



**Universidade de  
Aveiro**

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Departamento de Comunicação e  
Arte

**FILIFE MACIEL  
GONÇALVES**

**MAPPING THE TOURIST EXPERIENCE IN  
TRAINS THROUGH HUMAN-CENTRED  
DESIGN**





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**MAPPING THE TOURIST EXPERIENCE IN  
TRAINS THROUGH HUMAN-CENTRED  
DESIGN: ELICITING NEEDS AND DESIRES  
FOR A FUTURE MOBILE APP**

**MAPEANDO A EXPERIÊNCIA TURÍSTICA EM  
TRENS ATRAVÉS DO DESIGN CENTRADO  
NO SER HUMANO: DESCOBRINDO  
NECESSIDADES E DESEJOS PARA UMA  
FUTURA APLICAÇÃO MÓVEL**

Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Comunicação Multimédia, realizada sob a orientação científica do Doutor Rui Manuel de Assunção Raposo, Professor auxiliar do Departamento de Comunicação e Arte da Universidade de Aveiro.



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**Palavras-chave**

Design centrado no ser humano, experiência do usuário, pesquisas com usuários, m-Tourism, informação nos transportes.

**Resumo**

O trabalho de investigação aqui apresentado expõe as necessidades, desejos e necessidades futuras de turistas durante a experiência turística através do uso de trens na Bélgica, com foco na futura criação de uma aplicação móvel que suporte não somente a obtenção e uso da informação durante a viagem férrea, mas também alguns fatores relacionados com as fases de antecipação e experiência no destino.

Para isso, foram planejadas e executadas três metodologias qualitativas de pesquisa do usuário distintas: observações, entrevistas de grupo focal e jogos de mesa como ferramenta geradora de ideias.

Além disso, foram desenvolvidos Personas e cenários de contexto com o objetivo de iniciar a transição entre o processo de pesquisa e design.

Este trabalho foi desenvolvido em um programa de mobilidade entre a Universidade de Aveiro e Katholieke Universiteit Leuven. Está redigido em Inglês, o que representou um desafio para o pesquisador, que é brasileiro e tem português como idioma oficial.



**Keywords**

Human-centred design, user experience, user researches in design, m-Tourism, information in transports.

**Abstract**

The presented research elicits the behaviour, needs and desires, in addition to future needs, of tourists during the tourist experience through the use of trains in Belgium, with a focus on the future creation of a mobile application that supports not only the collection and use of information during the train trip, but also some factors related to the anticipation and on-site experience.

Three different qualitative user research methodologies were planned and carried out: observations, focus group interviews and board games as generative tool.

In addition, Personas and context scenarios were developed in order to start bridging the research-design gap.

This study was developed during a mobility program between University of Aveiro and Katholieke Universiteit Leuven. It is written in English, which represented a challenge to the researcher, who is Brazilian and has Portuguese as the mother tongue.



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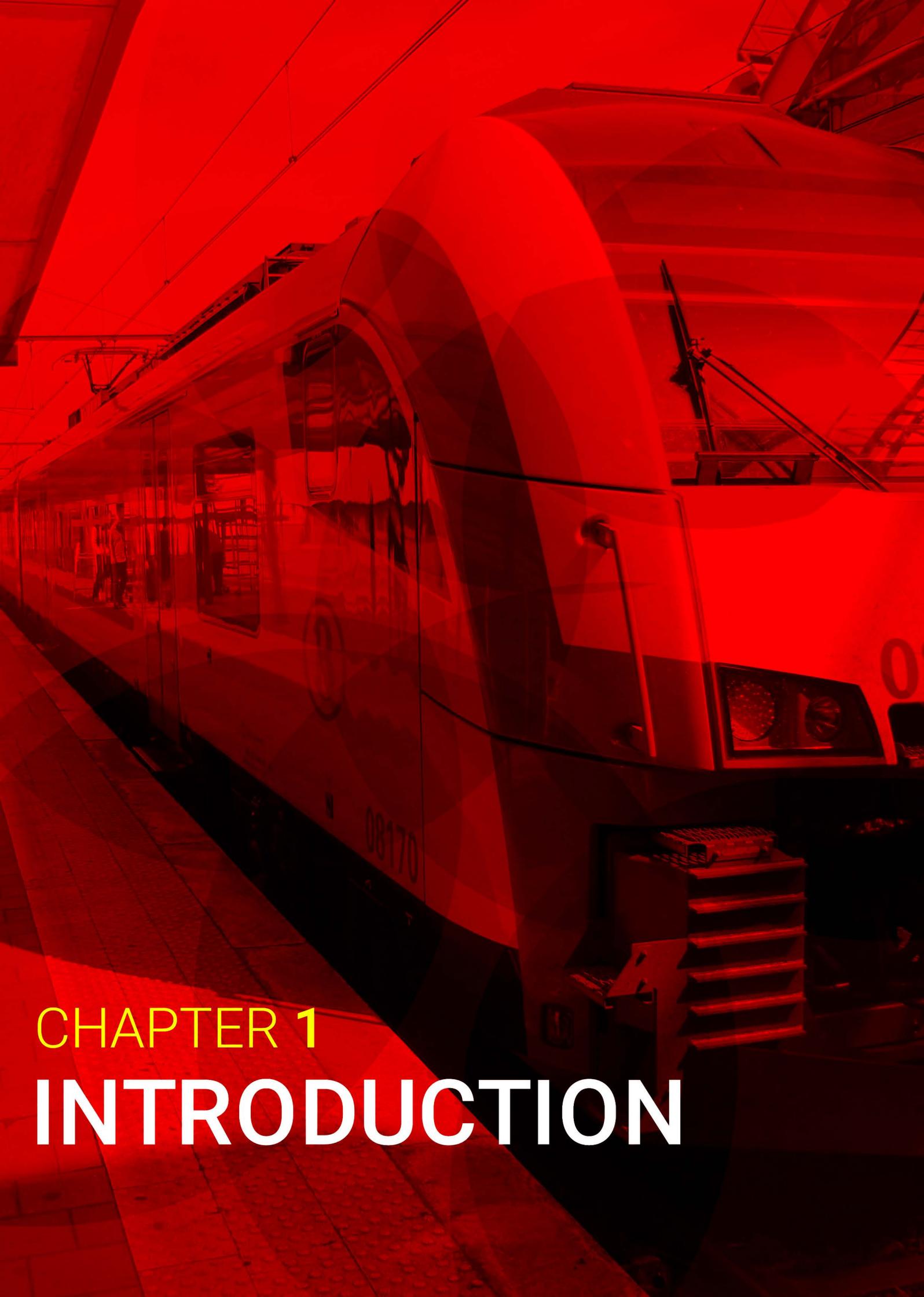
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CHAPTER 1

# INTRODUCTION

In this chapter, the problem approached in this study is presented highlighting its relevance and contribution for the scientific community, development of the market and social purposes. It is divided in 5 sections. The first section, "1.1. Context and motivation", introduces the context of this study. The second one, "1.2. Research problem", discusses what are the current strengths and weaknesses of the tourism and ICTs, eliciting the available room for improvements regarding the use of mobile devices, particularly smartphones, during the use of public transportation, specifically trains. The third section, "1.3. Research question", presents the question generated that guided this study together with the goals presented in the fourth section, "1.4. Goals". The fifth and last section, "1.5. Structure of the work", presents and overview of how the study is organized.

## 1.1. Context and motivation

This study was carried out at the Centre of User Experience (CUO), which is a research group within the Institute for Media Studies of the faculty of Social Sciences at the Katholieke Universiteit Leuven (KU Leuven), and is part of iMinds<sup>1</sup>.

The areas of study in which the CUO focuses on, and the know-how of its researchers, motivated the development of this study, which became possible through a mobility program between the University of Aveiro and the KU Leuven.

Due the international context provided by this partnership, it was developed and written in English, representing a challenge for the researcher, who is Brazilian and has Portuguese as the mother tongue.

## 1.2. Research problem

The development and popularization of Information and Communication Technologies (ICTs) has influenced, directly or indirectly, several sectors of the industry. The tourism sector was one of them. The easy access to information allowed people from many parts of the world to move between cities, states, countries and continents in a way much more independent, turning tourism into one of the largest and fastest-growing economic sectors in the world, which is considered a key driver of socio-economic progress through the creation of jobs and enterprises, export revenues, and infrastructure development (UNWTO, 2015). The long-term forecast of the World Tourism Organization expects that international tourist arrivals will increase about 43 million a year during the period 2010 to 2030, compared with an average increase of 28 million a year during the period 1995 to 2010 (UNWTO, 2015). This means that if confirmed, the number of international tourist arrivals will reach 1.8 billion by 2030.

Through the use of the ICTs, new concepts like e-Tourism and m-Tourism have emerged, which revolutionised the way consumers dream, plan and experience their travels. The advent of e-Tourism contributed, and still contributes, to a large expansion of services and products of the tourism sector through the digitalisation of

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<sup>1</sup>iMinds is the digital research centre and incubator of Flanders, which is the Dutch-speaking northern portion of Belgium.

the process and value chains, maximizing the efficiency and effectiveness of the sector (Buhalis, 2002). In addition, m-Tourism, which in its most basic definition is the use of mobile devices in tourism, contributes to this process by removing time-space barriers and allowing access to information at any time of the day, as long as connected to the Internet.

A brief study carried by Dan Wang et al. (2014) demonstrated some of the changes happening in travel activities due m-Tourism, in which planning trips became easier, as well as trips became more flexible. As a consequence, tourists can feel more comfortable to travel less prepared and in shorter notice, moving the planning and booking activities from the agencies (or in a more advanced case, from the computer) to mobile devices, thus carrying these issues on-the-go. Moreover, the affective experience has led to more connection between users and more informative travels, having constant access to information even out of home. However, travel information often seems incomprehensible to passengers (Beul-Leusmann et al., 2014) and consequently may require extra cognitive, affective and physical effort from them. In the case of tourists, perceive travel information can be even more crucial since they are not used with the environment and usually need more information than frequent users (Le-KlähnGerike& Michael Hall, 2014). Thus, there is still a need for improvement on the promotion of information in transportation, especially regarding tourists due the lack of studies with inclination to address tourists and non-tourists as different target audiences (Page, 2009).

Generally speaking, tourism is not the only sector which can take advantage of the ICTs but still fails at some points. For a long time, new technologies (especially the Internet) have been filled with products and services difficult to understand and use. This happens for a wide range of causes, but certainly in many cases the reasons are related to problems such as self-referential design, elastic user and edge cases (A. CooperReimann& Cronin, 2007). All these problems, which are discussed in-depth throughout the study, have a similar mistake among them: the system is designed without “hear” the user. In these cases, the group responsible for delivering solutions ends up developing systems without deeply understand the user’s needs and desires. Instead, they build products based on the team’s assumptions, which may turn the user experience provided by these products unpleasant, requiring an effort from the user when actually it should be saving efforts.

In order to solve these kinds of problems and help teams building products that are usable and desirable by the users, many design methodologies have emerged in the past few years. Design methodologies which are focus on bringing the user to participate during the product development are one example. Although different terminologies have been suggested, what is important about these methodologies is that they prime to “hear” the user by bringing them to the centre of the development process, such as *human-centred design*. Doing this, methodologies that focus on the user seeks to truly understand what are the users’ needs and expectations. Moreover, by bringing the user to the centre of the development process become much easier to understand the environment in which certain product or service is used, collaborating to avoid poor design solutions that may not be well executed in the real environment. Thus, in order to provide a better experience for tourists using transportation it is crucial truly understand what are their point of view regarding many aspects of the trip (GrisonGyselinck& Burkhardt, 2014).

Based on the importance of the tourism sector; the evolution of e-Tourism and m-Tourism with the support of ICTs; and the need for providing better experiences regarding the trip through public transportation, it becomes pertinent to understand clearly what are the tourists’ habits and needs during a trip, from the moment of decision-planning to the moment when they arrive back home. To achieve this, the use of trains by tourists in Belgium is studied through human-centred design methodologies seeking to solve the research question, which is presented next.

### **1.3. Research question**

According to the problem presented, the guiding question for this work seeks to understand:

- How may human-centred design be used as a design methodology for mapping the current travel experience of tourists who use Belgian trains, focusing on the future development of a mobile application?

By answering this question it can be perceived what are the necessary steps and methodologies to be taken in order to elicit the needs, desires and expectations of tourists during the tourist experience regarding the use of trains. Generally speaking,

it seeks to highlight the main features that a future mobile application must have in order to enhance the tourist experience.

Two hypotheses are proposed:

- An empirical study may be carried by applying a set of methods and tools which collect the information directly from the target group identified, eliciting the main points to be considered in a future mobile application.
- The development of the mobile application may be done through the use of a common design development cycle in which potential users are given the possibility to have direct participation in the process.

To answer this question and validate the hypotheses this work aims to achieve a set of goals, which are presented next.

## **1.4. Goals**

According to the research question proposed, this work aims to map the current travel experience of tourists who use Belgian trains. Thus, the general goal of this study is:

- To understand the habits of tourists during the tourist experience in order to provide sufficient and relevant information for a future development of a mobile application, which should enhance the tourists' travel experience by fulfilling their needs, expectations and desires regarding the trip;
- To involve the target group during the research valuing their insights and avoiding self-referential design.

Moreover, the specific goals of this study are:

- To understand the concepts of e-Tourism and the tourist experience life cycle aiming to better empathise how tourists obtain and use information on trains;
- To understand the concept of m-Tourism and how tourism-related business are being approached on mobile devices;

- To identify which are the mobile applications developed in a context similar to this study, analysing common and good practices;
- To understand human-centred design methodologies, in order to figure out how to design applications that will aid the user's experience and enable tourists to get the correct information during their experience while using public transportation.

In the next section it is described how this work was structured, presenting an overview of the linear narrative offered on this study.

## **1.5. Structure of the work**

This work was divided in six chapters following a linear presentation of how the development of this study was carried.

In the first chapter, "1. INTRODUCTION", an overview of the research problem is presented, introducing the power of the tourism as a service sector industry, also enhancing the opportunities to improve its service through the use of ICTs, specifically the use of smartphones during the tourist experience. Thus, a research question is created and presented next, followed by goals in which this study focused during its development. The structure of the work is presented next, which is this section.

In the second chapter, "2. E-TOURISM", it is discussed how the tourist activity is developed and what are the main characteristics that form the concept of e-Tourism; what are the phases of the travel experience and which activities are carried in each one; the importance of information in tourism transportation; and the concept of m-Tourism and how tourists are using mobile devices during their travel activities. Moreover, it is presented the current state-of-the-art of mobile applications that seeks to solve public transportation issues.

In the third chapter, "3. HUMAN-CENTRED DESIGN", it is discussed what are the main problems of designed systems in the ICT era, introducing concepts of product development's methodologies that includes the user in the centre of the process; and the main characteristics to value during the design of the user experience.

Furthermore, it is presented qualitative researches used in early stages of product development, as well as two design tools based on qualitative data gathered.

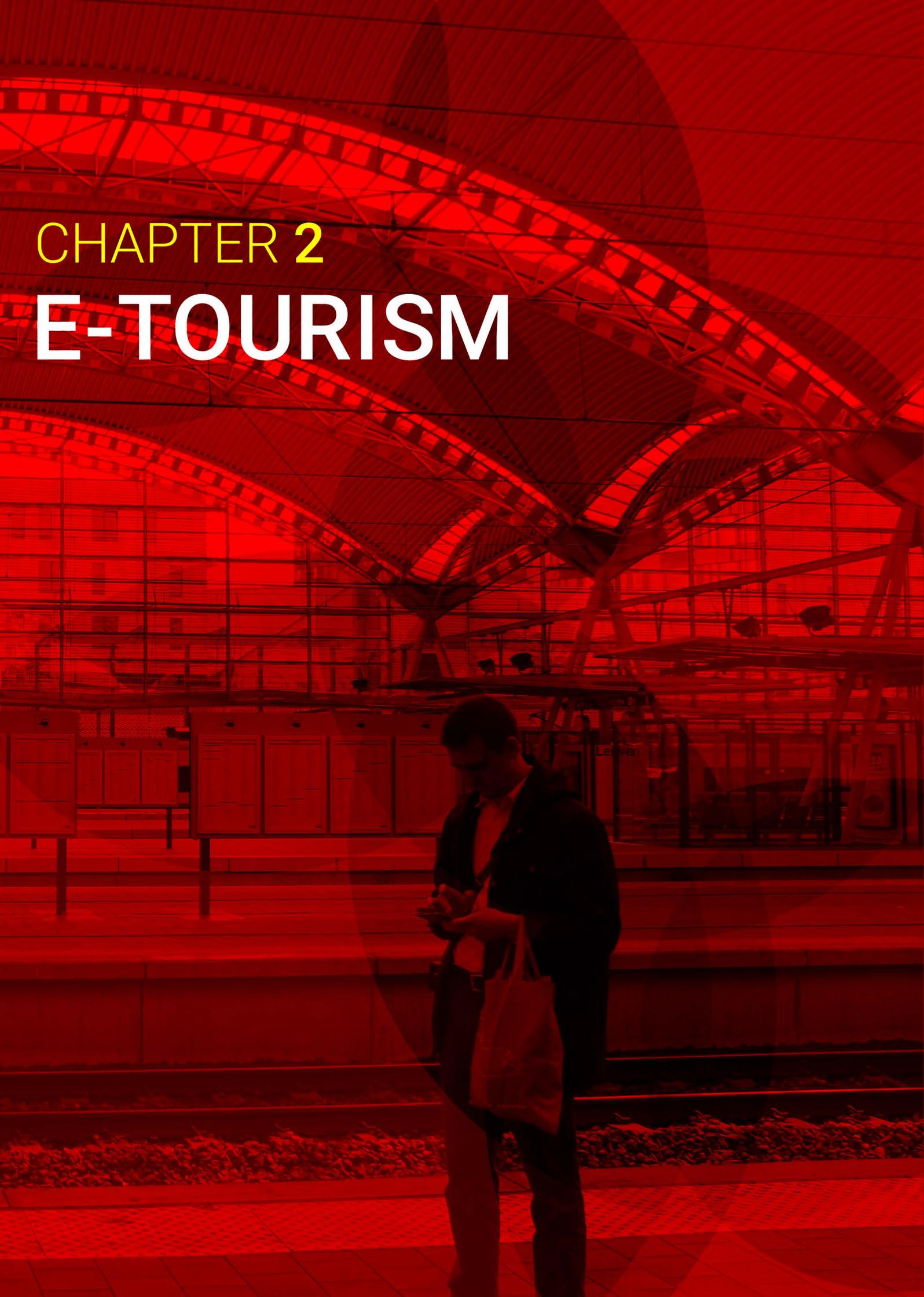
In the fourth chapter, “4. RESEARCH DEVELOPED”, it is presented how the practical part of this study was carried, describing the process of each one of the user researches applied: direct observation; focus group interviews; and board game workshops as a generative tool. In addition, it is also described how two design tools, Personas and scenarios, were developed. The way the data was analysed is also included in this part of the study.

