be used to communicate the promises made to the customer.

6.4 Lessons learned from how Tallinn Airport is managing the IT solutions for Passenger Experience Management at Tallinn Airport

RQ5: How can interference problems in Passenger Experience Management at Tallinn Airport be facilitated and managed with the help of IT/IS?

The partners in the network depend on each other. Thus, according to Kwan and Hottum (2014) maintaining a consistent Customer Experience as well as communication of the experiences that were promised to the customer within the network is crucial. The value propositions of the different partners have to be aligned with each other. In order to achieve that an information system accessible to all involved parties to communicate the promises made to the customer is suggested (Kwan & Hottum, 2014). An information system accessible by the partners in the airport community is already available at the airport: the Extranet. However, the functionality is currently rather limited and even if information sharing is generally possible, a structured process to share the promises made to the customers is needed. Moreover, it must be accepted and followed by each partner. In addition to sharing the promises made to customers also the occurrence of service failure could be shared, so that the other companies in the network can prepare for the potentially changed customer behaviour and let partners help resolve problems as early as possible to avoid customer rage (Surachartkumtonkun et al., 2015).

Proposition 1: Establish a process to share the promises made to the customer, occurrences of service failure and other experience relevant information in an information system (e.g., the Extranet) and motivate the network partners to consistently engage in it and make use of the generated insights.

Less towards the goal of reducing interference, but very important to the company’s ability to innovate with IT is that the relationship between Marketing and IT indicates the presence of organisational silos at Tallinn Airport. Kwortnik and Thompson (2009) identified the same problem in their case study, and identified that it hinders learning and the improvement of information systems. Tallinn Airport already engages in large scale team building events for the whole community and also offers a sports club for the employees. However, possibly more focused team building events would be helpful. Kwortnik and Thompson (2009) suggest a new functional area that is merging two formerly separated areas. Because this is probably a rather expensive solution it might not be feasible for Tallinn Airport.
However, an employee working on the intersection of IT and Marketing who is knowledgeable about both areas could be a feasible solution to integrate the two departments to some extent and to create more synergies.

**Proposition 2:** Establish a new position for an IT manager who is working at the intersection of IT and Marketing to integrate the two functions and get the IT team closer to the customer and seize their innovation potential.

According to the IT manager of Tallinn Airport, a lack of passenger data is limiting the potential for IT innovations to support the Passenger Experience with more customized services. The IT manager of Estonian Air remarks that Estonian Air has no right to share the passenger information. This problem has also been identified in a general manner by Kwan and Hotum (2014). Baird (2013) looked at such a situation legally and concludes that passenger data can be shared if the passengers previously gave their consent. In case the airline does not agree to ask the passengers for consent to share the information, another opportunity exists. During a discussion of the case study between the author and a consultant from SAP, the consultant suggested the possibility to ask the passenger directly for the information via the mobile app. It came up that especially the passengers mood would be relevant to ask for, so that the app could offer mood specific information and services. One scenario would be that a passenger states that she is tired, in that case the mobile app could customize a recommendation for the individual passenger’s journey through the airport. In this scenario the app could suggest to go to the Sleeping Pods, show them on the map and offer to set an alarm. At the moment the Tallinn Airport app is only asking the user to enter their flight in order to get notifications. This information is not even used. A combination of destination (thus flight information) and passenger mood would already offer diverse opportunities to customize the passenger journey. The airport could even start to increase its reach within the SDN and recommend activities or similar things to the passengers according to their destinations. A framework for personalisation through IT in service encounters was introduced by Glushko and Nomorosa (2013). They support the idea that personalized information can improve the experience.

**Proposition 3:** Utilize the mobile app to acquire passenger information directly and voluntarily from the passenger and offer corresponding personalized services, recommendations and offers also reaching beyond the walls of the airport.

## 7 Discussion

### 7.1 Results discussion

The goal of this thesis was to clarify the principal elements that constitute Customer Experience Management, to explore what role the Service Delivery Network plays in this context and how it can be managed more effectively by means of of IT/IS.

The proposed Customer Experience Management framework (see Figure 2-1) and the formulated definitions of CX and CEM presented a good applicability to the empirical case study. It supported the formulation of questions for the interviews and provided
good insights for the structure of the case report. These new definitions take a holistic perspective on CX and thus on CEM like Verhoef et al. (2009) proposed it. The direct inclusion of the customer journey concept stresses the previously underestimated effect of external factors on the CX. These factors, as the case study showed, may lie outside of the company’s control.

Concerning, the second and third research question the perspective of the service delivery network (Tax et al., 2013) appeared to be very helpful in discovering interferences along the customer journey. Also the service system network perspective by Kwan and Hottum (2014) supported the analysis.

However, in general there is remarkably few literature dealing with the effects of service networks in customer journeys.

The findings concerning the fourth and fifth research question have shown that the role of IT for the Passenger Experience Management at Tallinn Airport is gaining importance. The introduction of the mobile app may be a first step towards digitisation of the passenger journey from the airport’s perspective. The potential to use the mobile app for customisation of experiences is great.

### 7.2 Methods discussion

The case study approach proved to be an appropriate choice. Although, a compromise had to be made because field observations were not possible. But thanks to the motivated respondents a large amount of data could be collected and analysed. The amount was almost to large to handle for one researcher in the given time frame. The reliability of the method is very high as almost all the collected data could be appended with the permission of the respondents (Yin, 2003).

When it comes to a potential informant bias (Maxwell, 2012), the dependence on the key informant must be acknowledged. The majority of the data was collected through Tallin Airport’s Marketing Specialist. On the one hand, that brings up the risk of a biased perspective on the studied matter, on the other hand it brought an advantage because she is one of the most knowledgeable persons about that topic. The small size of the Airport did not allow to find a large sample of people that are involved in Passenger Experience Management. Furthermore, the responses from the partner companies’ employees were rather scarce. Unfortunately, the goal to get their perspective into the results could not entirely be reached. Here, a field visit would have most probably helped a lot.

### 7.2.1 Limitations

As with all qualitative research, the main limitation of the present study is that no statistical generalizations can be made (Yin, 2003). The amount of respondents was limited. Certainly, a larger number of respondents and more elaborate answers to some questions would have improved the evidence foundation. Also an interview with the CCO would have been an asset to further investigate the strategic perspective of the Passenger Experience Management efforts. Unfortunately, he was not available.
However, it must be understood that neither the airport, nor its partners ordered to conduct this case study. All respondents participated on a voluntary basis.

Only the reluctance of sharing private information seems to be particularly strong among the Estonian people which make up for a major share of the passengers. This, however, is an interesting finding in itself which is special, but could possibly also be made in certain other countries.

Regarding construct validity, all tactics suggested by Yin (2003) were utilized, however, the fact the author had no opportunity for field observations might have limited the scope.

The quantitative secondary data that is present in the form of the passenger survey results could not be validated because the raw data was not provided. The appended presentation of the results (Appendix 6) is only the public version of the results. So there might be more information that is not accessible for the author.

### 7.3 Implications for research

Many authors defined Customer Experience as an experience with one company, only few have included external factors. Empirical evidence was presented through the case study that the customers’ experiences with other companies along the customer journey can have a significant impact on the overall experience. It was shown that the Service Delivery Network perspective is useful for the analysis of Customer Experiences.

### 7.4 Implications for practice and recommendations for Tallinn Airport

Although the single case study design does not allow straight generalizations, this thesis has still various implications for practitioners. First of all, the case study describes many aspects of the Passenger Experience Management activities at Tallinn Airport. As the airport has proven to be quite successful with their efforts, there are plenty of inspirations to be found in the case report. One example, is the inclusion of the partner relations activities into the HR department. The "Better together" event presents a good example of how companies can make a first step to improving their relationships with partners. Analysing the customer journey and building models of Service Delivery Networks for selected passengers from different segments could be a helpful task for managers wanting to better understand their customers. In the network models managers can further analyse power relationships and search for missing links, to discover new partnerships. If managers attempt to think about their partners in the service delivery network and their own company as ONE, it might help to find better ways to improve the experience. This perspective also helped during the interview, to get more forward looking/innovative insights.