In the fifth chapter, “5. RESULTS”, it is discussed the results obtained throughout the study. First it is presented an introduction of how the chapter is organized, followed by an overview of the Belgian train system. Then, it is presented the user requirements identified through the user researches. In the sequence, these user requirements are compared with a similar work carried independently from this study. Moreover, the Personas and scenarios developed are presented. Lastly, the whole set of results are discussed.

In the sixth and last chapter, “6. CONCLUSIONS”, it is presented a reflection of the study done enhancing positive and negative points throughout the process. The limitations of this study and suggestions of future investigations are also presented in this chapter.

## CHAPTER 2

# E-TOURISM



In this chapter, the concepts of e-Tourism and m-Tourism are discussed. It is divided in 5 sections. The first one, “2.1. e-Tourism: tourism and the ICTs”, discuss how the tourist activity is developed and what are the characteristics that form the concept of e-Tourism. The second section, “2.2. Tourism experience cycle”, discuss what constitutes the travel experience and propose the model that is used during this study. The third section, “2.3. Information in tourist transportation”, approach the use of transportation in a tourist activity and the importance of information regarding provide a positive experience. The fourth section, “2.4. m-Tourism: Use of mobile devices in tourism”, discuss the concept of m-Tourism and how tourists are making use of mobile devices during their travel activities. Lastly, the fifth section, “2.5. Current state-of-the-art”, gives an overview about the characteristics of some of the mobile applications being used recently for public transportation purposes.

## 2.1. e-Tourism: tourism and the ICTs

To understand the concept of e-Tourism it is first necessary understand how the tourist activity is developed. Tourism is an economic activity that involves the movement of people from their places of origin to a destination (Leiper, 1979; Murphy, 1985). This movement creates a dynamic that involves various sectors, goods and services, which can be connected directly (such as airlines, hotels, restaurants<sup>2</sup>, travel agencies, rental cars, etc.) or indirectly (such as taxis, supermarkets, buses, etc.) with this activity (Smith, 1988).

For being a multidisciplinary area, which can be parsed by the supply and the demand side, there is not a unique definition for tourism. The complexity and scope of activities involving tourism results in several concepts that differ by the prospects of supply-side and demand-side. Under the supply-side perspective, for the World Tourism Organization (UNWTO, 2014, p. 1) *“tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes”*. Still in this context, (Smith, 1988, p. 190) defined tourism as *“the aggregate of all retail businesses that produce commodities for the traveller, regardless of his motivations or other personal characteristics”*. Under the demand-side perspective, Mathieson & Wall (1982, p. 1) defined tourism as *“the temporary movement of people to destinations outside their usual places of residence and work, the activities undertaken during the stay and the facilities created to cater for the needs of tourists”*. According to Leiper (1979, p. 404), the tourism also can be defined as *“the system involving the discretionary travel and temporary stay of persons away from their usual place of residence for one or more nights, excepting tours made for the primary purpose of earning remuneration from points en route”*. For the purposes of this study, both perspectives will be considered, since the use of ICTs in the tourism industry is therefore driven by the development of supply and demand-side (Jaime, 2008).

Tourism is a dynamic activity that has increasingly evolved. Its high growth is a result of various events, such as the end of the World War II, increased accessibility in

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<sup>2</sup> Since not all restaurants are focused on tourist activities, it is considered here those who offer not only a meal, but also a differentiated experience.

transportation and the development of new technologies (OECD, 2009), such as the ICTs, that allowed the development of e-Tourism (Buhalis, 2002).

According to Buhalis (2002, p. xxiv), e-Tourism is *“the digitization of all the processes and value chains in the tourism, travel, hospitality and catering industries that enable organizations to maximize their efficiency and effectiveness”*. This is a paradigm shift in the tourism industry as a result of the widespread adoption of ICTs (Buhalis & Jun, 2011), that *“have also radically changed the efficiency and effectiveness of tourism organizations, the way that businesses are conducted in the marketplace and how consumers interact with organizations”* (BuhalisLeung& Law, 2011, p. 205). Through these various technologies, solutions and tools are being developed, allowing each day more a new approach more dynamic and global (Buhalis et al., 2011). In addition, it facilitates the creation of new distribution channels and consequently new business models (Pereira, 2013), enabling a set of competitive advantages, such as cost leadership (it reduces cost for both business process and customers, and ensure competitive pricing among companies); product differentiation (differ products and services of a company, reduce differentiation advantage of competitors and use information as a product itself); focus (enhance segmentation and targeting, encouraging the creation of niche markets); time (maximise interaction and reduce response times); innovation (create new products and add value to existing products); promote growth (geographical expansion); and quality (offer before, during and after service) (Page, 2009).

With the advent of Web 2.0, the Internet has become one of the most important sources of information for traveling in Europe (TNS Political & Social, 2014). From the creation and sharing of content, consumers have access to more organic information, developed by and for a community of consumers. More and more users use this tool to create and maintain relationships with people of different destinations, as well as planning, search, reserve, buy or change their tourist products (Buhalis & Jun, 2011; Chung & Buhalis, 2008). The scenario of the new technologies, gradually expanded in the world’s context, started to influence the development of tourist activities with an intense exchange of information, which made the role of ICTs even more important (Chung & Buhalis, 2008; Pereira, 2013).

*“The significance of crossing the new information threshold of ubiquitous communication access has brought the entire tourism industry to the new levels*

*of interactivity. Developments in search engines, and in the carrying capacity and speed of networks, have influenced the number of travellers around the world that use technologies for planning and experiencing their travels.” (Buhalis et al., 2011, p. 205)*

In this context, consumers are becoming increasingly powerful in terms of decisions. With a variety of tools available, the conception of e-Tourism has contributed to the democratization of tourism, with consumers progressively less dependent on third parties (such as travel agencies, tourist guides, travel's packages, among others). Thus, they are more and more able to determine the elements of its tourism product (such as period of residence, means of transport, and points of interest). For Buhalis & Jun (2011, p. 29), *“successful tourism organizations will increasingly need to rapidly identify consumer needs and to interact with prospective clients by using comprehensive, personalized and up-to-date communication media for the design of products which satisfy tourism demand”*.

This determines the relevance of identifying the needs and desires of consumers, in order to produce products, content and innovative communication channels that follow the expectations of the tourists involved in the context of e-Tourism.

## **2.2. Tourism experience cycle**

During the tourism activity, the tourist goes through a cycle of experiences that begins even before he leaves home. Although many tourists do not realize this, their tourism activities are already in progress from the moment they start planning the trip.

The tourism experience is, according to Tussyadiah & Zach (2011), a subjective performative action contextualized by the geographical characteristics of tourist destinations, which takes form in different dimensions of sensory, cognition/perception, social, and affective/emotion as a result of interactions between tourists and spaces. An interesting way to approach the tourism experience, consequently the consumers' tourist behaviour, is through models and frameworks, which were created in order to better describe the main phases of the experience (van Raaij & Francken, 1984). It is important to understand the concept and characteristics of each one of the phases of this cycle of experiences because people are concerned with their life experiences, and they like to improve it as much as possible (Pearce,

2005). Understanding them will enable a design with appropriated solutions that fits the expectations and needs of tourists.

Clawson & Knetsch (1974) presented a model where they identified five phases for the outdoor recreation experience, which have been used into the tourist experience area since then. They are: (1) anticipation (or planning, or pre-purchase); (2) a travel to the site, (3) an on-site experience (or participation); (4) a travel back home; and (5) a recollection stage (or extended recall). Moreover, van Raaij & Francken (1984) proposed another framework expanded upon the planning phase (Taylor, 2014), but also divided in five phases: (1) generic expenditure; (2) information acquisition, (3) joint decision-making; (4) vacation activities; and (5) subsequent satisfaction and complaints. On the other hand, Chung & Buhalis (2008) simplified the tourist experience under only three phases: (1) pre-travel; (2) during-travel; and (3) post-travel. In comparison with the model proposed by Clawson & Knetsch (1974), it is possible suggest that the pre-travel represents the “anticipation” phase, while the during-travel represents both “travel to the site”, “on-site experience” and “travel back home”. Hence, the post-travel is represented by the “recollection stage” phase. In comparison with the model proposed by van Raaij & Francken (1984), it is possible suggest that the pre-travel represents both “generic expenditure”, “information acquisition” and “joint decision-making” phases, while the during-travel represents the “vacation activities” and post-travel the “subsequent satisfaction and complaints” phase.

For this work is considered the model of Clawson & Knetsch (1974), because it highlights the phases where the tourist spends time in transportation, which is the focus of this work (see Figure 1):

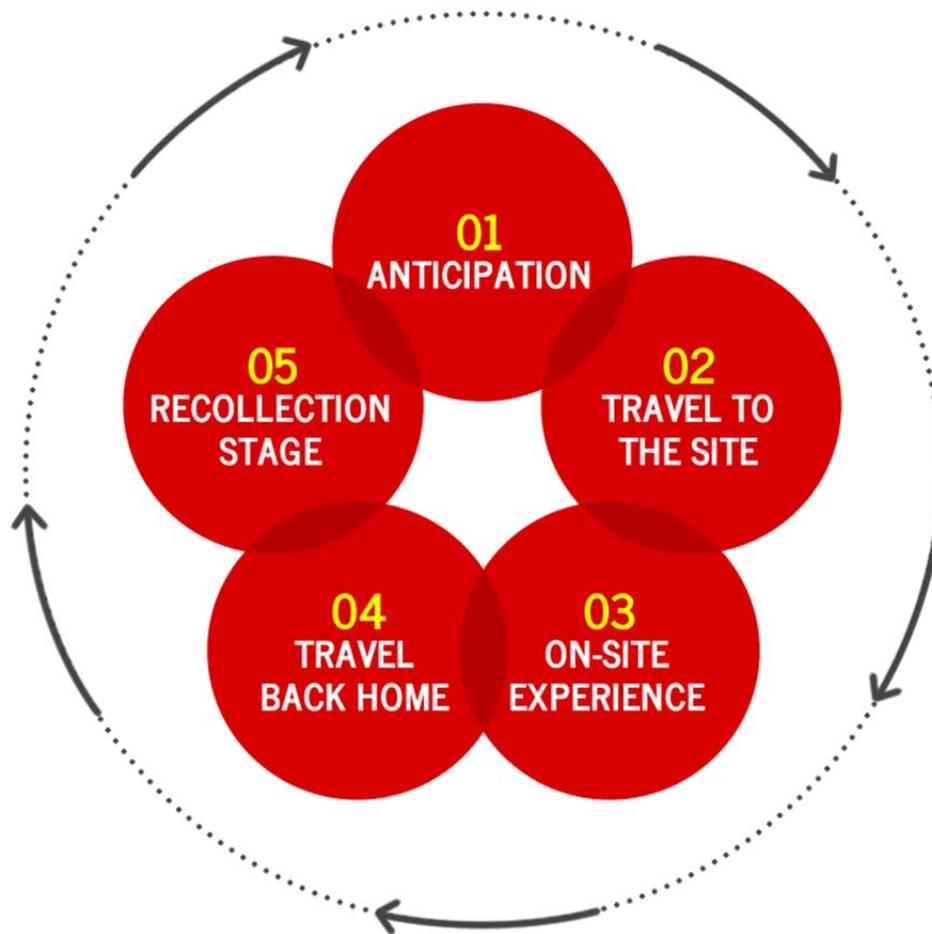


Figure 1: Five phases of the tourist experience based on the framework of Clawson & Knetsch (1974)

1. **Anticipation (or planning, or pre-purchase):** it is the first step of the trip, and it is based on the thoughts and plans about it, that can be very brief, or it may extend over weeks or months. This phase has a huge influence in the rest of the experience, since it involves key decisions, such as where to go, when to go, how to get there, how long to stay, what to take (including how much money will be necessary), among others. Usually, people tend to collect as much information as they can, because travel products are intangible and cannot be evaluated in advance (Chung & Buhalis, 2008). It is a delicate phase of the experience because here most of the expectations are created, which may lead to later disappointment and frustration if the optimism is excessive.
2. **Travel to the site:** refer to the displacement from the starting point (usually is home) to the destination (for example, Brussels). How to get from home (as

starting point) to the departure place (such as airport, train or bus stations, meeting point for a ride, among others); availability, location and costs of parking; estimated time spent; and ease of access are some of the factors to be considered on this first stage of the travel to the site. From the departure to the arrival place (that probably will have the same characteristics of the departure place) issues like comfort; entertainment; and safety are key factors measured on the basis of the expectations created during the anticipation's phase.

3. **On-site experience (or participation):** involves the whole experience in the destination, which includes the activities that people usually think of when decide to travel, such as visit museums, go sightseeing, eat in local or traditional restaurants, watch shows, go out, do shopping, among other possible activities in a given destination. Generally it is the basic reason when someone decides to travel, but it is only one part of the tourism cycle experience.
4. **Travel back home:** similar to travel to the site's phase, the stage of travelling back home involves the experience of the displacement from the trip's destination to home. Again, issues like how to get home, estimated time spent and ease of access are still relevant for the consumer. However, availability, location and costs of parking may be not, since it was solved in the travel to the site's phase. In addition, some facilities may be needed (such as laundry and food). Moreover, at this time the consumer has already experienced in part a similar situation, which could lead him to a new way of thinking.
5. **Recollection stage (or extended recall):** it is the last phase and represents the thoughts about the trip after getting home. Depending on how memorable the trip was, can be done for days, months, or even years. It is also on this phase that the satisfaction judgment is completed through the analysis of what was expected and what was encountered. However, this recollection is not perfect and tends to be selective, heightening the good memories and decreasing the bad ones. Furthermore, materials from the trip can help to recall those memories (such as maps, books, souvenirs, photos, videos, notes, among others), which will affect the anticipation phase of the next trip. Moreover, it is the phase where consumers spread their experiences and

feelings about the trip to friends and relatives, the “word of mouth”, which is a common and classic social pastime (Hjalager & Jensen, 2012). Recollection also often provides the starting point for anticipation of another tourist experience, by the same person or by others.

During all these phases, the Internet plays an important role in supporting the consumers' information search. It helps them to become more independent turning easier the access to a wide range of tools and services that helps the organization of trips. Consequently, the Internet has transformed the distribution function of tourism's industry into an electronic marketplace, where access to information and ubiquity is achieved, while interactivity between principals and consumers provides major opportunities (Buhalis et al., 2011).

However, the use of Internet varies between consumers. The frequency, objectives, motivations and time spent are some of the factors which make each consumer a different case. In order to help distinguish these different behaviours, Hjalager & Jensen (2012) suggested five profile of tourists regarding the use of Internet: *offliners* (marginal Internet users), *online planners* (mainly going online before the trip), *online explorers* (who access online sources continuously before and during the trip), *online keepsakers* (who collect information and share before and after the trip), and *online equilibrists* (active online in all travel phases). Each one of these five profiles will act differently and gather information in their own way.

Aiming to better illustrate the various activities that a consumer carries out along the five phases, imagine a person called Inês. She is considered an online equilibrist, according to the profiles suggested by Hjalager & Jensen (2012), which means that she is accessing the Internet in all travel phases.

**First phase:** Inês is a single woman managing her own business in Aveiro, Portugal. In the last 2 years she spent a lot of time developing her business, working and investing money, without any vacations. After realizing that she needs a rest, Inês started to consider making a trip. As an online equilibrist, she went home and started to look for interesting places to visit in Europe, on the Lonely Planet's website (online travel guide, but also editor of printed travel guides). Surfing on its website, she started to take notes about different countries interesting to go. Increasingly excited about the idea, Inês also look on TripAdvisor website for good suggestions of sightseeing, places to eat, go out and sleep in these countries (see Figure 2). In addition, she surfed through

several personal blogs from different people across the world sharing their experiences. After all, Inês had in mind various countries she found worth to visit, such as Belgium, France, Germany, Poland, and Turkey. However, it was not possible to visit all of them in just one trip.



Figure 2: Index of some of the content available on TripAdvisor website for Istanbul, Turkey

In order to find the best deals and choose one of the countries, she accessed some book flights search engines, such as Momondo, eDreams and Skyscanner. On these websites she realized that visit Belgium, France and Germany would be cheaper, since a low cost airline company offered daily flights from Francisco Sá Carneiro Airport (in Porto), the closest airport of Aveiro, directly to the airports in these countries. Moreover, she also took into account the price for transportation from the airports to the city centre, as she had read advices about this in some blogs. This task was stressful, since she had to go through each airport's official website to look for this information, that wasn't easily available in all websites nevertheless. However, her experience was sufficient to find all necessary information after some effort.

The next step was collecting information about prices of hotels and hostels. She searched for the best price-quality services on platforms of booking accommodation online, such as Booking.com, eBookers.com, Hotels.com and Hostelsbookers. The ratings and references left by other travellers were the mainly factor she considered.

With enough information about prices of planes, transfers and accommodation, Inês finally decided which place would be the best choice: Belgium. Once decided, she booked a round-trip flight through Momondo's website (see Figure 3), that redirected her to Ryanair's website in order to conclude the transaction. After, she took note about transfer schedules on the Brussels Airport's website, and booked a private room in a hostel in the centre of Brussels, through the Booking.com's website.

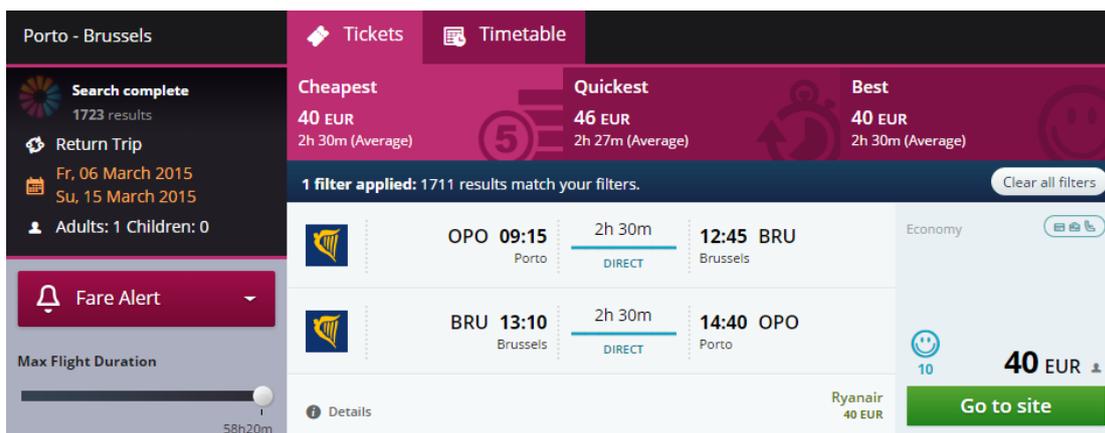


Figure 3: Flight details from Porto to Brussels on Momondo website.

Because she did not want to make a full planned trip, Inês left the nights of 7<sup>th</sup> to 12<sup>th</sup> of March free of booking, this way she could decide where to go spontaneously and book something on the way. As Inês had a lot of work to do, she did not plan anything else and waited anxiously the day of the trip.

**Second phase:** On the day of the trip, Inês woke up very early and planned everything from the way home to the airport. She checked once more her reservations and times of departure and arrival. As Inês didn't want to spend money parking neither taking the risk to get stuck in the traffic jam, she decides to take the train which connects Aveiro to Porto for a reasonable price, which made easier the decision of which public transportation use to go to the airport.

As she decided to go by public transportation, Inês walked to the train station and took the train to Porto. After arriving in Porto she went straight to the metro station and got on the metro direction airport. As she was in the right line of the metro, she could enjoy the 30-minutes ride to search for more information about Belgium in general, mainly which places could be interesting to visit after Brussels. Inês also post a message on her Twitter asking for tips.

Arriving to the airport, she immediately went to the Ryanair's desk in order to validate the ticket. At the line, looking at the screens, she realized that there are two different airports in Brussels (Charleroi and Zaventem). While her turn did not come, she started to navigate on Internet aiming to confirm that the transfer she looked a few days ago was the right one, from Zaventem. Luckily it was, and then she had not to look for more information. She validated her ticket and started to look for her gate. After finding it, without many problems since she knows a little bit the Francisco Sá Carneiro's airport, she went to the gate and waited for new instructions for her flight. Before the airline company's staff calls her flight, Inês posted a picture of the gate on her Instagram. She turned off her smartphone and got on the plane to flight to Brussels.

**Third phase:** Because of weather conditions, the airplane landed later than expected in Brussels Airport. Consequently, she lost the bus transfer and would need to wait over 40 minutes. Instead, Inês turned on her smartphone and looked for alternatives. After some searches on Google she found the *NMBS app*, that offers a complete view of all public transportation information in Belgium. She downloaded it and discovered that a train would be leaving the airport in 10 minutes, direction to the centre. Inês went to the train station situated in the airport and got on the train.

Arriving to the centre, Inês turned on her GPS function and used the Google Maps app to find her hostel as quickly as possible, since she didn't expect a rainy day and was not prepared. After leaving her stuffs there, got a printed map at the reception and made an itinerary based on the distance between places.

After visiting Brussels and other cities in Belgium, when it was time to go back home, Inês decided to use the same way of transportation to the airport, as she already knew how it would work. Arriving to the airport, she repeated the same process of when she was going from Portugal to Belgium and got on the airplane to flight back to her country.

**Fourth phase:** Arriving at Francisco Sá Carneiro's airport, Inês did the opposite way from Porto to Aveiro, but instead of leave the train and walk directly to home, she decided pass by a laundry and leave some clothes to wash. Meanwhile, she went to a supermarket and bought some food for the dinner. She took back her clothes and called a taxi through Uber app to take her home, since she was tired and did not want to walk all the way back.

**Fifth phase:** After reaching home, Inês went directly to the computer and started transferring all pictures and videos she took during the trip. While that, she went to the websites she used during the trip to give feedbacks to the community. On Momondo website, she ranked the experience of buying a ticket with 10 out of 10. On Booking.com's website, Inês ranked the services of all accommodations she stayed during the trip, also writing "pros and cons" comments. On TripAdvisor's website, wrote some recommendations about the last places she was and had forgotten to give feedback while there. Finally, Inês sent some messages on Facebook to closest friends inviting for a dinner in the next day. She wanted to show everyone the best moments of the trip and share some experiences. Also, she posted on different social networks, such as Facebook, Twitter and Instagram, small histories and lots of pictures from the different places she had been.

In sum, Inês as an online equilibrist used different Internet resources according to her needs and goals in each of the phases, as shown on Table 1.

The Inês' case is just an example, but proves how important the collection and sharing of information is important during all the phases of the tourist experience. Thus, in the next chapter the use of information in tourist transportation is discussed.

Table 1: Example of activities during the five phases of the tourist experience

Phase	Activity	Goal	Resource (Online)
Anticipation	Find interesting places to visit in Europe Suggestions of sightseeing, places to eat, go out and sleep Price of the transportation (flight, transfer from the airport to the centre) and accommodation (hotel or hostel).	Choose a destination Compare prices Book a flight Book a room	Travel guide Reviews from other users Flight search engines Accommodation search engines Airport website Airline website
Travel to the site	Check the reservations Go from home to the train station Go from the train station to the airport Do check-in Check the transfer in the destination Find her gate Post a picture on Instagram	Reassure the plan trip Arrive to the airport Share the moment with friends Take the flight	Airport website Photo sharing app
On-site experience	Look for transfer alternatives How to get to the hostel to leave the luggage Take a map	Take the next transfer to the city centre Go to the hostel Leave the luggage Explore the city	General search engine Public transportation information app GPS Navigation
Travel back home	Go from the airport to the train station Go from the train station to the laundry Go to the supermarket buy food Call a taxi to go home	Go back to hometown Do laundry Buy food Go back home	Call a taxi by app
Recollection stage	Go to the computer to transfer pictures Browse on travel websites to write reviews about the purchase process, accommodation and places Talk with friends Post pictures on social networks	Save the memories of the trip Return to the community some reviews Share the experience	Social network Photo sharing app Reviews to other users

## 2.3. Information in tourist transportation

Transportation is a very influential agent that contributed to the development of tourism connecting different places and destinations (Page, 2009). As tourism has its basis in the movement of people from the origin to the destination, it is safe to affirm that without transportation the travel for the purpose of tourism would not be possible (Page, 2009). Without transportation and its infrastructure, the ability of moving across the time and space would be much limited, consequently limiting the connection between people and places. Broadly speaking, without transportation a person would not be able to constantly get to know people from places geographically distant, since the access would be absent. Conversely, places could not be reached by other people, being its use restricted to the locals. On the other hand, the transportation and its current technology allow people to be anywhere in the World in less than 24 hours (Page, 2009). Therefore, *“transport relies on the viability and attractiveness of a destination, and a destination relies on transport for visitor access”* (Lohmann & Duval, 2011, p. 3). In other words, the attractiveness of a destination may be dependent of the availability and efficiency of transport to there (Page, 2009).

Three different modes of transport form the tourist transport framework: air; land and water (see Figure 4) (Lohmann & Duval, 2011; Page, 2009). Each of these modes has its own types of transport; infrastructure requirements; access to population; cost; and meaning of use (Page, 2009), as shown on the Table 2 regarding the use of trains, which are the focus of this study. The people’s choice regarding the type of transport to be used varies considerably according to their needs and motivations. For instance, a tourist that plans to go from Brussels to Amsterdam (approximately 200km) may prefer to go by land (e.g. train, bus or car) than by air (e.g. airplane), due the short distance and high bureaucracy required in airports. However, a tourist planning to go from Brussels to Berlin (approximately 760km) may prioritize the airplane, due the long distance and time needed for travel.

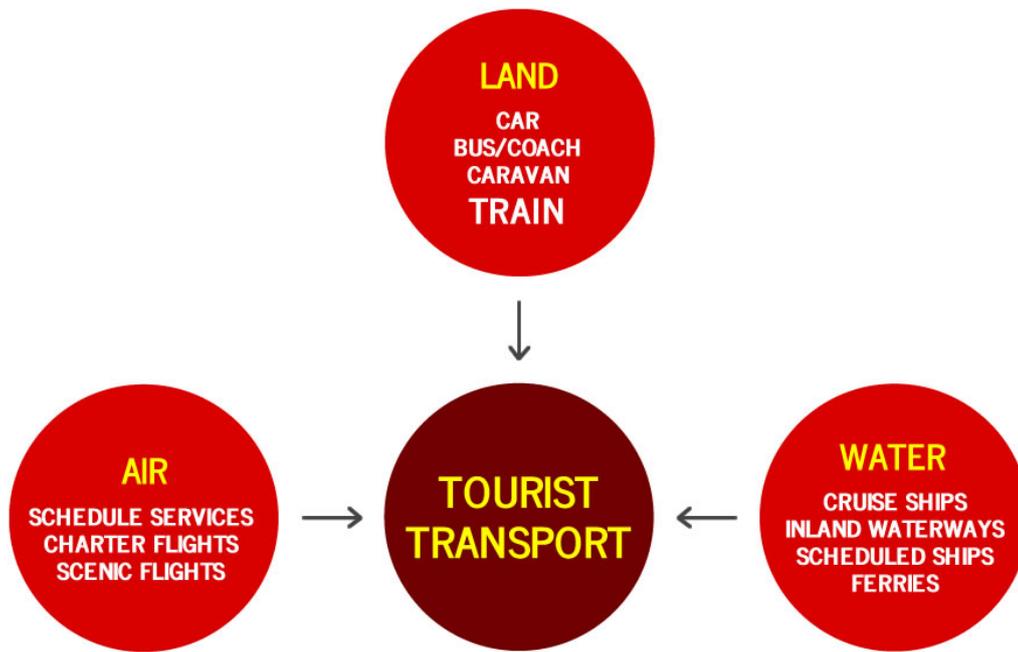


Figure 4: Modes of transport  
 Source (adapted): Page (2009, p. 14)

Table 2: Characteristics of the use of train in transport

Mode of transport	Land
Type of transport	Rail
Infrastructure requirements	Scheduled services, rail network, stations, interconnections and carriages
Access to population	General
Cost	Low to medium
Meaning of use	Travel to the destination and travel in the destination

Therefore, the mode of transport utilised affects the peoples' lives in three rather distinct ways (Clawson & Knetsch, 1974, p. 97):

1. **Time:** depending of the transportation utilised the time spent travelling varies, and thus the amount of time left to enjoy the destination;
2. **Costs:** the costs of a trip are largely correlated with distance, but costs of operation, food and any other expense taken during the ride are correlated

with time, including time spent in travel (e.g. travel long hours may imply extra costs with food);

- 3. Enjoyment:** utilise a transport as a matter of travel from origin to destination, or as a matter of value for the tourism experience plays a role, since part of the experience has physical and emotional aspects (e.g. heritage railways are used as tourism itself, while intercity rails are more often used as utility).

Thus, transport is also considered a key element of the tourism experience cycle since it involves directly two of the five phases of the whole tourist experience: travel to the site and travel back home.

One of the main issues that contributes to a positive tourism experience regarding transport is its efficiency (Moscardo & Pearce, 2004), being the balance between time and effort a factor that directly affects the passengers opinion (Grotenhuis, Wiegman & Rietveld, 2007). Regarding the public transportation (in which the use of trains are included), different motivations and needs lead to its use, such as car unavailability; drive-free benefit; avoid parking cost and traffic jams; and contribute with traffic reduction (Le-Klähn et al., 2014). However, different studies have shown that travelling by public transport is inconvenient and restricted (Le-Klähn et al., 2014); remains a rather dull experience (Foth & Schroeter, 2010); requires a significant cognitive and mental effort in planning (Grotenhuis et al., 2007); and lacks information (Beul-Leusmann et al., 2014; Le-Klähn et al., 2014). Typically, the static information is dense and just few of them are really relevant at the moment that a tourist is seeing them (e.g. timetables shows all depart schedules of the day), while dynamic information filters the content (e.g. displays showing the next trains to depart), but still lacks real-time and personal information (e.g. where are the train right now and what are the next stops) (Beul-Leusmann et al., 2014). Each of these studies has its own particularities, but all of them have shown the importance of providing efficient travel information in order to save efforts: physical (walking, waiting, carrying, escorting, and maintaining body postures); cognitive (gathering and processing information for route planning, navigation, progress monitoring and error correction); and affective (dealing with uncertainty, worries and stress) (Grotenhuis et al., 2007).

Travel information is crucial for most of decision-makings during the travel experience, and it should help passengers go through the travel experience without feeling

difficulties or inconveniences (Grotenhuis et al., 2007), avoiding unnecessary efforts. Thus, travel information becomes important not only for the travel to the site and travel back home's phases, but also for the anticipation phase (in which people look for information beforehand) and on-site experience phase (in which the time spent travelling relates to the time left for the destination, as discussed before).

Furthermore, the needs for information vary among different phases, type of passengers and goals, since there are different purposes to fill throughout the journey in each of them (Grotenhuis et al., 2007). It is known, for instance, that tourists require more information than commuters (Le-Klähn et al., 2014). Then, a tourist planning a trip from home may need a general overview of schedules of trains and prices of trains, while a commuter arriving in the station may just need to know at what time is the next train to certain destination. In addition, a tourist on the train may need real-time information about the stops his train is making and how long time is left until drop off the train, while a commuter leaving from home to work may be used to the route and just would like to know if there is any delay on the route. In general, the content of information required by passengers includes: information about time (e.g. when the train departs/arrives and how long it takes); space (e.g. from where to where it goes and what are the stops on the way); and system (e.g. how much it costs and what company operates the train) (Beul-Leusmann et al., 2014).

Aiming to support not only the travel information transmission, but also helps passengers to reach their destination without effort, many passenger information systems have been studied, developed and/or implemented in public transportations (Beul-Leusmann et al., 2014; CostaVasalouPittGalvão& e Cunha, 2013; Foth & Schroeter, 2010; Guo, 2008; Hansen & Bresin, 2012; Wirtz & Jakobs, 2013). Using new affordable technologies, these systems facilitate the access to information (such as schedule services, delays, routes, unexpected events, among others) according to the location of usage, and go one step further by providing solutions for the current needs, such as inform an alternative route due a last minute delay announced, for instance (Wirtz & Jakobs, 2013).

The use of mobile applications, combined with other sources of information from public transportation's infrastructures is one example of technology that can increase the tourist experience of its passengers (Foth & Schroeter, 2010). For being a popular

and portable technology, mobile applications can serve real-time and personal information for its users during all the phases of the tourism.