Finally, the categorization of interference into four types can help managers to better understand the network environment and its influences. It might also support finding
previously unknown sources of influence by providing a framework for brainstorming, and other ideation processes.

8 Conclusions

Summarizing the results of the thesis very briefly, the following things should be noted. First, the case study has shown empirically that passengers’ experiences with different companies in a SDN interfere with each other. Second, the findings suggest that partner management is an important part of Passenger Experience Management. Third, IT and mobile IT in particular are good means to manage Passenger Experiences. Especially, mobile applications have a huge potential to support a customer’s self-management and co-create an experience.

8.1 Future research

The following list presents new avenues for further research.

- Investigate the influence of prior experiences with the same company, its partners and its competitors on the current experience and expectations.
- The airport already considers several steps outside of their direct influence in their Passenger Experience efforts. However, the question remains how far reaching the consideration of external factors should be ideally and what are the factors that determine this ideal scope of CEM.
- The passenger is not the only customer of the airport, it would be interesting to also investigate what airports do in terms of B2B Customer Experience, for example, towards their major customer segment: Airlines.
- It became apparent that Tallinn Airport is a part of a Service Delivery Network with many significant incidents of interference among different providers. It would now be interesting to investigate how Customer Experience Management is implemented in other airports and also in other industries. A multiple case study with several different airports would be helpful to further validate the results of this thesis, but also a multiple case study comparing the airport CEM approach with the approaches in other industries would lead to new possibilities for theory building.
- With the goal of further analysing generalisability of the results, it would be interesting to find out what are the connections between the airport Service Delivery Network and other, maybe not so naturally intertwined Service Delivery Networks. Those could be easily found outside the retail and travel industries, for example in the IT industry (software vendors and consulting companies).
List of references


List of references


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*Journal of Retailing and Consumer Services, 21*(6), 1028–1037.

*Journal of Service Research, 18*(2), 177–192.


# Appendix 1: Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>CCO</td>
<td>Chief Commercial Officer.</td>
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<td>CEI</td>
<td>Consumer Experience Index.</td>
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<td>CEM</td>
<td>Customer Experience Management.</td>
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<td>CES</td>
<td>Customer Effort Score.</td>
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<td>CMS</td>
<td>Content Management System.</td>
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<td>CRM</td>
<td>Customer Relationship Management.</td>
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<td>CSAT</td>
<td>Customer Satisfaction.</td>
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<td>CUTE</td>
<td>Common-use terminal equipment.</td>
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<td>CX</td>
<td>Customer Experience.</td>
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<td>F&amp;B</td>
<td>Food &amp; Beverage.</td>
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<td>GH</td>
<td>Ground Handling.</td>
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<td>NFC</td>
<td>Near Field Communication.</td>
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<td>NPS</td>
<td>Net Promoter Score.</td>
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<td>PNR</td>
<td>Passenger name record.</td>
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<td>SDN</td>
<td>Service Delivery Network.</td>
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### Appendix 2: CEM Literature review - Overview of Research objectives and findings