## 2.4. m-Tourism: Use of mobile devices in tourism

The use of mobile devices is leading a wide change of behaviours. Back in 1995, the penetration of mobile devices in the global population was about only 1% while in 2014 surpassed 70%, which means more than 5 billion of mobile phone users, as shown in the Figure 5 (Kleiner Perkins Caufield & Byers, 2015). From 1973, when the first handheld mobile phone was created (M. Cooper et al., 1975), to 2015, when the number of smartphone users are pointed to be higher than 2 billion (Ericsson, 2015; Kleiner Perkins Caufield & Byers, 2015), a lot have changed.

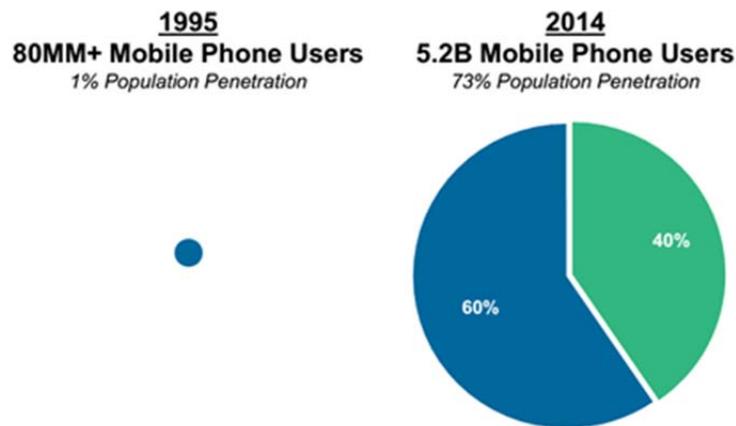


Figure 5: Smartphone's population penetration in a global scale  
Source: Kleiner Perkins Caufield & Byers (2015)

Smartphones are not only a voice communication tool, but fully functional computers running on modern operating systems (e.g. Android, iOS, Blackberry and Windows Phone) that facilitates the interaction through user-friendly interfaces (Dan Wang et al., 2014). The growth in the use of smartphones has been incredibly fast. According to the Ericsson Mobile Report released in February of 2015, it took 5 years to reach the first billion of smartphone subscriptions, and only 3 years to reach the second billion (Ericsson, 2015). Moreover, it is expected that by 2016 the number of smartphones will exceed the number of other basic phones for the first time in a global scale (see Figure 6), while in Western Europe it already happened in the end of 2012, as shown in the Figure 7 (Ericsson, 2014).

**Subscriptions – Split Per Device** **GLOBAL**  
in Mobile PC/Router/Tablet | Smartphone | Feature/Basic Phone

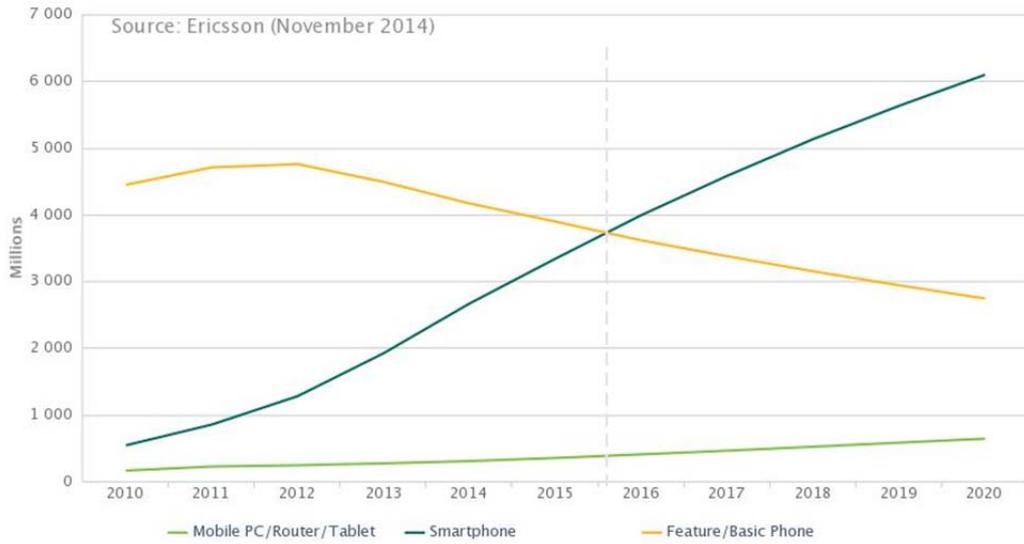


Figure 6: Subscriptions of mobile devices worldwide  
Source: Ericsson<sup>3</sup> (2014)

**Subscriptions – Split Per Device** **WESTERN EUROPE**  
in Mobile PC/Router/Tablet | Smartphone | Feature/Basic Phone

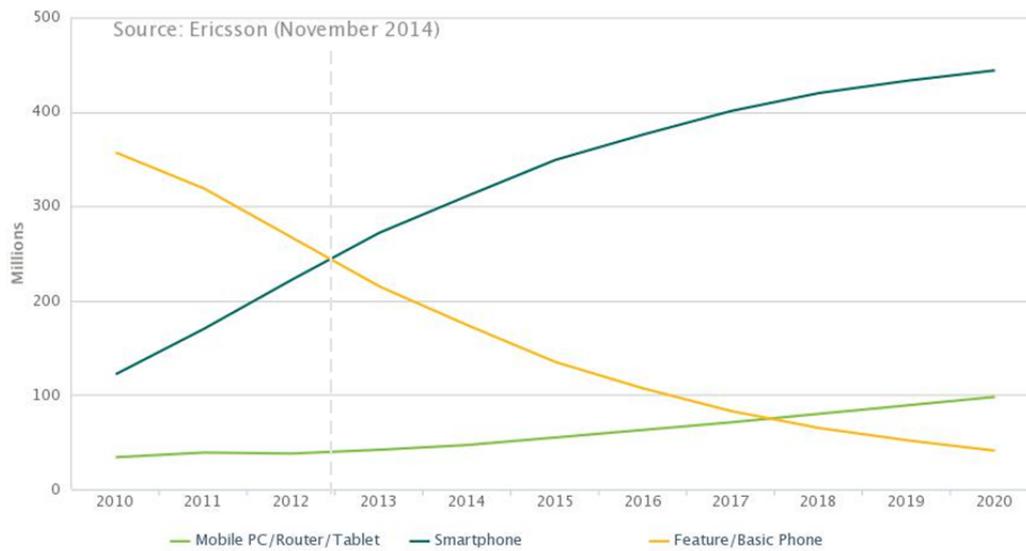


Figure 7: Subscriptions of mobile devices in Western Europe  
Source: Ericsson (2014)

<sup>3</sup> These charts are part of the research made by Ericsson (2014). However, they were generated through the website <http://www.ericsson.com/TET/trafficView/loadBasicEditor.ericsson>. Accessed in 12th of June of 2015.

The usefulness of smartphones is enhanced with the support of the Internet, usually through Wi-Fi or mobile broadband subscriptions (Soigné, 2014). The combination of these technologies allows people to break the space-time barriers, providing ease access for real-time information and solutions for human communication needs. Through the use of smartphones the information consumption started to happen not only during routine periods (e.g. breakfast and dinner), but throughout the whole day since smartphones are now carried by their owners almost 24 hours a day. A research published on the *Internet Trends 2015's* report by Kleiner Perkins Caufield & Biers<sup>4</sup> (see Figure 8) shows that 87% of the interviewees aged between 18 and 34 years in the U.S. confessed to have their smartphones close by them for the whole day. In the same research, 60% of the interviewees affirmed to believe that before 2020 everything will be done on mobile devices.

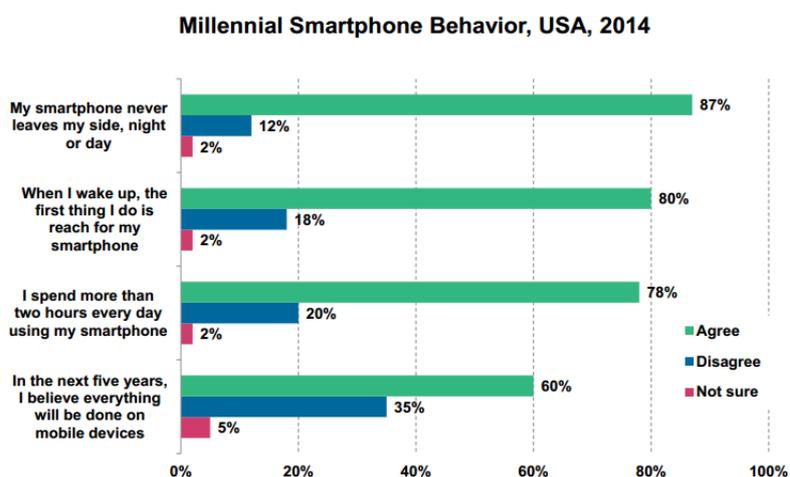


Figure 8: Smartphone behaviour among adults aged between 18 and 34 years in U.S.  
 Source: Kleiner Perkins Caufield & Byers (2015, p. 69)

Those users' beliefs are not random. The content consumption through mobile devices is increasing each year more. A research carried by comScore<sup>5</sup> (2015) shows

<sup>4</sup> Kleiner Perkins Caufield & Biers (KPCB) is a venture capital firm based in Silicon Valley, described by The Wall Street Journal as "one of the largest and most established" in the area. The company's portfolio includes ventures in tech companies such as Google, Twitter, Slack, Amazon, Nest, Uber, Coursera, Duolingo, among others.

<sup>5</sup> comScore is an internet technology company that analysis digital media providing marketing data and analytics to many of the world's largest enterprises, agencies, and publishers, collecting a portfolio of more than 1200 clients.

that from December 2010 to December 2014 there was a rise of 394% in the time spent with digital media by smartphone in the U.S. (see Figure 9). Moreover, by 2020 smartphones will represent 70% of the mobile traffic global, generating five times the total mobile traffic of today (Ericsson, 2015). In Europe, the growth of smartphone mobile traffic data will be up to six times, as shown in the Figure 10 (Ericsson, 2014).

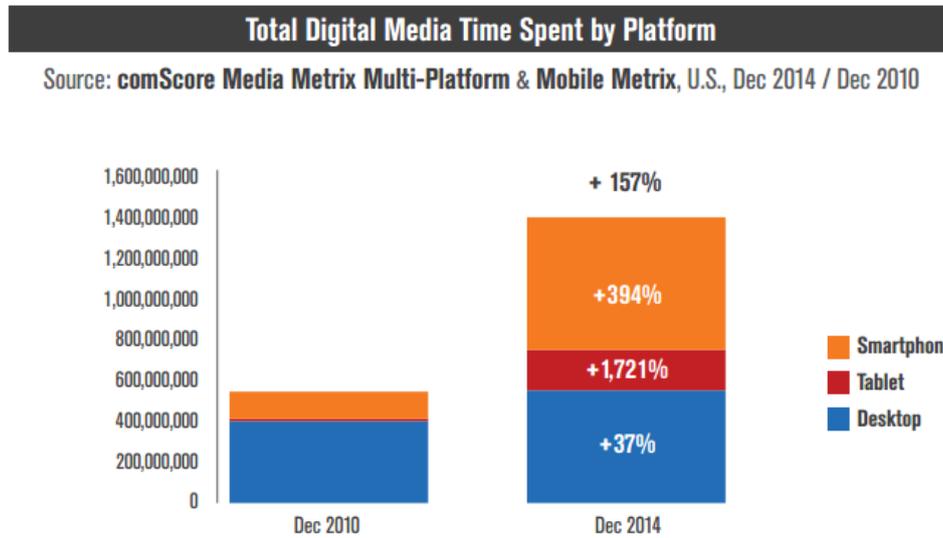


Figure 9: Total digital media time spent by platform in U.S. based on data from December of 2010 to December of 2014

Source: comScore (2015, p. 4)

#### Smartphone subscriptions and traffic, Europe

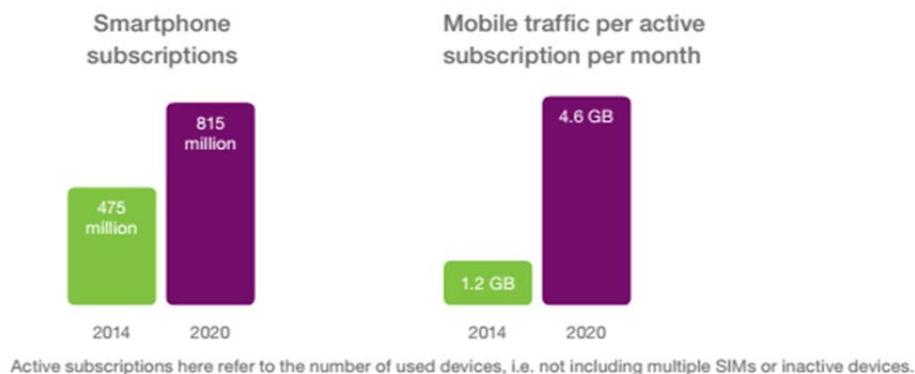


Figure 10: Forecast for smartphone subscriptions and traffic in Europe by 2020

Source: Ericsson (2014, p. 5)

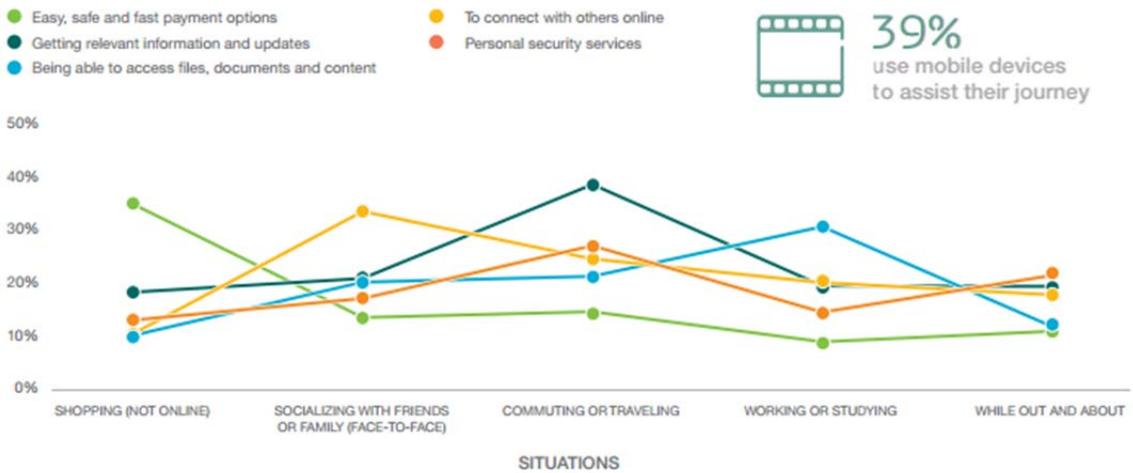
Its impact is so important that digital leader companies have been changing their strategies and design process due the popularity of mobile devices. For instance, Google recently introduced a new algorithm that prioritizes mobile-friendly websites.

In other words, websites that do not meet mobile search engine guidelines will be lower ranked in the results (Mangalindan, 2015). Apart from benefit current mobile device's users increasing their user experience, this attitude may lead changes in the near future about device usage preferences by forcing designers and developers to provide better mobile websites and applications, and consequently allowing users to accomplish a wider range of tasks on mobile devices. SiauLim& Shen (2001) elicit four unique characteristics of mobile communication:

1. **Ubiquitous:** the current location is not restrictive anymore. Companies can reach users regardless their physical constraints, as well as users can access information whenever they want from anywhere;
2. **Personalisation:** using mobile devices as personal tools, users can set-up preferences and define the type of content to be accessed. The information can be addressed in a much easier way according to the users' profile and needs;
3. **Flexibility:** due its portability, mobile devices can be used by users while they execute other activities. The ease access to mobile devices empower and encourages its use throughout the day without the need to dedicate full attention to it;
4. **Dissemination:** companies can disseminate specific information according to geographic regions and type of data plans, for instance. Moreover, users can potentially disseminate information through their network, producing and sharing content.

The potential of smartphones have been used for different activities and purposes, such as messaging and calling friends, listening music, playing games, being social, browsing on Internet and shopping. Moreover, smartphones have also been used and integrated in tourism contexts. A research carried by Ericsson Consumerlab (2015) shows that 39% of mobile device users in Europe use their devices for commuting or travelling purposes (see Figure 11), such as consulting schedules or getting directions.

Figure 7: Services accessed in different situations



Source: Ericsson ConsumerLab, The indoor influence Europe, 2015  
 Base: Any internet user accessing the respective service on a mobile phone or tablet, eight countries

Figure 11: Services accessed through smartphones in different situations

Source: Ericsson Consumerlab (2015, p. 7)

The use of mobile devices in tourist activities form the basis of mobile tourism, or simply m-Tourism, that is *"a particular aspect of e-Tourism that invests in the use of mobile devices in tourism"* (Pereira, 2013, p. 55) involved in the third generation of e-Tourism (see Figure 12).