<table>
<thead>
<tr>
<th>Focus</th>
<th>Purpose</th>
<th>Findings</th>
<th>Ref.</th>
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<tbody>
<tr>
<td>CEM</td>
<td>Present ideas about experience quality management</td>
<td>Experience management requires monitoring for execution and effect. Both rational and emotional clues carry messages that create total customer experience. Three types of clues exist: Functional, Mechanic and Humanic Clues. Identify emotions that evoke customer commitment and build a customer experience plan that creates loyalty.</td>
<td>(Berry &amp; Carbone, 2007)</td>
</tr>
<tr>
<td>CEM</td>
<td>To describe elements of a customer experience management strategy.</td>
<td>During the customer journey a company is sending out clues to it’s customers, those add up to a total customer experience that has to be managed.</td>
<td>(Berry et al., 2002)</td>
</tr>
<tr>
<td>CEM</td>
<td>Understanding customer experience from a practical viewpoint</td>
<td>The paper provides an often cited definition of customer experience, gives a guideline on how to manage the customer experience (e.g., with monitoring methods) and shows how various functions should be involved in customer experience to make it successful.</td>
<td>(Meyer et al., 2007)</td>
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<td>CEM</td>
<td>Present a five step approach to CEM and discuss corresponding methodologies</td>
<td>Many case examples are presented and provide benchmarks</td>
<td>(Schmitt, 2003)</td>
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| CEM (Personalisation) | "(...)
(…)
(…)
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(…)
" Human service providers and automated service systems both need (1) a service model manager that stores information about how a customer requests a service; (2) a customer model manager that stores information about customers and preferences; (3) a recommendation system manager that uses service models, customer models, and contextual information to adapt the service at delivery time; (4) a learning system that analyzes previous service encounters to refine service and customer models, and a (5) service monitoring system that monitors the status of service delivery." | (Glushko & Nomorosa, 2013) |
<p>| Challenges | &quot;(...) to (a) identify key challenges practitioners must address to manage the multi-channel environment more effectively, (b) propose a framework that shows the linkages among these challenges and provides a conceptual structure of the field, and (c) summarize academic research thus far about how to address the key challenges.&quot; | &quot;we have (a) identified five key challenges practitioners face in multichannel customer management, (b) proposed a framework that links the challenges together and provides a conceptual structure of the field, and (c) summarized the knowledge base that academic research has generated to date about the five challenges. The five challenges (...) are as follows: data integration, understanding customer behavior, channel evaluation, allocating resources across channels, and coordinating channel strategies.&quot; | (Neslin et al., 2006) |
| Antecedents and Effects | &quot;(...) to identify challenges that service firms face when services are developed and managed from siloed functional perspectives.&quot; | &quot;(...) to identify challenges that service firms face when services are developed and managed from siloed functional perspectives.&quot; | (Koobnik &amp; Thompson, 2009) |
| Antecedents and Effects | &quot;(...) provide a review of the online consumer literature in order to inform understanding of the antecedents and consequences of online customer experience (OCE) in the purchase context.&quot; | &quot;First, it adds to understanding of OCE in the purchase context and, second, specifically recognizes and discusses the antecedents of OCE by drawing on existing literature relating to online consumer purchase. Third, it proposes the potential consequences of OCE and provides a framework for future testing. (...)&quot; | (Rose et al., 2011) |
| Antecedents and Effects | &quot;(...) to expand and further our knowledge of OCE (Online Customer Experience), particularly in relation to its antecedents and outcomes. | &quot;The study provides empirical support for a comprehensive model of OCE not previously found in the literature and evidences the linkages between antecedents, components, and outcomes of OCE. (...) The second contribution to new knowledge is the evidence for the previously unidentified variable Perceived Control and its mediating effect. (...) The study identifies the existence of CES and AES as components of OCE, previously only found in CE offline (Frow and Payne 2007; Gentile, Spiller, and Noci 2007) thereby extending existing knowledge into the online context. (...) The fourth contribution is made by extending existing knowledge into a new context.&quot; | (Rose et al., 2012) |</p>
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<th>Focus</th>
<th>Purpose</th>
<th>Findings</th>
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<tr>
<td>Effects of being loyal</td>
<td>&quot;(...) to empirically identify (...) the benefits customers perceive in pledging their allegiance to a particular provider. The emphasis is placed on relational benefits, defined here as those benefits customers receive from long-term relationships above and beyond the core service performance (...)&quot;</td>
<td>1) &quot;we conclude that consumers in long-term relationships with service firms experience three primary types of benefits: confidence benefits, social benefits, and special treatment benefits.&quot; 2) &quot;The findings presented (...) indicate that confidence benefits are the most important to consumers across all three categories of services. The sense of reduced anxiety, faith in the trustworthiness of the provider, reduced perceptions of anxiety and risk, and knowing what to expect are the most critical benefits of service relationships.&quot; 3) &quot;confidence benefits are critical outcomes of long-term relationships.&quot;</td>
<td>(Gatignon et al, 1998)</td>
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<tr>
<td>Effects of consumer behavior</td>
<td>Elements of consumer behaviour affecting the buying (consumer decision) process in Retailing</td>
<td>&quot;specific elements of consumer behavior—goals, schema, information processing, memory, involvement, attitudes, affective processing, atmospherics, and consumer attributions and choices—play important roles during various stages of the consumer decision process.&quot;</td>
<td>(Puccinelli et al, 2009)</td>
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<td>Effects of customer service</td>
<td>How important is customer service to loyalty? Which customer service activities increase loyalty, and which don’t? Can companies increase loyalty without raising their customer service operating costs?</td>
<td>&quot;First, delighting customers doesn’t build loyalty; reducing their effort—the work they must do to get their problem solved—does. Second, acting deliberately on this insight can help improve customer service, reduce customer service costs, and decrease customer churn.&quot;</td>
<td>(Dixon et al., 2010)</td>
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<td>Effects of CX</td>
<td>&quot;(...) to demonstrate the ability of delight to influence consumers’ behavioral intentions in an online environment and to extend research on the relevance of website quality factors to the context of delight (Finn 2011).&quot;</td>
<td>Customer delight through web experience: &quot;this research shows how firms can attain customer delight in an online environment and clarifies its effects on consumer behavior.&quot; &quot;Overall, this research offers a five-fold contribution to extant understanding of delight. First, it shows that website satisfaction and delight are distinct constructs with differing effects on consumer behavior. Second, it offers novel insights by identifying individual website quality factors that firms can manipulate to increase the chances of delightful consumer web experiences. Third, by examining and distinguishing the effects of website quality factors on delight and surprise, this study sheds light on how consumers perceive different website quality factors. Fourth, the positive effect of delight on purchase intentions emphasizes the positive returns on firms’ up-front website investments. Fifth, by including real consumers browsing a car manufacturer’s website, this study describes actual, immediate attitudes and behavioral intentions.&quot;</td>
<td>(Bartl et al., 2013)</td>
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<td>Effects of CX</td>
<td>&quot;(...) to test the effect of customer experience (CE) on satisfaction and develop a robust model which improves the understanding of the relationship between customer satisfaction, customer experience, social interaction and convenience.&quot;</td>
<td>&quot;Results revealed that convenience and social interaction affect both customer experience and customer satisfaction.&quot;</td>
<td>(Srivastava &amp; Kaul, 2014)</td>
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<td>Effects of CX</td>
<td>&quot;Drawing upon research in consumer behavior, the purpose of this paper is to deploy an alternative way to predict behavioral intention with customer technology beliefs and experience in e-brokerage services.&quot;</td>
<td>&quot;Technology-ready (TR) customer segments vary in their evaluations of customer-service interfaces; interface evaluations affect cognitive service experience; and interface evaluations and cognitive experience affect customers’ behavioral intentions.&quot;</td>
<td>(Ding et al., 2011)</td>
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<td>Effects of CX</td>
<td>&quot;(...) the role of macro factors in the retail environment and how they can shape customer experiences and behaviors.&quot;</td>
<td>&quot;Several ways (e.g., promotion, price, merchandise, supply chain and location) to deliver a superior customer experience are identified which should result in higher customer satisfaction, more frequent shopping visits, larger wallet shares, and higher profits.&quot;</td>
<td>(Grewal et al, 2009)</td>
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<td>Effects of economic climate and CX</td>
<td>&quot;(...) to assess how the state of the economy interacts with customer experience and personal income to influence customers’ service purchase behaviors. Of primary concern was addressing the important question of whether customer experience matters more when the state of the economy is more positive or negative.&quot;</td>
<td>&quot;1. Customer experience matters more when the state of the economy is more positive. (...) 2. Lower income consumers are more sensitive to the state of the economy than higher income consumers. In a better economy, while both higher and lower income consumers are likely to spend more, the increase (delta) in spending from a poorer economy to a better economy is larger for lower income consumers. 3. After controlling for behavioral and demographic variables, economic and customer experience factors emerge as useful indicators of service purchase behavior. (...) 4. Results from an experiment confirm that measures of the economy at the state and national levels do, in fact, influence individual-level perceptions of the economy. (...) We posit that the relative importance of customer experience increases at more positive levels of the economy because the relative importance of price decreases.&quot;</td>
<td>(Kumar et al., 2014)</td>
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<td>Effects of service failure</td>
<td>&quot;(...) to develop a dynamic process model of customer rage elicitation (...), centered on personal resource reevaluation, retention, and rebuilding. (...) Second, we aim to extend the usefulness of the critical incident technique (CIT)&quot;</td>
<td>&quot;We empirically demonstrate (...) that although rage may sometimes take place at the initial service failure (Episode 1), rage does not tend to be an immediate reaction. Rather, it is when service failures remain unresolved that residual negative emotions are carried forward into the next episode, so that rage is dominant in Episodes 2 and 3. This carryover of negative emotion spirals with more resources being threatened, propelling the customer into rage.&quot;</td>
<td>(Bitran et al., 2015)</td>
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<td>Effects of waiting</td>
<td>&quot;(...) to help managers understand how the duration of service encounters can affect profits.&quot;</td>
<td>&quot;The article began with the presentation of a comprehensive framework (...) connecting duration to profits. That was followed by an explanation of the connections between duration and satisfaction and the analysis of potential short- and long-term effects on profitability.&quot;**A service encounter is an experience that extends over time. Therefore, its effective management must include the control of the timing of the delivery of each of the service’s elements and the enhancement of the customer’s experience between and during the delivery of the various elements.&quot;</td>
<td>(Gilmore, Pine &amp; Chakravorti, 2008)</td>
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<td>Effects of knowledge management and culture</td>
<td>&quot;exploring the major aspects of superior customer experience and its management. It specifically investigates and analyzes the dual effect of knowledge management and organizational culture on customer experiences, what aspects of both affect customer experience and how superior customer experiences can be managed through managing change in knowledge and culture.&quot;</td>
<td>&quot;For knowledge management to result in organizational learning and creation of added-value customer offerings, the knowledge base needs to be dynamically integrated across the organization and maybe even beyond.&quot; The built Framework includes the following propositions: &quot;P1: Knowledge management positively affects customer experience management. (...) P2: Organizational culture change management in an organization positively affects knowledge management. P3: Organizational culture change management in an organization positively affects customer experience management. (...) P4: Absorptive capacity of an organization positively moderates the effect of organizational culture change management on knowledge management. (...) P5: Knowledge management in an organization positively affects its absorptive capacity. (...) P6: Power relationships within an organization moderate the effect of organizational culture change management on knowledge management. (...) P7: Together organizational culture change management and knowledge management in an organization positively affect customer experience management. P8: Customer experience management efforts in turn positively impact organization culture change management and knowledge management.&quot;</td>
<td>(Chakravorti, 2011)</td>
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<tr>
<td>Experience</td>
<td>Explaining the foundations of the experience economy</td>
<td>They provide aspects that distinguish experiences from other offerings, namely, commodities, goods and services, and discuss several examples of how experiences are staged in practice. Further, 5 design principles for experiences are introduced: 1) Theme the experience 2) Harmonize impressions with positive cues 3) Eliminate negative cues 4) Mix in memorabilia 5) Engage all five senses</td>
<td>(Pine &amp; Gilmore, 1998)</td>
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<td>Experience (CX)</td>
<td>&quot;(...) to understand the specific role of different experiential features in the success achieved by some well-known products.&quot;</td>
<td>&quot;The study proved that a relevant part of the value proposed to customers, and actually recognized by them, is linked to experiential features; we found that, regardless of the context, customers want to live positive consumption experiences.&quot;</td>
<td>(Gentile et al., 2007)</td>
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<td>Experience</td>
<td>&quot;(...) to critically assess the conceptual validity of customer experience as a construct and propose a model which integrates inter-personal relationships, service quality and brands.&quot;</td>
<td>&quot;By incorporating emotions and perceptual distortion over time, customer experience overcomes many problems associated with static, partial measures of service quality. (...) This paper has provided a critical review of an emerging topic and suggested that despite academic interest in the concept, practical application of customer experience management may be difficult to achieve.&quot;</td>
<td>(Palmer, 2010)</td>
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<td>Experience</td>
<td>&quot;(...) to examine the concept of customer experience and, in particular, what represents an ‘outstanding’ or ‘perfect’ customer experience.&quot;</td>
<td>&quot;As companies start on their journey to achieving a perfect customer experience, they will benefit greatly by benchmarking other companies that have successfully created outstanding customer experiences. This paper represents an initial step, identifying case studies of companies that have successfully embarked on this journey (...)&quot;</td>
<td>(Frow &amp; Payne, 2007)</td>
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<td>Experience (CX)</td>
<td>Overview of the existing literature on customer experience and examination of the creation of a customer experience.</td>
<td>&quot;In this paper we provided a holistic portrayal of the customer experience construct and proposed a conceptual model delineating its determinants. Subsequently, we discussed specific determinants in this model, highlighting those that are especially in need of further research.&quot;</td>
<td>(Verhoef et al., 2009)</td>
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<td>Definition of CX &amp; CXM</td>
<td>&quot;The problem occurs when performance levels and service offerings become too similar within an industry, so that price is the only competitive weapon that remains. The purpose of this paper is to argue that in order to break this deadlock, companies need to focus on the small details that make big differences to customers.&quot;</td>
<td>&quot;The paper develops three research propositions and argues for radical approaches to help service organizations truly understand customers and provide service experiences that engage and delight them. The paper argues that the new challenge for marketing is to help companies find and implement these small details to make a large impact on the overall customer experience.&quot;</td>
<td>(Gounaris, et al., 2014)</td>
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<td>Experience (of failure)</td>
<td>&quot;(1) What are the distinct, socio-culturally informed ways consumers frame experiences of failure when consuming high-risk services? (2) What are the implications of these experiential framings for service recovery tactics that offer the potential to enhance consumer well-being?&quot;</td>
<td>&quot;(...) we (1) broaden current understanding of consumers’ experiences of service failure beyond those contexts where recovery is routinely possible, (2) identify that not only cultural models regarding consumer-service provider relationships, but also those regarding goal pursuit inform consumers’ experiential framings of service failures, and (3) offer implications for key service outcomes that academics can explore further, and that practitioners should consider in developing service-related strategies.&quot;</td>
<td>(Zayer et al., 2015)</td>
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<td>Experience (pre-purchase)</td>
<td>&quot;(...) develop a new theoretical framework for cocreating customer value through hyperreality during the pre-purchase service experience.&quot;</td>
<td>&quot;This article develops a new model depicting how organizations can help customers test out and experience a service prior to purchase and consumption or use. (...) We have proposed a framework consisting of the five dimensions of an experience room that need to be carefully designed and constructed to allow customers to create their own experience.&quot;</td>
<td>(Edvardsson et al., 2005)</td>
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<td>Experience (Service)</td>
<td>&quot;(...) to review the characterisation of the concept of service experience in service marketing research.&quot;</td>
<td>&quot;Three characterisations of the concept of service experience are identified in the literature review: phenomenological service experience (...); process-based service experience (...); and outcome-based service experience (...).&quot; CX literature is sorted under the category &quot;Phenomenological characterisations of service experience&quot;.</td>
<td>(Hekkula, 2011)</td>
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<td>Experience Design</td>
<td>&quot;(...) objective is to investigate how organisations actually go about designing and improving their customer experiences&quot;</td>
<td>&quot;This paper proposes a ten stage „road map“ to improvement which develops the existing models.&quot;</td>
<td>(Johnston &amp; Kong, 2011)</td>
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| **Purpose**<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n
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<td>Networks - Experience management</td>
<td>&quot;(...) we look at various scenarios in service system networks and propose value proposition formulations for multiple-level engagements denoted as B2X2Y. We also consider &quot;lossless&quot; derivations of value propositions as a way of aligning value systems and expectations among the participants so as to maintain a consistent experience for the customer at different levels and forms of engagement in the service system network. &quot;</td>
<td>&quot;First, we extended value propositions of the traditional business model of B2B and B2C to a B2X2Y model for a service system network environment with multiple levels of service provider and customer relationships. (...) Second, we put forth a model of the derivation of a hierarchy of value propositions in a service system network environment where the service delivery is relegated to subcontractors or partners. (...) Third, we proposed an integration quality gap as a measure of service quality (difference between that expected and that perceived) in a service system network environment as an addition to the traditional service quality gaps.&quot;</td>
<td>(Kwan &amp; Hottum, 2014)</td>
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<td>Networks - Stakeholder collaboration for CX</td>
<td>&quot;(...) to provide the logic for complementing the dyadic service encounter perspective with a broader network view that emerges when the customer's providers of related services are taken into account.&quot;</td>
<td>&quot;(...) customer experiences need to account for forces outside the firm that influence the traditional dyadic encounter perspective that has driven service theory development. The SDN perspective provides a conceptual basis for integrating network theory into the service encounter and the customer experience and journey literature. Taking the customer's view and seeing networked service delivery from this vantage point provides a more realistic way of portraying the service encounter in a world of fragmented, interconnected service delivery. (...) One key decision is how to build relationships with complementary firms to deliver a more efficient and enjoyable customer journey. In doing so, gaining customers' trust and confidence likely depends upon the firm's concern for relational coordination and a harmonized approach to how its network operates. This may require firms to develop new capabilities to capitalize on the opportunities while at the same time considering that network partners represent a new form of competition.&quot;</td>
<td>(Tax et al., 2013)</td>
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<td>Networks - Stakeholder collaboration for CX</td>
<td>&quot;(...) to develop a robust measurement process for obtaining substantive insights and to facilitate continuous improvement of the customer's experience.&quot;</td>
<td>&quot;In this paper, we propose a simple conceptual framework for stakeholder collaboration in tourism. A four-phase customer experience measurement process is developed to prioritize resource allocation and to increase tourists' advocacy levels for a destination. The proposed measurement framework has wide applicability and can also be exercised in the context of other public sector services, e.g., mass transit systems.&quot; - &quot;we derived eleven drivers of tourists' satisfaction using a qualitative research methodology.&quot;</td>
<td>(Gopalan &amp; Narayan, 2010)</td>
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<td>Reference</td>
<td>Applied Theory/Framework</td>
<td>Developed/tested framework/model</td>
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<td>Bartl et al., 2013</td>
<td>Technology acceptance model (TAM)</td>
<td>Two conceptual models to differentiate satisfaction from delight</td>
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<td>Bitran et al., 2008</td>
<td>Experience Audit approach</td>
<td>A conceptual framework linking the duration of a service encounter to behaviors that have been shown to affect profitability</td>
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<td>Chakravorti, 2011</td>
<td>Absorptive capacity; Dynamic capabilities</td>
<td>&quot;framework of knowledge and culture enabled customer experience management&quot;</td>
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<td>Dixon et al., 2010</td>
<td>Theory of reasoned action</td>
<td>&quot;framework to evaluate firm performance in terms of firm-customer relationship for Online financial services e-brokerage services&quot;</td>
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<td>Edvardsson et al., 2005</td>
<td>CES - Customer Effort Score (for the measurement of customer loyalty)</td>
<td>Servicescape &quot;framework consisting of the five dimensions of an experience room&quot;</td>
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<td>Gentile et al., 2007</td>
<td>Psychological concept of modularity of mind (Pinker, 1997).</td>
<td>&quot;a conceptual framework where the concepts of Customer Experience and exchanged value are encapsulated and their mutual-relations and the inter-relations with the main entities (the...&quot;</td>
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<td>Glushko &amp; Nomorosa, 2013</td>
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<td>Gwinner et al., 1998</td>
<td>Bowen's taxonomy of service firms</td>
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<td>Johnston &amp; Kong, 2011</td>
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<td>Kim et al., 2011</td>
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<td>Kumar et al., 2014</td>
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<td>Kwan &amp; Hottum, 2014</td>
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<td>Kwortnik &amp; Thompson, 2009</td>
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<td>Lemke et al., 2010</td>
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<td>Neslin et al., 2006</td>
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<td>(attitude theory)</td>
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<td>Olsson et al., 2012</td>
<td>Satisfaction with Travel Scale (STS)</td>
<td>Theoretical model of service experience.</td>
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<td>Palmer, 2010</td>
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<td>Patrício et al., 2008</td>
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<td>Pine &amp; Gilmore, 1998</td>
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<td>Puccinelli et al., 2009</td>
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<td>Rose et al., 2011</td>
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<td>Schmitt, 2003</td>
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<td>Zomerdijk &amp; Voss, 2010</td>
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<td>(Berry et al., 2002); (Bolton et al., 2014); (Frow &amp; Payne, 2007); (Gounaris, 2015); (Grewal et al., 2009); (Helkkula, 2011); (Meyer et al., 2007); (Srivastava &amp; Kaul, 2014)</td>
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### Appendix 4: Customer Experience - Literature review - Journals, Journal ranking and applied methods