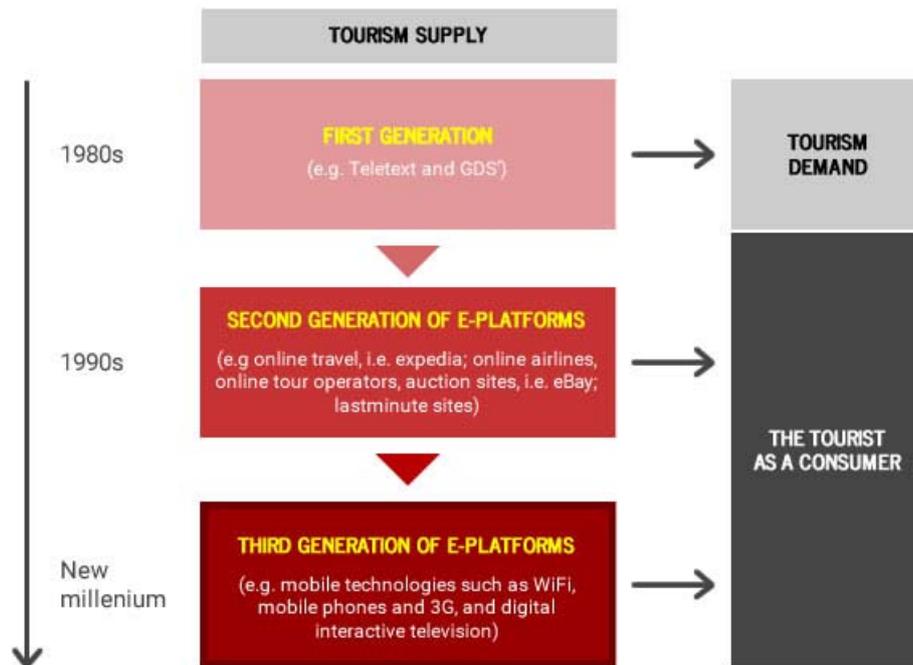


Figure 12: Evolution of three generations of e-Tourism

Source (adapted): Page (2009, p. 232)

Smartphones offers a wide range of possibilities supporting travellers (KaranasiosSellitto& Burgess, 2014), serving as an useful tool during the five phases of the tourism experience cycle by addressing a range of information needs that increases the interest of travellers in the travel process (D. WangPark& Fesenmaier, 2011). The Table 3 shows some examples of activities carried on smartphones (Brown & Chalmers, 2003; Buhalis et al., 2011; Karanasios et al., 2014; Soigné, 2014; D. Wang et al., 2011; Dan Wang et al., 2014):

Table 3: Use of smartphones during the tourism experience cycle

<b>Activities carried through the use of smartphones during the tourism experience cycle</b>		
<b>Planning a trip</b> Information about destinations, logistics involved; prices...		<b>Find &amp; Discovering places</b> Sightseeing; museums; tourist attractions; restaurants...
<b>Navigation</b> Getting directions, comparing routes, traffic jam status...		<b>General-tourism booking information</b> Lodging, restaurants, flights, public transport, car rentals...
<b>Interacting with friends</b> Messaging, calling, exchanging media...	<b>Management of travel itinerary</b> Schedule of transports; price comparison; estimating waiting time of rides...	<b>Weather</b> Real-time, forecast, waves, wind...
<b>Personal information for personal circumstances</b>	<b>Facilities</b> Gas/charging stations; Tourism Offices; Wi-Fi hotspots; sports facilities...	<b>Be informed about activities</b> Temporary events happening; night agenda; markets...

Thus, many tourism organizations have been delivering new systems, products and services for tourists willing to improve their tourist experience. On the other hand, users have been generally responding positively to this approach by using and accessing mobile solutions focusing on solve tourism experiences (Pereira, 2013). However, this use is based on four factors, pointed by KimPark& Morrison (2008): technology experience; travelling experience; usefulness perceived on the use of certain technology; and ease of use. As a consequence, the previous experience with ICTs plays an important role in m-Tourism (Soigné, 2014).

From 2013 to 2014, the percentage of users using mobile devices for travel researches increased in many activities, such as using navigation tools; booking

travel; looking for destinations; checking and changing itineraries; comparing travel prices; checking reviews; and doing flight check-ins (Adobe, 2014). The increase was even higher regarding the *mobile elite*, a term used by Adobe to classify “those consumers who reported spending more time and money on mobile devices compared to the general sample” (Adobe, 2014, p. 4), i.e. users with relevant previous knowledge in ICTs. Among them, the frequency (i.e. at least once per month) of tourism researches on mobile devices reached 87% using navigation tools; 81% for searching travel destinations; 7% for checking reviews; 71% for comparing travel prices; and 61% for checking itinerary (see Figure 13).

**Figure 10. Percentage of mobile respondents who frequently engage with travel activities**

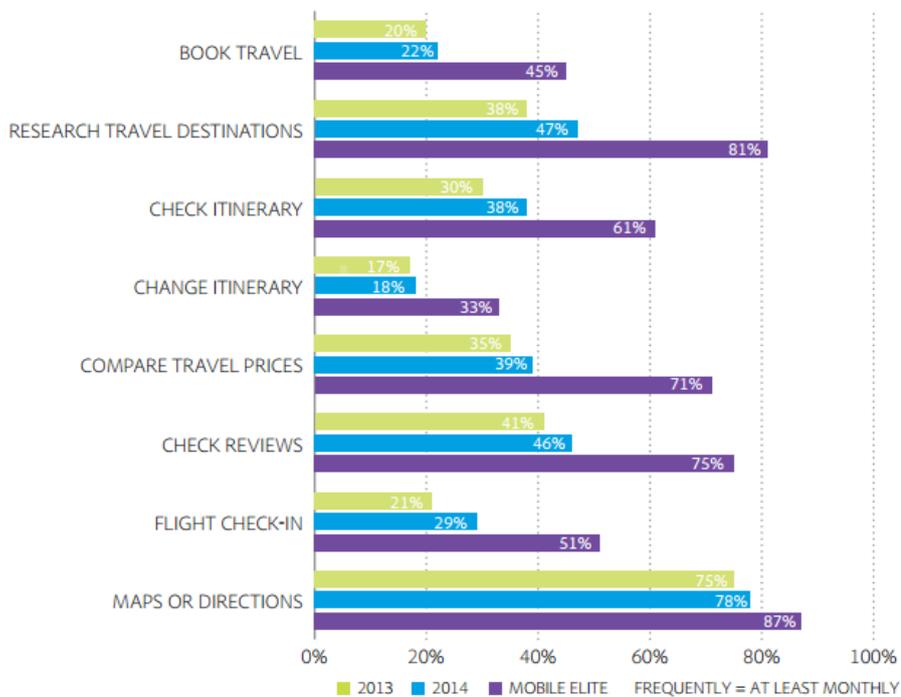


Figure 13: Percentage of mobile respondents who frequently engage with travel activities

Source: Adobe (2014, p. 8)

On the other hand, another research showed that 44% of the participants highlighted problems because their smartphones were not with them. Among these problems, the two highest scores could be directly related to the travel environment: 25% of the participants had problems finding a place or getting directions, and 13% trying to meet someone or let someone knows that they are late (Pew Research Center, 2015, p. 27).

Undoubtedly, the benefits of m-Tourism are relevant and worth to be studied and developed. The use of smartphones is leading changes in the way tourists do tourism, as well pointed by D. Wang et al. (2011, p. 22):

*“It is apparent that the increasing penetration of mobile devices in people’s daily life will have a profound influence on how people think and behave. Therefore it is posited that these changes in daily life will lead to significant changes in travel behaviour as the unique features of the travel context (i.e. out of home, search for new experiences, and unpredictability) may encourage travellers to rely even more on mobile devices.”* (D. Wang et al., 2011, p. 22)

Mobile tourism has technological potential and interested target audiences to change the way people faces problems on the daily life. However, the challenge needs to go beyond the screen, allowing the connecting of mobile devices with physical resources in order to properly support the information and communication among different contexts of use (Pereira, 2013). Only then, engaging users in their exact moment of need with the right services and information, product teams will be able to solve real problems concisely.

In order to better understand what is already available on the context of smartphones and tourism, the next chapter discuss the state-of-the-art of mobile applications focused on solve public transportation problems, mainly regarding trains.

## **2.5. Current state-of-the-art**

As explained in the previous chapter, smartphones are fully functional computers running on modern operating systems. Among the operating systems available nowadays, two of them are widespread and own the biggest share of the market regarding smartphones: Android and iOS. According to IDC (2015), in the first quarter of 2015 these two operating systems together corresponded to more than 95% of the worldwide market share.

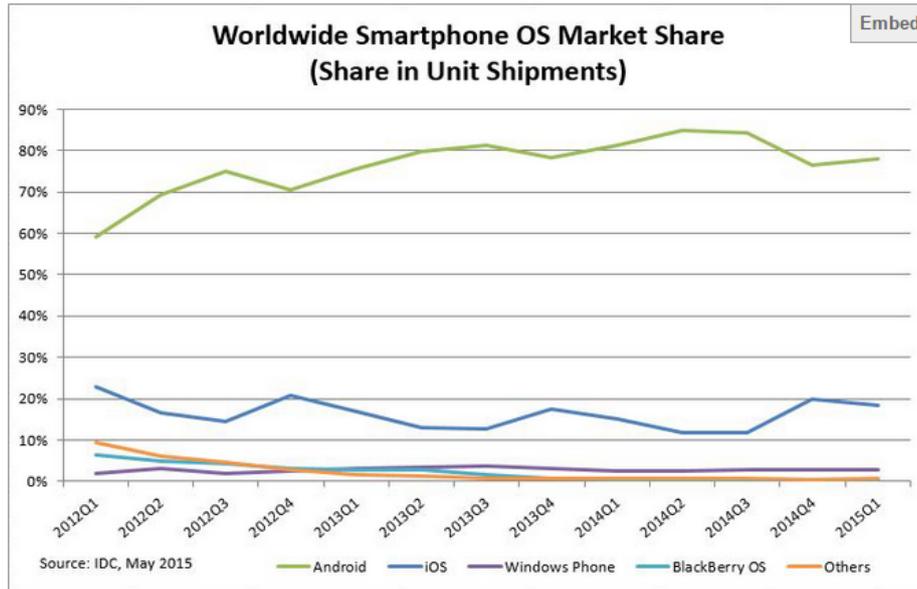


Figure 14: Worldwide Smartphone Operating System Market Share  
Source: (IDC, 2015)

One of the many reasons that may lead users to make use of one or other operating system can be the offer of compatible applications. These mobile applications are offered on official application stores, which are virtual stores where users can download mobile applications for their devices. On these virtual stores users can browse through a wide range of applications carefully categorized among many categories. On the *App Store* (official app store for iOS users) there are 23 categories, while on the *Google Play* (official app store for Android users) there are 28. On both app stores is possible to find categories created specific for tourism related apps, such as “Travel & Local” on *Google Play* and “Travel” on the *App Store*. Moreover, categories such as “Transport” on *Google Play* and “Navigation” on *App Store* also include many applications that support the movement from a place to another. These facts prove that m-Tourism has already reached an important space into the mobile environment in general.

Thus, in order to get to know what are the current features and functionalities available on mobile applications regarding the use of public transportation, a current state-of-the-art was carried based on some of the relevant applications available for free on *Google Play*, i.e. the online store for Android based apps. The fact of not limit the study for applications regarding the use of trains is because other public transportation systems may provide important features and insights regarding the act of move between places, either as tourist or not. Moreover, the choice of make this analysis based only on free Android applications has three main reasons:

- **Dominance of the market:** Android users are the extremely majority of smartphone users in the World, representing more than 75% of the worldwide market (IDC, 2015);
- **Popularity:** it is much more common to find free apps on the top of ranks based on popularity than paid ones;
- **Financial constraints:** pay for applications could become unaffordable for the researcher due his low budget during the development of this work.

Thus, besides being free and available on *Google Play*, the criteria of which applications should be analysed were also based on the number of installs, being 10.000 the minimum expected; the rank provided by customers' reviews, being 3.0 out of 5.0 the minimum expected (see Figure 15); the last version have been published at least in 2015; and language used in the app, which should be available in English, Spanish or Portuguese due the language barrier of the researcher.

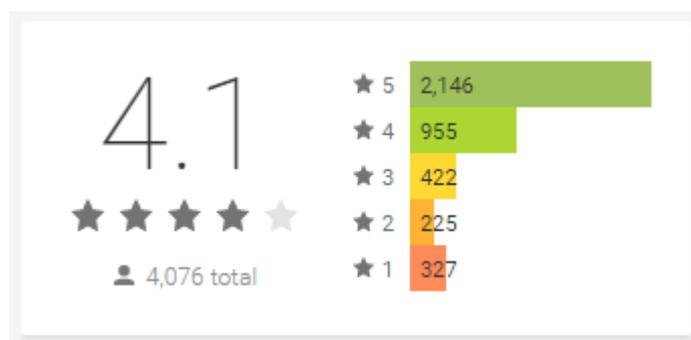


Figure 15: Example of review about certain mobile application on Google Play

Furthermore, beyond these 3 criteria, the application also needed to seem relevant for the purpose of the analysis, which aimed to:

- Identify the main features that supports the tourist experience regarding the use of public transportation;
- Understand what are the common patterns among different applications and how they deal with the information provision during the tourist experience;
- Elicit specific features that may be particularly relevant for tourists;
- Perceive the importance given by different types of content in the applications.

Thus, in order to achieve that, 10 applications were carefully analysed in total. The period of collection, analysis and comparisons finished in June of 2015, being this information relevant since some of the applications here presented may have suffered strong changes or even be discontinued by its authors for whatever reasons during the development of this study and the day of publication of this work. The Table 4 shows some general information about the apps analysed:

Table 4: General information about the apps

App	Category	Installs	Rate (reviews)	Android required	Size (MB)
<b>BeTrains</b>	Transport	100,000 - 500,000	4.3 (1,061)	Varies with device	
<b>Capitaine Train</b>	Transport	100,000 - 500,000	4.5 (3,164)	4.0 and up	5.4
<b>DB Navigator</b>	Transport	10,000,000 - 50,000,000	4.1 (69,850)	2.3 and up	8.9
<b>Italo Treno</b>	Transport	100,000 - 500,000	4.1 (3,240)	4.0 and up	4.1
<b>National Rail Enquiries</b>	Transport	1,000,000 - 5,000,000	3.7 (14,339)	2.2 and up	5.7
<b>NS International</b>	Transport	50,000 - 100,000	3.2 (422)	2.2 and up	2.4
<b>NS Reisplanner Xtra</b>	Travel and Local	1,000,000 - 5,000,000	4.0 (11,201)	Varies with device	
<b>Opal Travel</b>	Travel and Local	10,000 - 50,000	3.5 (110)	2.3.3 and up	3.3
<b>SBB Mobile</b>	Transport	1,000,000 - 5,000,000	4.1 (13,441)	2.1 and up	7.2
<b>SNCB/NMBS</b>	Transport	500,000 - 1,000,000	3.8 (5,122)	2.2 and up	6.7

From the 10 apps analysed, 8 of them are officialised by public transportation companies, such as *DB Navigator* (Germany); *Italo Treno* (Italy); *National Rail Enquiries* (United Kingdom); *NS International* and *NS Reisplanner Xtra* (Netherlands); *Opal Travel* (Australia); *SBB Mobile* (Switzerland) and *SNCB/NMBS* (Belgium). The others 2, *Capitaine Train* and *BeTrains*, are popular unofficial applications that provide information about France, Belgium and nearby countries. The language supported in each of these apps is shown in the Table 5:

Table 5: Language support of the apps

App	German	Dutch	English	French	Italian
<b>BeTrains</b>	-	-	✓*	-	-
<b>Capitaine Train</b>	-	-	✓	-	-
<b>DB Navigator</b>	✓	-	✓	-	-
<b>Italo Treno</b>	-	-	✓	-	✓
<b>National Rail Enquiries</b>	-	-	✓	-	-
<b>NS International</b>	-	✓	✓	-	-
<b>NS Reisplanner Xtra</b>	✓*	✓	✓*	✓*	-
<b>Opal Travel</b>	-	-	✓	-	-
<b>SBB Mobile</b>	✓	-	✓	✓	✓
<b>SNCB/NMBS</b>	✓	✓	✓	✓	-
* During the analysis part of the content was seen without proper translation					

Through the analysis, five main characteristics stand out for being available in most of the applications, even though presented in different ways (see Table 6), such as:

- **Route planner:** this feature allows users to plan their trip from a point A to B offering available transportation's schedule based on the time of departure and/or arrival indicated. In case of need of more than one transport, the app automatically suggests connections. Depending of the app the route planner can include only one or more means of transportation.

- **Multimodal:** The apps which offers more than one mean of transportation can be considered multimodal. The means of transportation mostly observed were: by foot; bus; train (international, intercity, regional) and metro. Usually the user has the option of choose which means of transportation use.
- **Real-time information:** provision of information in real-time, in which users can keep updated about the movement of the train and any changes in the train system, for instance.
- **Traffic issues:** provision of information regarding any disturbances in the rail network, which can be caused by maintenance on purpose or unexpected events, for instance.
- **Buy tickets in-app:** possibility of buy tickets through the app, using digital payment methods such as credit card or PayPal. In some of the apps it is mandatory create a register, while in others it is suggested but optional.