<table>
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<tr>
<th>Ranking</th>
<th>Journal</th>
<th>Reference</th>
<th>Lit. rev.</th>
<th>Quantitative</th>
<th>Non-robust stated</th>
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<th>Method</th>
<th>Studied Airport / Airline</th>
<th>Applied theory / Developed theory, model or framework</th>
<th>Reference</th>
<th>Journal (Ranking)</th>
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<tr>
<td>Antecedents of passenger satisfaction</td>
<td>“The study results indicated key satisfiers in the airport context such as cleanliness and pleasant environment to spend time in. On the other side, security-check, confusing signage and poor dining offer are recognized as major dissatisfiers in the airport setting.”</td>
<td>Mixed method</td>
<td>Multiple airports</td>
<td>Herzberg’s two-factor motivation theory / ---</td>
<td>(Bogicevic, Yang, Bilgihan, &amp; Bujisic, 2013)</td>
<td>Tourism Review (-)</td>
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<td>Airport Service Quality (towards passengers)</td>
<td>“Qualitative and quantitative research on nearly 1,000 airport users provided results suggesting that passengers’ expectations of airport service quality is a multidimensional, hierarchical construct that includes three key dimensions: function, interaction and diversion.”</td>
<td>Qualitative</td>
<td>Multiple airports</td>
<td>--- / Conceptual model for airport service quality</td>
<td>(Fodness &amp; Murray, 2007)</td>
<td>Journal of Services Marketing (C)</td>
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<tr>
<td>Airport Service Quality (towards Airlines)</td>
<td>“System of criteria designed for assessment of the quality of Quantitative airport services provided to airlines.”</td>
<td>Quantitative</td>
<td>Vilnius International Airport</td>
<td>SERVQUAL / system for assessment of the quality of airport services</td>
<td>(Pabedinskaitė &amp; Akstinaitė, 2014)</td>
<td>Procedia - Social and Behavioral Sciences (-)</td>
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<td>Measure for the overall level of service at airports</td>
<td>“This unique research has provided a method to collect Quantitative passenger responses about the overall LOS provided at the airport passenger terminal along with the most important overall measures for each interviewed passenger.”</td>
<td>Quantitative</td>
<td>Sao Paulo - Guarulhos International Airport</td>
<td>--- / ---</td>
<td>(Correia, Wirasinghe, &amp; de Barros, 2008)</td>
<td>Transportation Research Part A: Policy and Practice (-)</td>
</tr>
<tr>
<td>Relationship between airport image and passenger delight</td>
<td>“The results revealed that there is a strong positive relationship Quantitative between the airport image and passengers delight, and that national identity helps strengthen the relationship of the main effect.”</td>
<td>Quantitative</td>
<td>Malaysia’s Low Cost Carrier Terminal (LCCT)</td>
<td>--- / ---</td>
<td>(Ariffin &amp; Yahaya, 2013)</td>
<td>Journal of Air Transport Management (-)</td>
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<tr>
<td>Passengers’ relation to time</td>
<td>“Based on our research, a relationship between time sensitivity Quantitative and degree of passenger engagement was identified. This relationship was used as the basis for a new passenger segmentation model, namely, airport enthusiast (engaged and non-time sensitive), time filler (non-engaged and non-time sensitive), efficiency lover (non-engaged and time sensitive) and efficient enthusiast (engaged and time sensitive).”</td>
<td>Qualitative</td>
<td>Brisbane International Airport</td>
<td>--- / “passenger segmentation model”</td>
<td>(Harrison, Popovic, &amp; Kraal, 2015)</td>
<td>Journal of Vacation Marketing (-)</td>
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<td>Focus</td>
<td>Findings</td>
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<td>Applied theory / Developed theory, model or framework</td>
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<td>Legal implications of new IT at Airports</td>
<td>This &quot;legal review&quot; recommends airport managers to be mindful of multiple &quot;practical legal solutions and protective measures from the outset&quot; when implementing new IT equipment (e.g., offer opt-out right to passengers).</td>
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<td>(Baird, 2013)</td>
<td>Airport Management (-)</td>
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<td>Changes and consequences due to technological innovations at airports</td>
<td>&quot;Biometric systems, NFC, Big Data and smartphones are bound to radically change facilities and operations in future passenger buildings and improve passenger experience. In this paper, the impact of these changes on the check-in and security control processes in the departure hall has been described in quantitative terms using a microsimulation model with Lisbon Portela Airport as a case study.&quot;</td>
<td>Lisbon Portela Airport</td>
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<td>(Kalakou, Psaraki-Kalouptsidi, &amp; Moura, 2015)</td>
<td>Journal of Air Transport Management (-)</td>
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<td>Airlines</td>
<td>Airlines' mobile apps (information and functionality)</td>
<td>Airline Mobile Apps</td>
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<td>(Budd &amp; Vorley, 2013)</td>
<td>Research in Transportation Business &amp; Management (-)</td>
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<td>&quot;The findings of our survey show that the majority of apps offer Qualitative full functionality across all of the seven pre-defined criteria and the apps clearly aim to provide a seamless service from booking to boarding. All of the 22 airlines with a mobile app have the functionality of flight search and all but one offer a flight booking facility.&quot;</td>
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<td>(Laming &amp; Mason, 2014)</td>
<td>Research in Transportation Business &amp; Management (-)</td>
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<td>CX in the airline industry</td>
<td>15 full service airlines in Europe, Middle East and Asia</td>
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<td>(Sinisalo, 2011)</td>
<td>International Journal of Electronic Customer Relationship Management (-)</td>
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<td>&quot;The results from the survey suggest that Middle Eastern and Quantitative Asian carriers were considered to be delivering a better customer experience than their European counterparts. (...) One airline stood out. (...) their median score for Likelihood to use again (loyalty) and Likelihood to recommend (advocacy) was 5 –the ratings ‘Definitely’ and ‘Extremely Likely’ respectively – demonstrating an excellent delivery of customer experience.&quot;</td>
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<td></td>
<td>Mobile CRM</td>
<td>Finnair</td>
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<td>Theoretical framework of communication within the multichannel environment in CRM</td>
<td>(Sinisalo, 2011)</td>
<td>International Journal of Electronic Customer Relationship Management (-)</td>
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### Appendix 6: Tallinn Airport’s Strategy Map from the Annual Report 2014

Reference: Tallinn Airport, 2014

#### Tallinna Lennujaam AS strategy map

<table>
<thead>
<tr>
<th>Mission focus</th>
<th>Slogan</th>
<th>Vision</th>
<th>Owner’s strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic value objectives</td>
<td>The world’s cosiest airport</td>
<td>To develop into a well-known and respected flight transport hub in Northern Europe</td>
<td>Maintaining air traffic (incl. regional airports) and increasing it through efficient, profitable, sustainable and responsible business practices</td>
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</tbody>
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<thead>
<tr>
<th>Responsibility</th>
<th>Client Satisfaction</th>
<th>Employee Satisfaction</th>
<th>Quality</th>
<th>Efficiency</th>
<th>Profitability</th>
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<tbody>
<tr>
<td>Safe operating environment</td>
<td>The world’s cosiest airport</td>
<td>We cooperate</td>
<td>Quality operations</td>
<td>Forward-looking and innovative operations</td>
<td>Profitable operations</td>
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<tr>
<td>Working environment is safe, ergonomic, and sparing physical and mental health</td>
<td>We fulfill our commitments (the level of service of operating airports and servicing aircrafts, passengers and freight is according to the previously agreed conditions)</td>
<td>Infrastructure, processes, and services, and technologies are efficient</td>
<td>Company’s business operation is profitable</td>
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<tr>
<td>Service environment is clean, cozy, and logical</td>
<td>Our ecological footprint is small</td>
<td>Our impact on the society and the economic environment is positive</td>
<td>Company manages its resources efficiently</td>
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<tr>
<td>A diverse portfolio of services and destinations</td>
<td>We offer competitive working conditions</td>
<td>We create new business opportunities</td>
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<td>We are a trustworthy business partner</td>
<td>We are a responsible and flexible employer</td>
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<tr>
<td>We are open organisation with a positive image</td>
<td>We are a trustworthy employer with a high reputation</td>
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<td>Airport’s community considers joint objectives.</td>
<td>Employees and members of the community are informed</td>
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<thead>
<tr>
<th>Sustainability</th>
<th>We have an optimal number of competent employees</th>
<th>Company’s business operations follow national and international regulations, standards and norms</th>
<th>Flips are fully managed and minimized</th>
<th>The business is developed with a sense of perspective</th>
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<tr>
<td>We are a competitive business</td>
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Appendix

Appendix 7: Tallinn Airport’s organisational structure from the Annual Report 2014

Reference: Tallinn Airport, 2014
Appendix 8: The Cosiest Airport in the World - Introduction

A document with a selection of different design and passenger experience highlights at Tallinn Airport that was a deliverable for Enterprise Estonia (EAS). EAS is an institution "within the national support system for entrepreneurship, providing financial assistance, counselling, cooperation opportunities and training for entrepreneurs, research institutions, the public and non-profit sectors" (Enterprise Estonia, 2015) - 5 pages

The big dream of Tallinn Airport is to become the cosiest airport in the world.

In recent years, the transformation of Tallinn Airport into a cosy airport has been particularly noticeable. The different needs of passengers have been more clearly catered for in order to offer everyone a chance to spend their waiting time as pleasantly as possible.

Exciting discoveries in the passenger area:

Library at Tallinn Airport

The library is situated in the passenger area at Gate 3. The Library operates on the principle of "from Passenger to Passenger". Passengers can choose a book from the bookshelf to pass the time while waiting for their flight. It is also permitted to take the book along on a trip and return it when you come back. If you have not managed to finish reading the book during the trip, you may take it home and return it next time.

The library is entirely self-service and open 24 hours.

The library operates on the principle of trust; there is no operating personnel or supervision.

The books are divided on the shelves, as follows:

- linguistically: books in English, Estonian and Russian
- books in other languages
- children’s books

Everyone can make additions to the library—individuals, companies/business partners.
Enterprise Estonia’s introduction to Estonia—Visit Estonia at Gate 5

One of the favourite gates of passengers is Gate 5 because an introduction to Estonia is incorporated into the waiting area. This is for all departing passengers as well as for travellers arriving from the Schengen area. It introduces Estonia as an attractive holiday destination. A large selection of print material in different languages is available on the shelves and clips about Estonia are played on the big screens to show events and exhibitions that are taking place in Estonia. Chairs are decorated with national patterns, the bridge from the gate to the airplane is designed as a walk-through in the woods and fabric banners hang from the ceiling to create a pleasant mood. In a separate area, the business lounge has comfortable armchairs in Estonian design for business travellers.

To connect the traveller with the airport, a wall made of aspen boarding is placed next to the corner so business travellers can leave their business cards and thereby exchange contacts.

Children’s playground

The second part of Gate 5 is dedicated to the Estonian children’s favourite Lotte from Gadgetville. The wall of the waiting area is decorated in Lotte theme, a high three-storey children’s playhouse is situated in the middle of the waiting area with a screen mounted on the wall for playing Lotte animated films; three tables and 12 chairs in the Lotte area provide Lotte colouring paper and crayons.

In addition to children’s entertainment, Lotte Village helps children relieve any travel anxiety and make passing the time more fun. Seating places decorated with Estonian national patterns next to the Lotte area offer parents the opportunity to keep an eye on their children in the play area.
Non-Schengen children’s area

There is also a play area for children in the non-Schengen zone. As many charter flights pass through the non-Schengen area of the airport, this is where families wait for board their flights. Again, the play area helps children relieve any travel anxiety and makes passing the time more fun.

Boudoir-themed women's restrooms

All women's restrooms in the airport have been revamped—cubicles and mirrors are designed in a boudoir theme. A visit to the lavatory may provide a pleasant surprise and influence the entire airport experience. Each cubicle is dedicated to a clothing/accessory. The mirror and the door carry a flattering message, and the overall message embodies a glorification of femininity.

Sports-themed men's restrooms

In order to maintain balance, the men's restrooms have also received a completely new look.

Instructions on how to tie a tie are placed on the mirrors, and humorous sports facts can be found around the whole toilet room.

For example, did you know that the fencing is the only combat sport that has no weight classes?
Working with partners

When choosing services and advertising, we proceed from the fact that everything we present in the terminal follows the cosiest airport concept.

Therefore, we have created a number of leisure places in the terminal, based on travellers' wishes.

Postimees lounge at Gate 7:

The Postimees lounge is supplied with tables and chairs as well as large screens to monitor news and tablet computers showing the news. Blue beanbags are placed in the Postimees area where you can relax and fold paper planes for entertaining. Passengers can fold their wishes into planes and fly them into the barrel of ideas!

Elion lounge at Gate 6:

Elion has also designed its own special and attractive lounge. The various design elements of the Elion gate generate the feeling of being in someone's living room, waiting on comfortable sofas and watching your favourite TV shows on large screens. Houseplants and picture frames on the walls add cosiness.

Samsung Tab Bar
Appendix

Samsung Estonia has installed the Samsung Tab Bar, which gives passengers use of the available tablet computers, if desired. It also allows travellers to use the Internet if they don’t have their own devices. There are no time restrictions on the use of the tablet PCs and it can be used comfortably on the mounted table.
Appendix

Appendix 9: Design Management Europe Award 2013 - Presentation

The presentation that was held during the ceremony of the Design Management Europe Award 2013 in St. Etienne, France - 2 pages consisting of 9 slides
Appendix

Challenges

- **Government owned Corporation** - high public interest, involvement and expectations
- In most cases passengers are the clients of our partners
- Passenger volumes are limited to seats available for sale
- Many different partners involved
- Airport procedures' requirements

Biggest acknowledgment in 2014

"Sleeping in Airports" passenger query listed Tallinn Airport amongst the 10 best airports in Europe based on overall airport experience.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Airport</th>
<th>Rate (out of 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jerusalem</td>
<td>13.3</td>
</tr>
<tr>
<td>2</td>
<td>Helsinki</td>
<td>13.2</td>
</tr>
<tr>
<td>3</td>
<td>Munich</td>
<td>13.6</td>
</tr>
<tr>
<td>4</td>
<td>Athens</td>
<td>12.8</td>
</tr>
<tr>
<td>5</td>
<td>Naples</td>
<td>12.3</td>
</tr>
<tr>
<td>6</td>
<td>Tallinn</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Prague</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Frankfurt</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Copenhagen</td>
<td>9.5</td>
</tr>
<tr>
<td>10</td>
<td>Oslo</td>
<td>9</td>
</tr>
</tbody>
</table>