Table 6: Comparison of general characteristics regarding a public transportation trip

App	Route planner	Multimodal	Real-time information	Traffic issues	Buy tickets in-app
BeTrains	✓	-	✓	✓	-
Capitaine Train	✓	-	-	-	✓
DB Navigator	✓	✓	✓	✓	✓
Italo Treno	✓	-	✓	✓	✓
National Rail Enquiries	✓	✓	✓	✓	✓
NS International	✓	✓	✓	✓	-
NS Reisplanner Xtra	✓	✓	✓	✓	-
Opal Travel	✓	✓	-	✓	-
SBB Mobile	✓	✓	✓	✓	✓
SNCB/NMBS	✓	✓	✓	✓	✓*

\* It is necessary a Belgian cellphone number

Apart from these main features, many others stand out during the analysis, even though they may be not common among the other apps, such as:

- **High-level personalisation for the route plan:** many of the apps observed allow users to plan their routes from a point A to B passing through a point C. However, none of them provides such high-level of personalisation as the *National Rail Enquiries* app (see Figure 16). This app allows users to not only choose via which station they want to go through, but also which station they want to avoid. Moreover, they can choose where to make a connection, and where to not make.

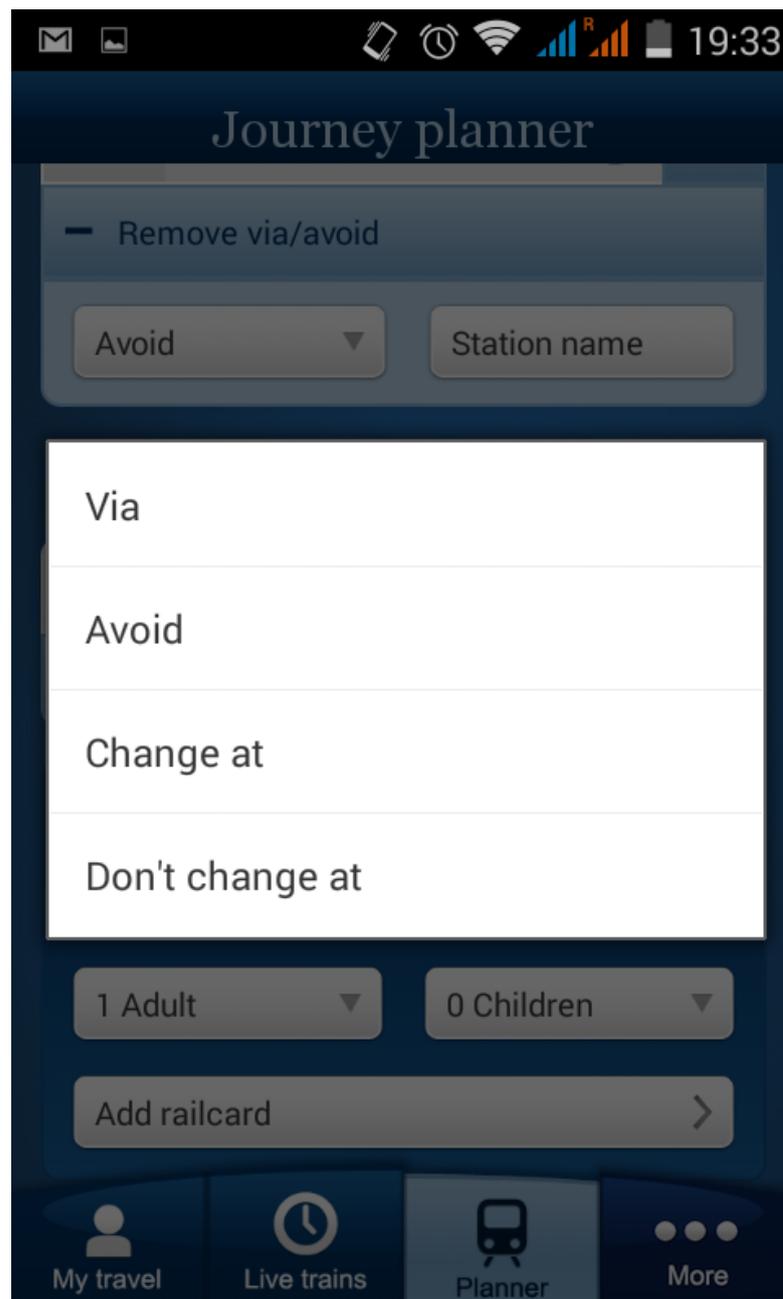


Figure 16: Route planner with high-level of personalisation

- Punctuality and train occupancy:** the *NS Reisplanner Xtra* app offers two extra features aiming to avoid discomfort and problems for passengers. The first feature is about the popularity of certain route. The app shows through the use of men's icons (highlighted with a rectangle in the Figure 17) how crowd the route is used to be. Although it is not real-time information, this average statistic can help passengers who prioritize comfort to identify potential less crowded trains. Moreover, it helps the company to identify the busiest routes and based on this data provide better solutions. The Figure 18 shows how users can provide feedback about the occupancy of certain train. The second feature is about the history of delays of certain train. Besides of the destination chosen, the app shows an icon of clock with a percentage number (highlighted with a circumference in the Figure 17). This number means the punctuality of the train in certain route in the near past (see Figure 19). By doing this the app can help passengers to choose routes with less delays possible, or even aware them about constant delays in certain route.

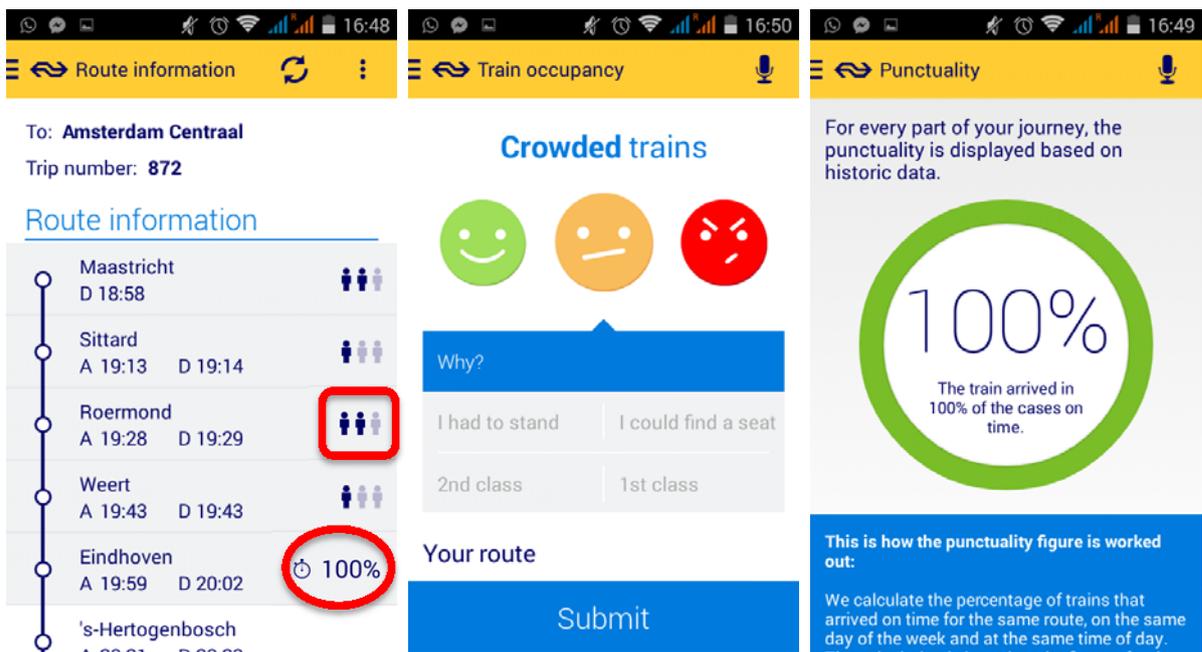


Figure 17: Icons representatives of train occupancy and punctuality, respectively

Figure 18: Feedback section about train occupancy in certain route

Figure 19: Detailed information about punctuality of certain train route

- **Clarity displaying the price:** the *Opal Travel* app presents very clearly the price for each of the public transports involved in the route planning. Thus, facilitates the decision-making for those who prioritize price when choosing a transport, as shown in the Figure 20 and Figure 21.

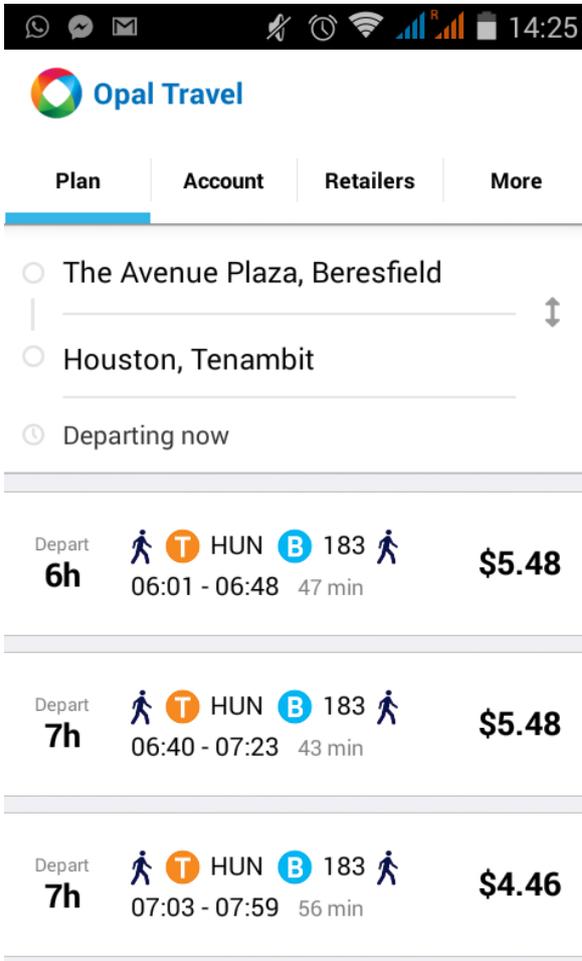


Figure 20: General overview of possible transports to be taken, with the price displayed in the right

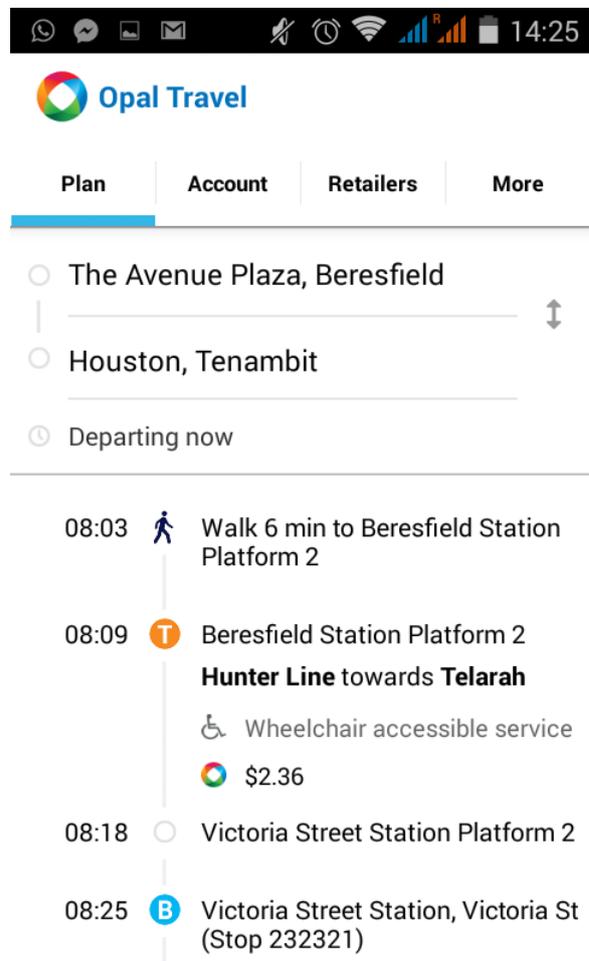


Figure 21: Price of a single transport of the route planning displayed separated

- Clarity about ticket types:** In addition to the feature previously described, it is also important to make clear the conditions and differences between types of tickets. The Figure 22 shows the *NS Reisplanner Xtra* app displaying six different prices of tickets without a clear description of either the user is able to buy it or not. On the other hand, the *Italo Treno* app (Figure 23 and Figure 24) summarizes what are the main differences between the tickets available. This information may be crucial to avoid make users pay more than necessary for a ticket.



Figure 22: List of tickets and prices without a clear description of conditions

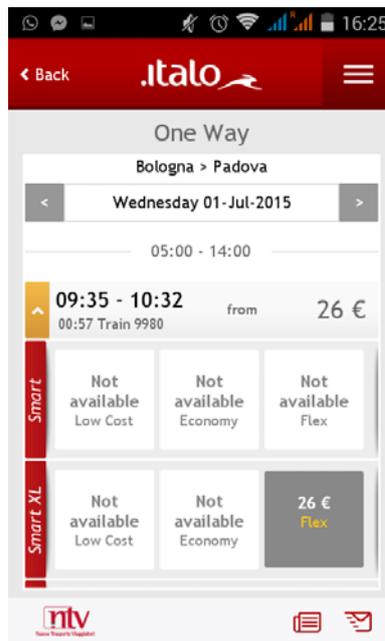


Figure 23: Grid with different tickets, even though not available

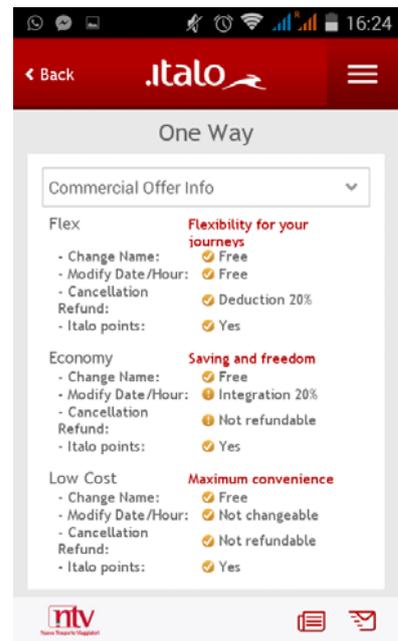


Figure 24: Summary of the main differences between types of tickets

- Possibility of filter results according to accessibility issues:** many of the apps observed allow users to filter the means of transport while planning the route. However, the *SBB Mobile* app goes further and provides the possibility of search routes that supports disable people through the set-up of accessibility definitions (see Figure 25). This feature may be crucial for disable people who need to rely on public transportation, providing a better experience through the indication of stations and trains that supports their needs.

- **Services in the surroundings:** many of the apps observed provides textual information about the station's facilities, as well as connection to third-party apps such as Google Maps. However, the *NS Reisplanner Xtra* presents it in a much more friendly way, pinning the services available in the surroundings on the map, allowing users to select which type of these services they want to see Figure 26.

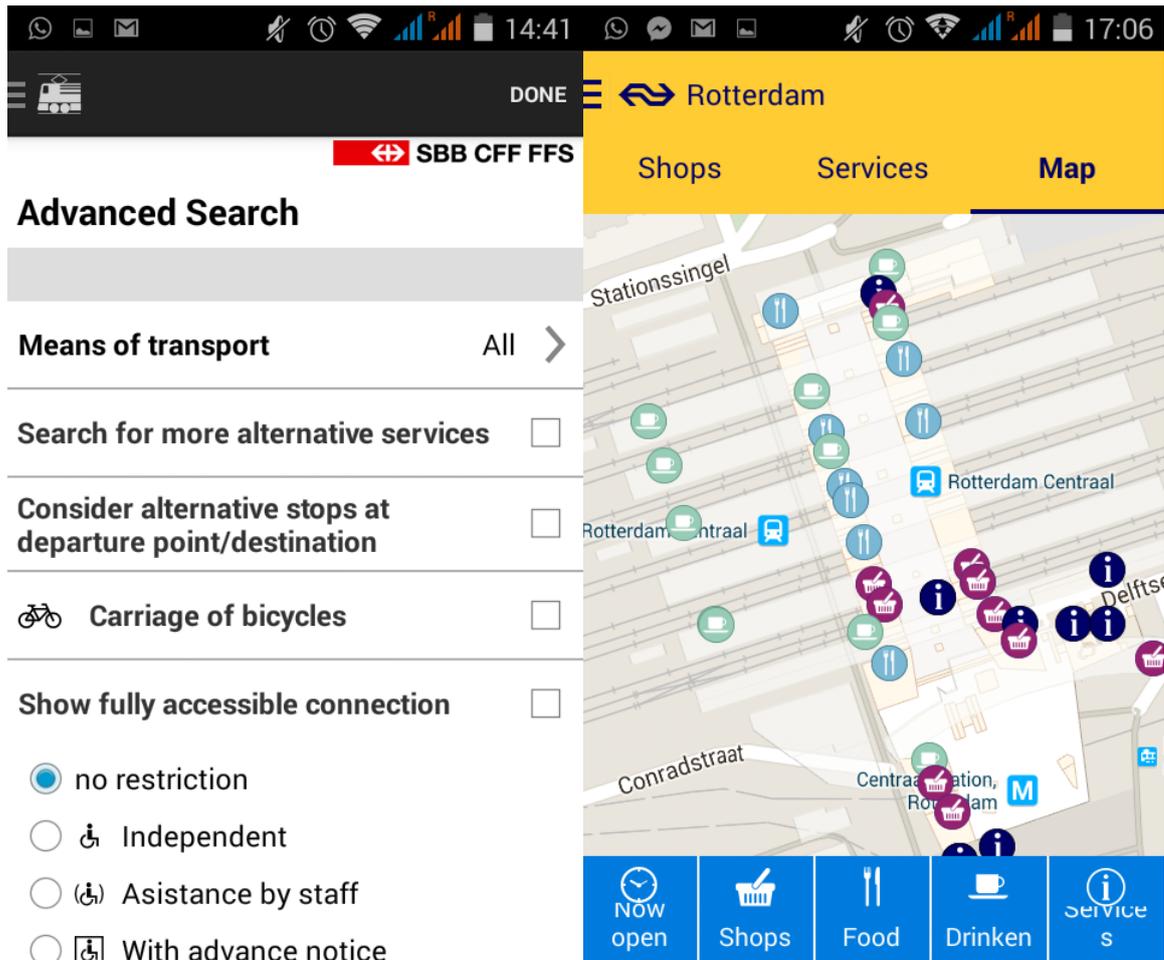


Figure 25: Advanced search of SBB Mobile app, in which is possible see the set-up for disable people on the bottom of the image

Figure 26: Map showing different services available in the surroundings of the station

- **Visual support:** sometimes the information about the route plan can be very complex (see Figure 27), or tourists may not be aware about the geography that surrounds their destination. Thus, provide visual support may help them to understand where they are going to pass through. The *NS International* app provides this overview through the use of dynamic maps, pinning the stations based on geolocation, as shown in the Figure 28.

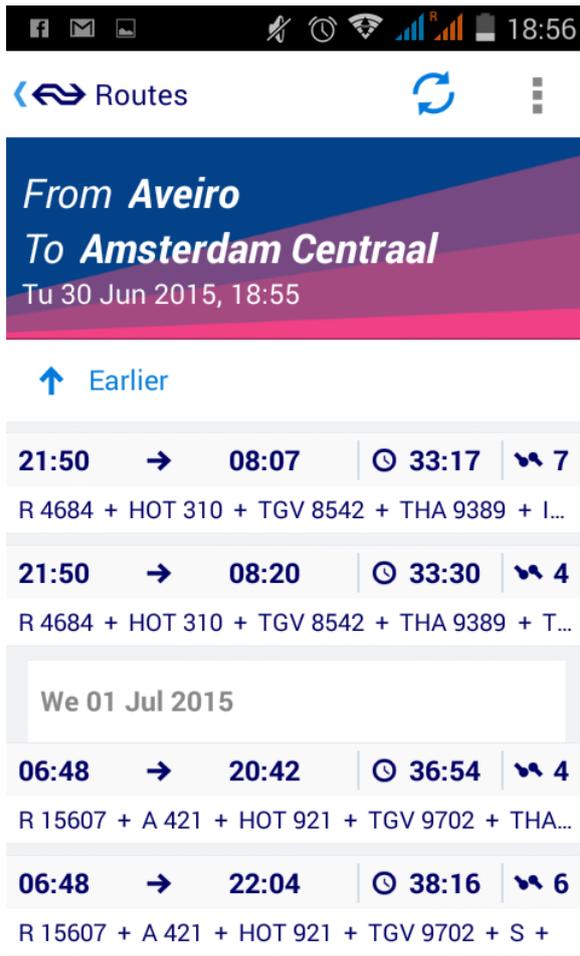


Figure 27: Complex list of route plans suggested for the route from Aveiro (Portugal) to Amsterdam (Netherlands) by train

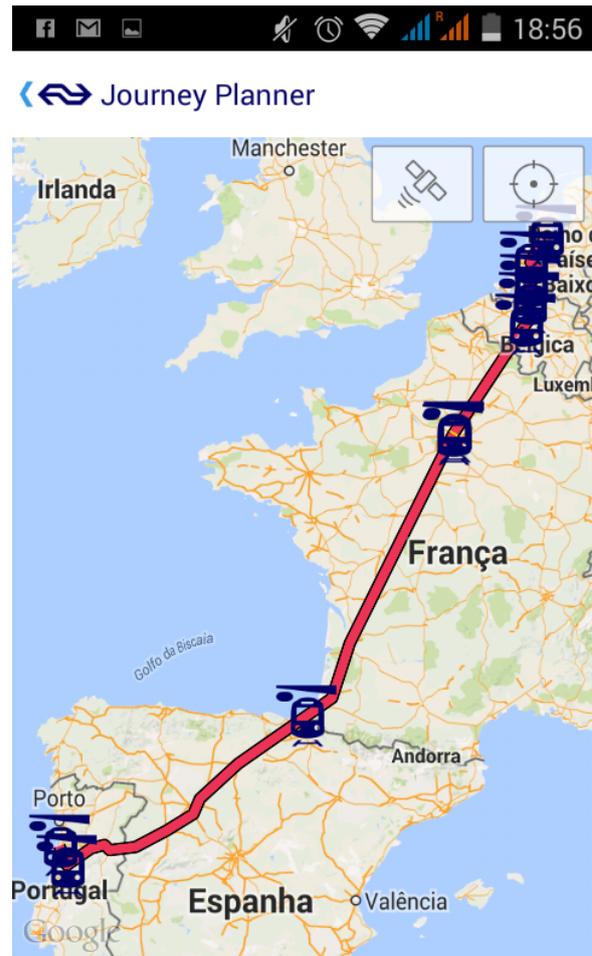


Figure 28: Dynamic image support for the route from Aveiro (Portugal) to Amsterdam (Netherlands) by train

In order to better understand the concepts and guidelines of human-centred design methodology, in the next chapter the main characteristics of methodologies which includes the user in the centre of the product development are discussed.



## CHAPTER 3

# HUMAN-CENTRED DESIGN

In this chapter, the concepts and characteristics of human-centred design, user experience design and user researches are discussed. It is divided in 3 sections. The first one, “3.1. What is human-centred design”, discuss what are the main problems of designed systems in the ICTs’ era, introducing concepts of product development methodologies that includes the user in the centre of the process. A short discussion about the terminologies is made. The second section, “3.2. Designing the user experience”, discuss the main characteristics to value during the design of the user experience, which primes to solve user’s problems delivering great experiences while using certain product or service. Lastly, the third section, “3.3. User research: Understanding users through qualitative research”, presents an introduction of qualitative researches used in early stages of product development, discussing in-depth the ones used in this study. It is presented in three subsections: “3.3.1. Direct observations”; “3.3.2. Focus group interviews”; and “3.3.3. Board game workshops as generative tool”. Moreover, two design tools based on qualitative data gathered are presented and discussed approaching its concepts and guidelines of use: “3.3.4. Personas & Scenarios”.

### 3.1. What is human-centred design

The popularity of the Internet has increasingly changed the way we communicate. With the Web 2.0 phenomenon, the user has become an essential part in the construction of the resources, not only a final consumer. Various services and products began to be created with a concept that is based on the collective.

However, the advancement of technologies and services related to this recent ICT expansion has been shown to be superior than the human ability to understand this new industrial phase. As a result, users have experienced a variety of complex resources, which are difficult to use. By failing in the design, such resources are becoming exclusive since not all users are able to understand and use them. Norman (2002) illustrates the complexity of relations between man and machine through three different aspects of mental models, as shown in Figure 29.

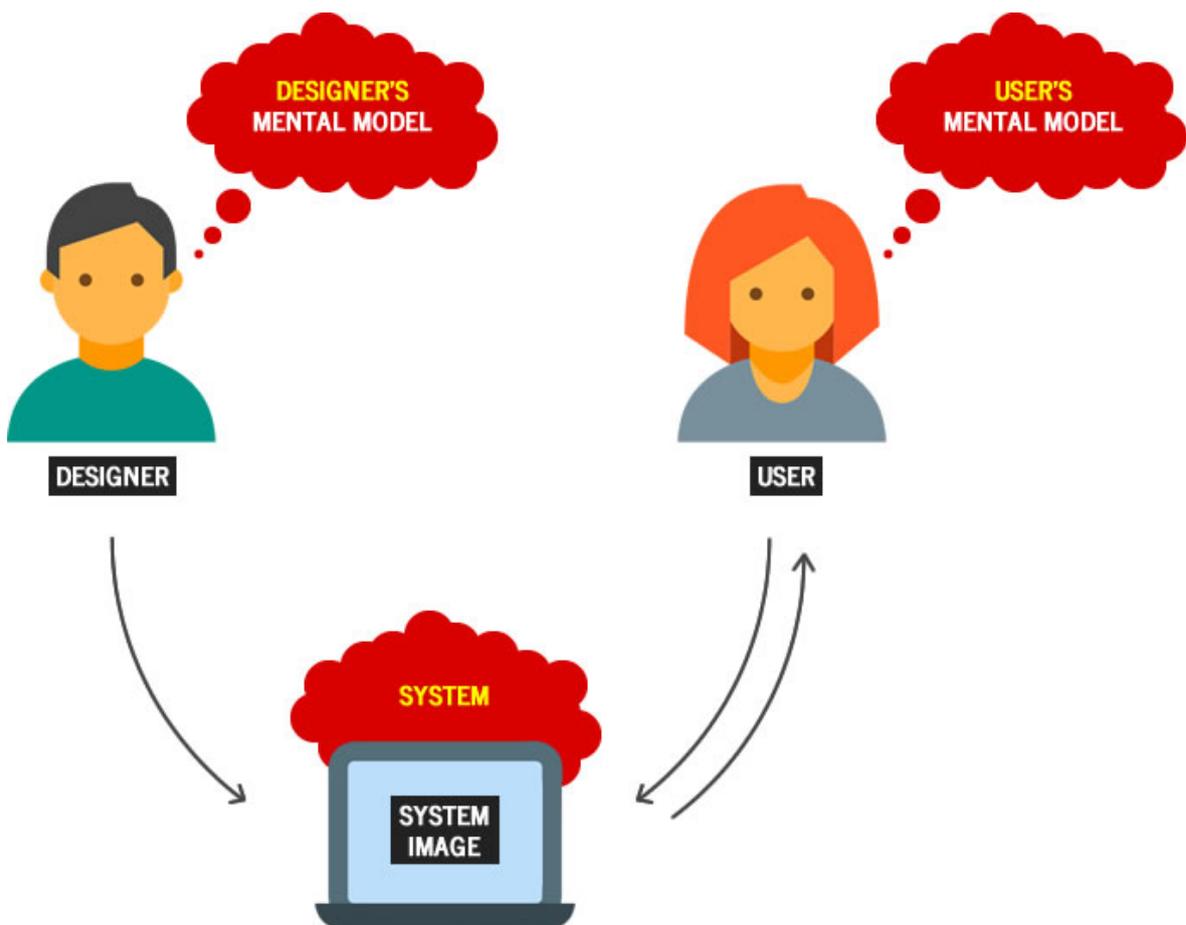


Figure 29: Three aspects of mental models  
Source (adapted): Norman (2002, p. 16)

The mental models may be understood as the:

- **Designer's mental model:** represents what the designer has in mind;
- **User's mental model:** corresponds to what the user develops to explain the operations of the system;
- **System image:** is the way the system seems, operates and responds, in addition to the manuals and instructions.

The communication between these three models mediated by the interaction between the designer, the user and the system is what determines the quality of the experience. It is necessary the designer be able to represent his thoughts in an explicit way in the system, through a model *"that is functional, learnable, and usable"* (Norman, 2002, p. 190). Thus, the user will be able to understand it and then interact properly with the system, which will promote the translation of intentions into actions, as well as the system's feedback into interpretations. Therefore, *"it is the designer's task to make sure that they form the correct interpretations, the correct mental models: the system image plays the key role"* (Norman, 2002, p. 198).

Thus, it stands out the need to build resources that are easy to understand and use.

*Developers, instead of planning and executing with a mind towards satisfying the needs of the people who purchase and use their products, end up creating technologically focused solutions that are difficult to use and control. (A. Cooper et al., 2007, p. 3)*

To avoid a product or service to become worthless since *"if people cannot or do not use a resource, it may well not exist"* (J. Nielsen & Loranger, 2007, p. 16), different methodologies have been created and evolved<sup>6</sup>, aiming to provide best performance and quality for the outputs in terms of capabilities to perform their roles.

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<sup>6</sup> Because it is a relatively new area and it still seeks to answer many questions, many of these methodologies are still in constant development. It is also common to find similar techniques being referred through different terminologies.

In relation to the conceptualization, design and development of mobile applications, several methodologies focused on bringing the user to the centre of the process have gained visibility in the academy and the labour market, such as *user-centred design* (Garrett, 2002; Lowdermilk, 2013; Moule, 2012; Norman, 2002), *participatory design* (Schuler & Namioka, 1993) and *human-centred design* (ISO, 2010). Yet there is a very slight differentiation between concepts and boundaries of these methodologies. Sanders & Stappers (2012), for example, suggests a 2-dimension framework driven by two opposite mind-sets (expert vs. participatory) and two opposite approaches (design vs. research), as shown in the Figure 30.

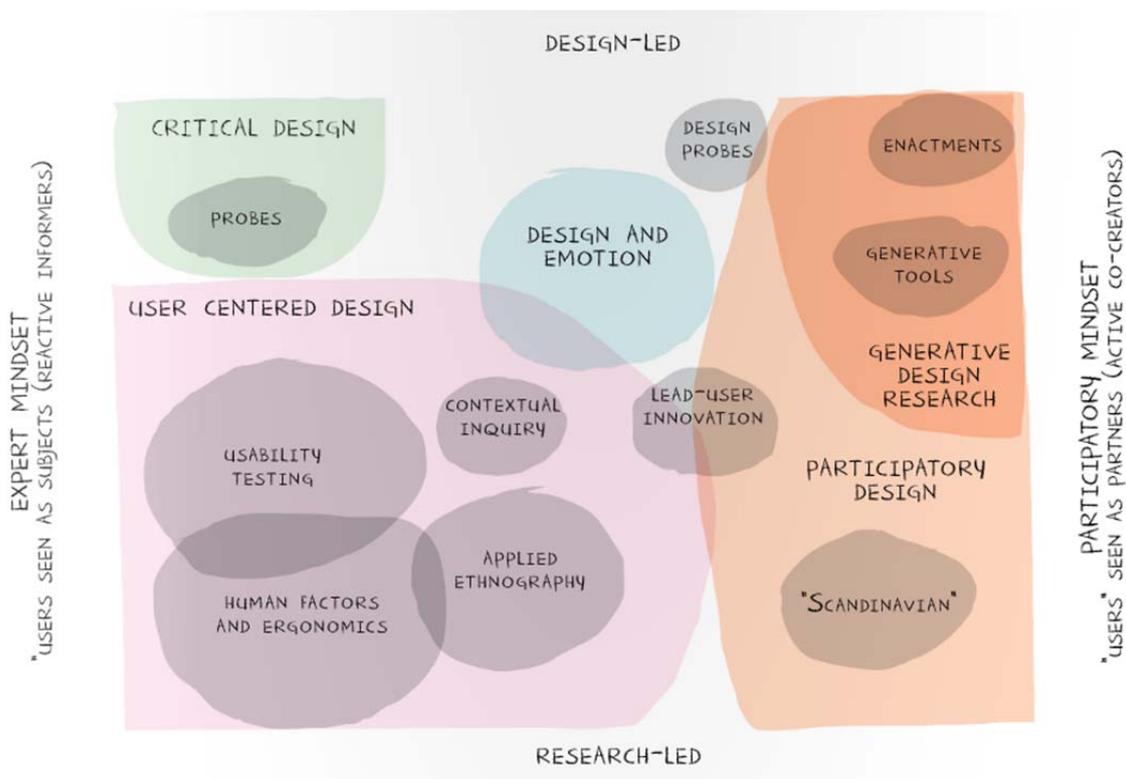


Figure 30: Landscape of design research approaches and methods.

Source: Sanders & Stappers (2012, p. 19)

However, the author of this study concluded that to reach the goals of this research, the proper methodology does not fit in this classification. Instead, a more collaborative classification is suggested, in which the user-centred design, participatory design, and consequently generative design research areas are covered by different methodologies along the research, as represented in the Figure 31.

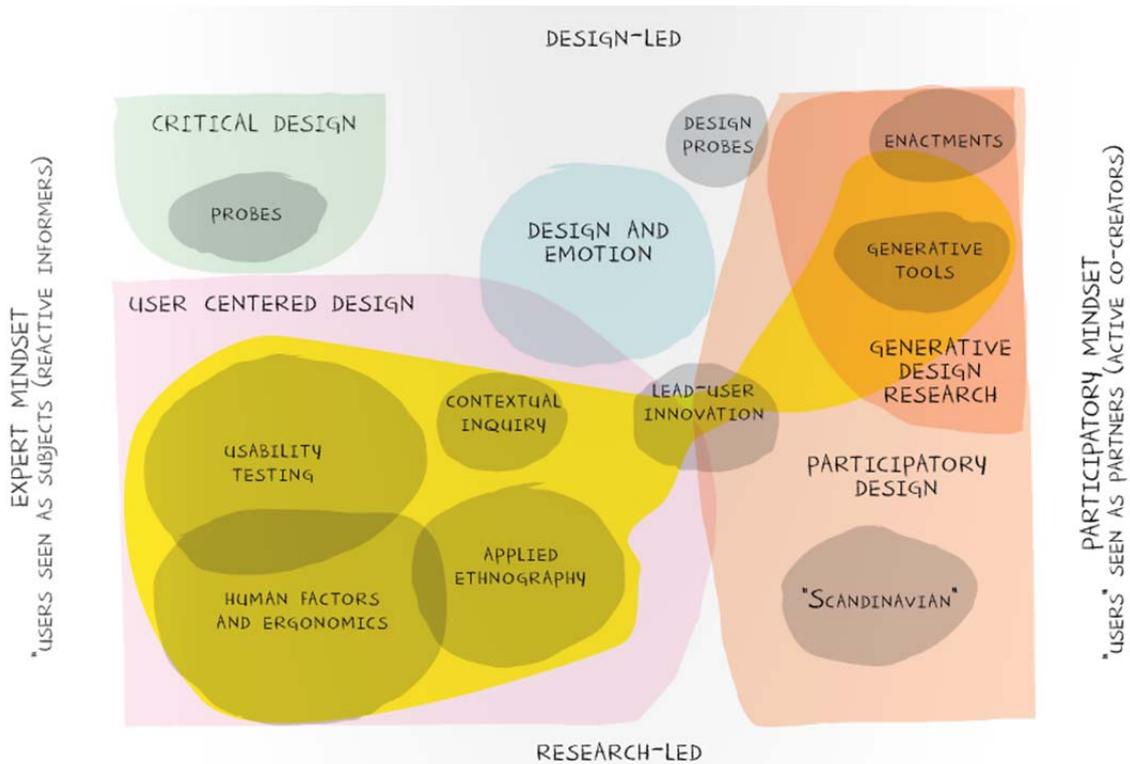


Figure 31: Landscape of design research approaches and methods, being the yellow background representative of the areas approached in this study.  
 Source (adapted): Sanders & Stappers (2012, p. 19).