Design Management outcome:

Commerical outcome:

Record numbers in non-aeronautical revenue per passenger
Self-sufficient state owned company

Thank you
eva.maarend@tll.aero
www.airport.ee
Appendix 10: Design Management Europe Award 2013 - Poster

The poster presentation that was submitted for the participation in the Design Management Europe Award 2013 competition. The high-resolution PDF-file can be downloaded here: http://www.designmanagementexcellence.com/wp-content/uploads/2013/12/NPO-Tallinn-Airport.pdf
Appendix

Appendix 11: Passenger Survey - Questionnaire 2013

The questionnaire of Tallinn Airport’s Passenger Survey 2013 - 4 pages

Dear passenger,
You have been randomly selected to take part in Tallinn Airport’s annual passenger survey. Your contribution would help us evaluate the service quality from passengers’ point of view and improve the services according to our customers’ expectations.

**YOUR FLIGHT AND DESTINATION**

<table>
<thead>
<tr>
<th>Flight number:</th>
<th>Date:</th>
<th>Departure time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i.e. OK 878)</td>
<td>(i.e. 10. MAY)</td>
<td>(i.e. 11:20)</td>
</tr>
</tbody>
</table>

1. Destination of the flight you are about to board (city)

Please use CAPITAL letters

2. What is the final destination of your flights? (city)

Please use CAPITAL letters

2.a. Is this the final destination of your journey?

Yes (continue with question 3)
No (continue with question 2.b.)

2.b. What is the final destination of your journey?

Please use CAPITAL letters

3. What is the main reason you are taking this trip?
Hereafter, please, circle the number in front of the suitable answer option

1. Business (work, conference etc)
2. Leisure
3. Visiting friends/relatives
4. Other

4. Is your flight a scheduled flight or a charter flight?

1. Scheduled flight
2. Charter flight

5. What kind of ticket do you have?

1. Business class
2. Tourist/economy
3. IDAID or frequent flyer bonus

6. How long before the scheduled departure time did you arrive at the airport?

1. Less than 1 hour
2. 1 - 1.5 hours
3. 1.5 - 2 hours
4. More than 2 hours

7. How long does your journey last?

1. 1 - 3 days
2. 4 - 5 days
3. 6 - 10 days
4. More than 10 days

**ARRIVAL TO THE AIRPORT**

8. Which mode of transportation did you use to arrive to Tallinn Airport?

1. Plane (connection/transfer) continue with question 9
2. Taxi
3. Car, short stay
4. Car, with long-term parking
5. Rental car
6. Public transportation (bus)
7. Other
### Appendix

<table>
<thead>
<tr>
<th>9. Based on your experience of arriving to this airport today, please rate the following services and aspects:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very good</th>
<th>Excellent</th>
<th>Hard to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Simplicity of parking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>B (Public) transportation from the city</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>C Availability of short-time parking space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>D Availability of long-term parking space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>E Adequacy / availability of luggage carts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### AIRPORT SERVICE

<table>
<thead>
<tr>
<th>10. Based on your experience of arriving to this airport today, please rate the following services:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very good</th>
<th>Excellent</th>
<th>Hard to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Terminal staff courtesy and helpfulness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>B Waiting time in check-in line</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>C Helpfulness of check-in staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>D Waiting time in security check</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>E Helpfulness of security staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>F Feeling of being safe and secure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>G General atmosphere in airport</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>H Speed of baggage delivery on arrival</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

10I Comments or suggestions about the airport service

### SHOPS

<table>
<thead>
<tr>
<th>11. Did you visit or buy anything from any of the following retail shops at this airport today?</th>
<th>I bought from this shop</th>
<th>I just visited this shop</th>
<th>I did not visit this shop</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Accessories</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B Cigar Lounge</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C Estonian specialties/souvenirs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>D Men's clothes</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>E Tax-free (alcohol, fragrances)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>F Kiosk</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>G Design shop Pohl</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>H Toy and candy shop</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

IF YOU DID NOT VISIT ANY SHOPS, CONTINUE WITH QUESTION 14.

<table>
<thead>
<tr>
<th>12. Approximately how much did you spend in total in shops of the airport today (if any)? Please also write down the currency!</th>
<th>AMOUNT</th>
<th>CURRENCY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>13. Please rate the shops at this airport</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very</th>
<th>Excellent</th>
<th>Hard to say</th>
</tr>
</thead>
</table>
### Appendix

<table>
<thead>
<tr>
<th>based on your experience today.</th>
<th>good</th>
<th>lent</th>
<th>to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Shop staff courtesy and helpfulness</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B Product choice in the shops</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C Value for money of the products</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

13D Comments about the airport shops

---

### RESTAURANTS, EATING FACILITIES

<table>
<thead>
<tr>
<th>14. Did you check out or buy anything from any of the following restaurant / eating facility at this airport today?</th>
<th>I bought from this restaurant</th>
<th>I just visited this restaurant</th>
<th>I did not visit this restaurant</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Old Tallinn Bistro</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B Snack-bar (Take-Off One)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C Sushi</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>D Aviation theme pub</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

IF YOU DID NOT CHECK OUT ANY RESTAURANTS, CONTINUE WITH QUESTION 17.

### 15. Approximately how much did you spend in total in restaurants of the airport today (if any)?

Please also write down the currency!

<table>
<thead>
<tr>
<th>(AMOUNT)</th>
<th>(CURRENCY)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>16. Please rate the restaurants at this airport based on your experience today.</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very good</th>
<th>Excellent</th>
<th>Hard to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Staff courtesy and helpfulness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>B Product choice</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>C Value for money of the products</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

16D Comments about the airport eating facilities

---

### ROOMS AND ATMOSPHERE

<table>
<thead>
<tr>
<th>17. Based on your experience today, please rate the following aspects of this airport:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very good</th>
<th>Excellent</th>
<th>Hard to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Sufficiency and location of information screens</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>B Availability of information</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>C Ease of finding your way through airport</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>D Cleanliness of toilets/washrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>E Cleanliness of airport in general</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
GENERAL QUESTIONS

18. What is your overall satisfaction with Tallinn Airport?
   1. Poor
   2. Fair
   3. Good
   4. Very good
   5. Excellent
   6. Hard to say

19. If you could give ONE suggestion to improve this airport, what would it be?
   Please use CAPITAL letters

QUESTIONS ABOUT YOU

20. What is your native language?
    Please use CAPITAL letters

21. In which city/country do you live?
    Please use CAPITAL letters

22. Your gender
   1. Male
   2. Female

23. How old are you?
   1. Under 25
   2. 25-34
   3. 35-44
   4. 45-54
   5. 55-64
   6. 65 or more

24. What is your average monthly net income (i.e. income after taxes)?
   1. up to 500 EUR / kuni 700 USD
   2. 501-1000 EUR / 701-1400 USD
   3. 1001-2000EUR / 1401-2885 USD
   4. 2001-3000 EUR / 2585-3875 USD
   5. over 3000 EUR / üle 3875 USD
   6. Do not wish to answer

Thank you for sharing your experience and expectations with us!
Please return the filled questionnaire to the interviewer before boarding your flight
or insert it into the box at your gate.
Have a pleasant flight!

Küsiteja ID: _____
Appendix 12: Passenger Survey results 2014

The presentation of Tallinn Airport’s Passenger Survey results 2014 as it was shared through the Extranet - 10 pages à 4 slides.
**To improve satisfaction levels airports need to provide a greater sense of choice**

- Väljaemaid pakendeid lennuksesse kaasa võtmiseks
- Soolaseid asju poes võiks rohkem olla, klii, liha, vorst vms
- El leiendud vajaminevat partüöri
- Eesti siidrit ei olnud
- Should be more cognac
- Värava vett ei leiinud
- Rohkem Eesti tooted
- My flight was outside their work hours
- Teenindajad lubasid oma kolleegi kohta seal omavahel
- ei õeldud ei tere ega head aega
### Lennujaama puhtus tervikuna

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/11</td>
<td>4.6</td>
<td>4.6</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>2014/5</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>2013/11</td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>2013/5</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>2012/11</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>2012/5</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>2011/11</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>2011/5</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>2010/11</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
</tr>
</tbody>
</table>

### Pagasi kätesaamise aeg saabumisel

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/11</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>2014/5</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2013/11</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2013/5</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2012/11</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2012/5</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2011/11</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2011/5</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2010/11</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
</tr>
</tbody>
</table>

### Kokku 637 kommentaari/soovitust

- **Tähelepanekud**
  - Cleaning lady came into a not so clean toilet and signed the paper on the wall without doing or cleaning anything
  - Extend the work hours for the shops and eating services to be open for the first flights
  - mobiilefonide taadimispunktid on jäänud märkamat

- **Küsimus**
  - Ulmnõus koht, koliks sisse!
  - I love the setup and the atmosphere at the departure area. It is very casual and makes you feel like home.
  - Спасибо огромное сотрудникам аэропорта!!!

---

**Tänan!**
Appendix 13: Lounge Survey questionnaire

The questionnaire of Tallinn Airport’s Lounge Survey - 2 pages

---

**Please take a moment to give us your opinion on Tallinn Airport’s business lounge. Rating scale: 5 (excellent) ... 1 (poor).**

If you have any comments or suggestions, please add them to the questions after the ratings or on the other side of the card.

1. Interior design, atmosphere of Tallinn Airport's business lounge
   - Rating: 5 4 3 2 1

2. Customer service at Tallinn Airport’s business lounge
   - Rating: 5 4 3 2 1

3. Catering
   - Selection of snacks
     - Rating: 5 4 3 2 1
   - Selection of nonalcoholic drinks
     - Rating: 5 4 3 2 1
   - Selection of alcoholic drinks
     - Rating: 5 4 3 2 1

4. Additional services
   - (Flight) information availability
     - Rating: 5 4 3 2 1
   - Selection of newspapers/magazines
     - Rating: 5 4 3 2 1
   - Use of office equipment (personal computer)
     - Rating: 5 4 3 2 1

---
Appendix

5. General impression of Tallinn Airport’s business lounge
   5 4 3 2 1

6. How many times have you visited Tallinn Airport’s business lounge during the last year?
   1 x 2–5 x 6–… x

7. How many times have you visited other business lounges during the last year?
   1 x 2–5 x 6–… x

Date: ______________________

Comments:
.................................................................................................................................
.................................................................................................................................
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Appendix 14: Application for the ACI EUROPE Best Airport Award 2015

This is the presentation Tallinn Airport submitted as an application for the ACI EUROPE Best Airport Award in the category under 5m passengers (the text marking in yellow was added by the author of this thesis to highlight key points) - 3 pages à 4 slides

- The award criteria can be found on www.aci-europe-events.com
- The press release mentioning that Tallinn Airport was highly commended can be found on www.aci-europe.org
**Specific Initiatives**

- **Boozi-themed Restaurants**
  - A themed restaurant offering local cuisine and delicacies, enhancing the overall dining experience.
- **Sports-themed Bars**
  -Bars that showcase live sports events, creating a vibrant atmosphere.
- **Art Gallery**
  - An art gallery space for everyone and offers a diverse range of art exhibits.
- **Self-Service Sandwich Station**
  - A sandwich maker that lets you customize your sandwich as per your palate.

- **Social Media Coverage, Awards**
  - Hundreds of social media followers have joined the community of Tallinn Airport.
- **Parking**
  - Tallinn Airport offers free parking for 3 minutes in front of the airport terminal, followed by a flat fee for extended parking.

**Appendix**

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**Airport Facilities Are Part of the Journey**

The best passenger experience design principles need to be followed throughout the whole passenger journey from parking to shops and cafes.

**Financial Outcome**

All the activities in the passenger experience design have been implemented to increase sales and non-aeronautical revenues. The revenue has grown in all areas (retail, advertising, and services).

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall Satisfaction</th>
<th>Passengers per Passenger</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>6.3</td>
<td>2013 + 2012 + 2011</td>
</tr>
<tr>
<td>2012</td>
<td>6.0</td>
<td>2013 + 2012 + 2011</td>
</tr>
<tr>
<td>2011</td>
<td>6.0</td>
<td>2012 + 2011 + 2010</td>
</tr>
</tbody>
</table>

**Customer Relations**

The app also offers different aspects of Tallinn Airport's facilities and functions. The app provides essential information about Tallinn Airport's facilities.

- **Mobile App**
  - The app uses the latest technology and mobile apps to provide real-time updates on airport facilities and services.
The verbatim transcripts were excluded from this online version.

Appendix 15: Interview 1 - Tallinn Airport - Marketing
Eva Maarend / Marketing Specialist - 2015/03/05

— Transcript removed —

Appendix 16: Interview 2 - Tallinn Airport - Marketing
Eva Maarend / Marketing Specialist - 2015/03/18

— Transcript removed —

Appendix 17: Interview 3 - Tallinn Airport - Marketing
Eva Maarend / Marketing Specialist - 2015/03/20

— Transcript removed —

Appendix 18: Interview 4 - Tallinn Airport - IT
Sven Friberg / IT Manager - 2015/07/10

— Transcript removed —
Appendix

Appendix 19: Questionnaire Template

Please just overwrite the placeholder lines that are printed below the questions. Don't feel restrained by the little space given.

Questions for the XYZ department

My name is Chris Bodderas (boch1389@student.hj.se) and I am studying “IT, Management and Innovation” (MSc in Informatics) at Jönköping International Business School, Sweden.

The goal of my research is to investigate the passenger experience, that is the direct and indirect interactions that the passenger has with the airport and its partners (e.g., shops, restaurants, car rental, etc.), as well as the feelings and behaviours which result from these interactions. Furthermore, I am trying to find technological solutions to support the management of the passenger experience, with special attention to the aspects of partner management. The dimensions to be managed include internal processes and systems (e.g., communication with partners), as well as passenger-facing staff (e.g., security personnel), technology (e.g., website), and objects (e.g., toilets).

Thank you very much for supporting my research by answering the following questions!

1) Question 1


i) Sub-Question


2) Question 2


3) ...


The responses to the above questions will be used to compile a case study as part of a master thesis research project. Personal quotes may be published. Otherwise please contact: boch1389@student.hj.se
Appendix

Appendix 20: Questionnaire 1 - Tallinn Airport - Marketing
Eva Maarend / Marketing Specialist - Answers received: 2015/06/04

— Transcript removed —

Appendix 21: Questionnaire 2 - Tallinn Airport - Sales
Rasmus Kabun / Head of Sales - Answers received: 2015/06/04

— Transcript removed —

Appendix 22: Questionnaire 3 - Tallinn Airport - IT
Sven Friberg / IT Manager - Answers received: 2015/06/04

— Transcript removed —

Appendix 23: Questionnaire 3 - Estonian Air - IT
Marcus Liimets / IT Manager - Answers received: 2015/07/28

— Transcript removed —

Appendix 24: Questionnaire 4 - Follow up - Marketing
Eva Maarend / Marketing Specialist - Answers received: 2015/07/22 and 2015/07/23

— Transcript removed —

Appendix 25: Questionnaire 5 - Inflight Service Estonia Eesti OÜ
Monika Tubro, Shop Manager - Answers received: 2015/08/06

— Transcript removed —
Appendix

Appendix 26: Questionnaire 6 - Follow up - Marketing

Eva Maarend, Marketing Specialist - Answers received: 2015/08/06

— Transcript removed —