Nevertheless, in order to maintain some consistency and facilitate the reading of the results of this research, the terminology human-centred design is used regarding the definition given by the *International Organization for Standardization* (ISO). Responsible for the creation of global standards, the ISO (2010) has developed a catalogue of standards within a specific section called *Part 210: Human-centred design for interactive systems*<sup>7</sup>, in which human-centred design is defined as an “*approach to systems design and development that aims to make interactive systems more usable by focusing on the use of the system and applying human factors/ergonomics and usability knowledge and techniques*”. The choice of this term, human-centred design, serves to emphasize that the process also includes the participation of stakeholders, which is an individual or organization having a right; share; claim; or interest in a system or in its possession of characteristics that meet

<sup>7</sup> Available on <https://www.iso.org/obp/ui/#iso:std:iso:9241:-210:ed-1:v1:en>. Accessed on 20<sup>th</sup> of June of 2015.

their needs and expectations (ISO, 2010). However, caveat that more important than the terminology used is make sure about the user's actual existence in the middle of the process. For this, there are six main points to be consider in a methodology that praises for the human in the centre of the design process (ISO, 2010):

- **The project is based on an explicit understanding of users, tasks and environments:** each project has its own context, and this should be considered. Understand who is the target audience, what problems they solve, and in what kind of situation they are faced is fundamental for a good user experience. For example, searching for train's timetables through a mobile application is faced differently and produce different particular experiences to a 25 years-old man who uses his smartphone all day and wants to take a trip this weekend, than to an adult who is 33 years-old who uses his smartphone only in working hours and is late for an appointment because his flight was delayed. Buxton (2007, p. 32) emphasis that *"as much as people, technology need to be thought of as social beings, and in a social context"*.
- **Users are involved throughout the design and development:** the users must be present during all phases of the project, not just in some of them. More than "final evaluators", users are builders of the resource.
- **The project is conducted and refined by user-centred evaluations:** through different forms of evaluation, like usability tests for example, the user has a fundamental role as a source of feedback during the process. Feedback must be constant, because it is based on that that developers will analyse the quality of communication between the three mental models: designer, user and system image; and consequently identify the weaknesses of the project.
- **The process is iterative:** human-centred development is a loop. During the whole process steps are repeated in order to validate and understand the positive and negative points of the work carried out so far.
- **The project considers the entire user experience:** in addition to ensure the correct use of a particular resource, is necessary also consider other aspects of the experience: physical, cognitive, emotional sensual, and aesthetic (Forlizzi & Battarbee, 2004). It is necessary to pay attention in creating

remarkable experiences rather than simply avoid usability problems (Hassenzahl & Tractinsky, 2006).

- **The project team includes skills and multidisciplinary perspectives:** a team formed only by people in the same field of study are unlikely to be able to offer a solution with different views. Thus, a good human-centred team requires human resources from different fields of study. It will enable a more open discussion that may be less addicted to some perceptions of the theme, once the background knowledge of the team's members is diversified. Several areas have contributed to the maturing of the area, such as design, management, philosophy, anthropology, cognitive science, social sciences, among others (Forlizzi & Battarbee, 2004; Rubin & Chisnell, 2008).

In sum, human-centred design is, at its most simplistic definition, a methodology that can be implemented to ensure that those computer products offers a good user experience (Lowdermilk, 2013). For Väänänen-Vainio-MattilaRoto& Hassenzahl (2008), it is more than that: it is the key to provide good user experience design. For this reason, the next section discusses the concepts and guidelines regarding the design of user experiences.

## **3.2. Designing the user experience**

One of the most effective ways to apply concepts of human-centred design is through the design of the user experience (UX). Recently the ICT market has seen a big rise in job offers for professionals in this area, being ranked as the 14<sup>th</sup> best job in America in 2015, based on growth, salaries and satisfying work (CNNMoney & PayScale, 2015). This is a reflection of a labour market that realised the importance of providing meaningful experiences to your consumers (Garrett, 2002). Users began to show desire for products that, in addition to fulfilling their goals, are pleasant to use, support values and combine with their fundamental human needs (Väänänen-Vainio-Mattila et al., 2008), such as *“autonomy, competency, stimulation (self-oriented), relatedness, and popularity (others-oriented)”* (Hassenzahl, 2008, p. 12).

Any product developed for human's use has a user, and every time this product is used some experience is produced. However, not every experience is positive. The study and application of UX is focused on understanding and solve challenges that are

related to interactions between man and machine that occur through user interfaces (see Figure 32), in order to provide a positive user experience. The concepts that involve the UX are dynamic, context-dependent and subjective. They include a range of variables, such as emotional, affective, of experience, hedonics and aesthetics (Hassenzahl & Tractinsky, 2006; LawRotoHassenzahlVermeeren& Kort, 2009).

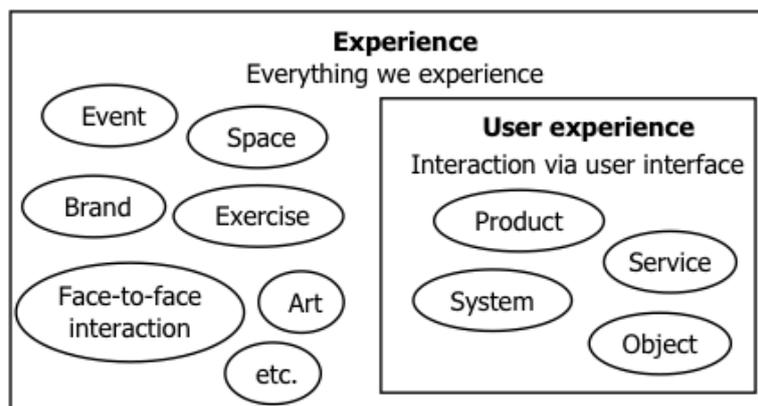


Figure 32: UX in relation to other experiences  
Source: Law et al. (2009, p. 727)

According to ISO (2010), UX is *“a person's perceptions and responses that result from the use or anticipated use of a product, system or service”*. These perceptions and responses differ according to each individual, making the experience something extremely personal. It is generated through the interpretation of three factors (Hassenzahl & Tractinsky, 2006), as shown in the Figure 33:

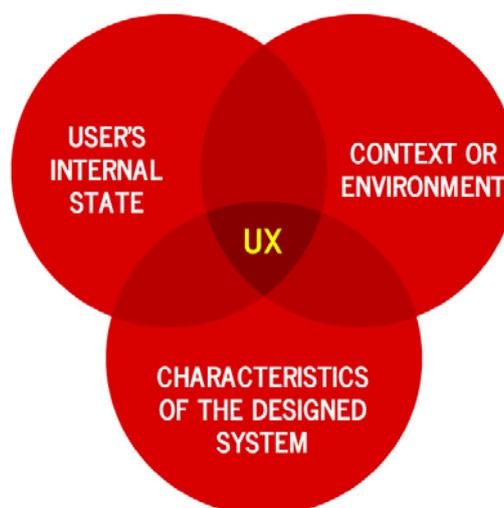


Figure 33: Three factors of the user experience proposed by Hassenzahl & Tractinsky (2006)

- **User's internal state:** common feelings of the human being, such as predisposition; expectations; needs; motivations and mood;
- **Context or environment:** is the location or motivations that influence the interaction. For example, can occur in the workplace or personal; for professional reasons or simple curiosity; alone or accompanied; among others;
- **Characteristics of the designed system:** represent the characteristics of a resource, such as its complexity; proposal; usability and functionality.

Therefore, the user experience is not a singular event, and its development is a complex task which depends on the understanding of these three factors working together. Independently of what kind of problem is planned to solve with a particular feature, some characteristics are essential for delivering a good UX, as shown in Figure 34:

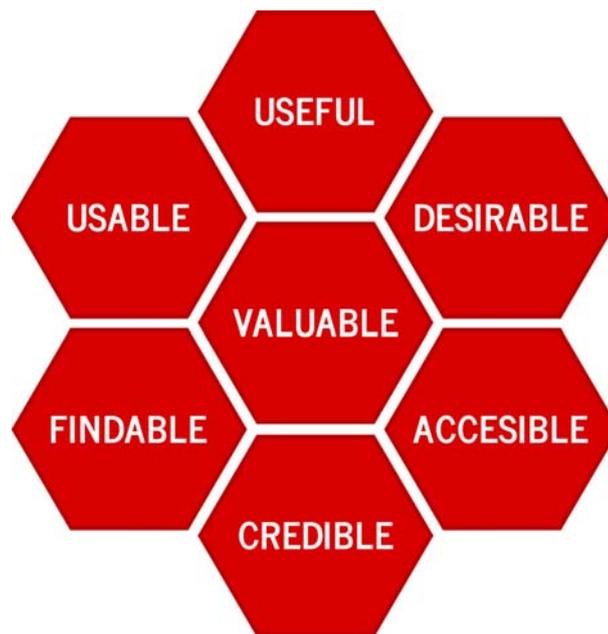


Figure 34: Characteristics that influence the user experience  
Source (adapted): Morville (2004)

The essential characteristics for delivering a good UX are (Morville, 2004; Moule, 2012):

- **Useful:** the content fills a real need, provides alternatives to possible errors, is unique;

- **Usable:** it's easy to use, eliminating cognitive efforts through an intuitive interface, consistent with appropriate structures and nomenclatures;
- **Desirable:** has a visual appealing that reflects emotions. This can be achieved through good typography, location of elements, use of hypermedia, colours and contrast, etc.;
- **Findable:** navigation is easy, it is possible to access other sections whenever necessary;
- **Accessible:** is inclusive from a technological (compatible with different systems, for example) and human viewpoint (allows people with disabilities to use efficiently);
- **Credible:** build trust making users believe in its features, is suitable for its purpose, presents the information expected by the user.

The combination of these characteristics, in correspondence with the other two factors, will define the value of a product or service. The value must be judged by the satisfaction that a resource has improved to its users and investors (A. Cooper et al., 2007). Therefore, in addition to meeting the needs of users, the product must also meet the stakeholders' expectations. In the case of this work, the appropriate value would be a correct and accurate transmission of information to tourists during the whole tourist experience using trains in Belgium, reducing complaints and need for personal assistance, improving customer satisfaction, and possibly increasing profits for stakeholders as a direct result from these overall improvements.

However, as mentioned earlier, the good UX results from a combination of the three factors. In addition to the characteristics of the designed system, it is necessary first understand what are the users' internal states, and the context or environment of use. These are aspects that cannot be completely mastered only by the designer assumptions, but through user researchers can be better understood and interpreted, increasing the chances of developing a product or service that suit the customers' needs (Colborne, 2010). Thus, user researches and the use of qualitative research in product development are discussed in the next section.

### 3.3. User research: Understanding users through qualitative research

All products must be developed taking into account its target audience and context in which it is going to be used. The best way to understand it goes through user researches, because its focus on the dynamics of experiences and how they contribute to the construction of the user experience (Bargas-Avila & Hornbæk, 2011), relating the three factors mentioned in the previous chapter (user's internal state, context or environment and characteristics of the designed system).

It is an interdisciplinary work, in which everyone involved in the creative design of the project is important (Lowdermilk, 2013). The sooner, and frequent, these searches are carried out, the greater the chances to direct the design on the right way (Väänänen-Vainio-Mattila et al., 2008). It is also important to involve the stakeholders during the process. This way, the communication between the three parties (investors, developers and users) becomes clearer and allows a solid relationship, which will help prevent returns through the process for economic or political reasons (Moule, 2012).

Because it is an iterative process, user researches should be applied throughout all stages, starting in the early phase of the design process, then in the development phase, and furthermore after released to the market (Rubin & Chisnell, 2008). The most faithful data received in a user review are those generated through the actual use of the product, for people who already bought or tested (Väänänen-Vainio-Mattila et al., 2008).

*No matter how skilful and creative the designer, if she does not have clear and detailed knowledge of the users she is designing for, the constraints of the problem, and the business or organizational goals that are driving design activities, she will have little chance of success (A. Cooper et al., 2007, p. 49).*

Qualitative methods helps to achieve this detailed knowledge in a more effective way, encouraging the interpretation of key concerns related to human behaviour and their contexts (such as how people behave; what they think about products, services or situations; what are the patterns between different type of users; among others), valuing details which are extremely important in the process. According to Cooper et al. (2007, p. 50), *"any attempt to reduce human behaviour to statistics is likely to*

*overlook important nuances, which can make an enormous difference to the design of products*". Furthermore, qualitative research turn the process of gathering information more flexible, allowing researches to interpret quickly whether the first data collected is on the right way or not and, if necessary, implement changes on the current approach without major damages and costs (A. Cooper et al., 2007; Goodwin, 2009).

There are several methods of qualitative research in the design process, which can focus on understanding the users, simulate their behaviours, or test their experiences with prototypes already developed (Unger & Chandler, 2012), such as board games, card games, card sorting, contextual inquiry, focus group, interviews, direct observations, surveys, task analysis, usability testing, among many others (A. Cooper et al., 2007; Deterding & Dixon, 2011; Goodwin, 2009; Kuniavsky, 2012; Sanders & Stappers, 2012; SlegersRuelensVissers& Duysburgh, 2015; Unger & Chandler, 2012). Besides, there are new methodologies emerging (and current ones being evolved or adapted) in a wide range of disciplines, such as architecture, engineering, computer science and so on (Schumacher, 2009).

However, the basics for conducting a user research usually go through understanding why the research is being done and how the results will influence actions (Kuniavsky, 2012), focusing more in learning about the users involved than the technology itself (Schumacher, 2009). It is necessary figure out which questions to ask, in what order, to have the most impact on the product or service (Kuniavsky, 2012). Briefly, five steps can be followed in order to achieve the proper results (see Figure 35) (Kuniavsky, 2012; Moule, 2012):

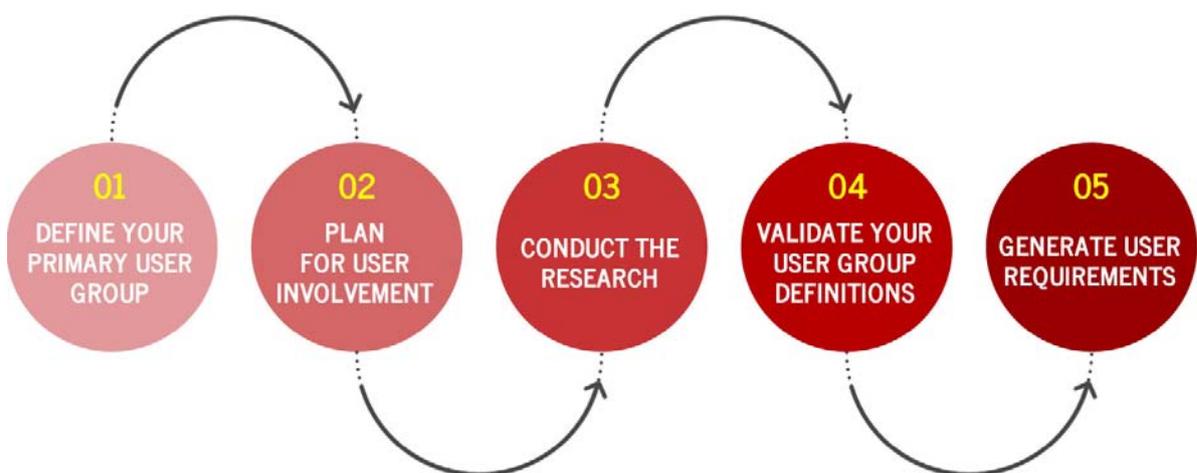


Figure 35: General five steps for conducting a user research.

1. **Define your primary user groups:** define the questions seeking for answers and the importance of each one of them. This leads to a better understanding of who will be the main target audience of the research;
2. **Plan for user involvement:** with the target audience already defined, it is necessary plan the methods to be used based on the key objectives of the research (Schumacher, 2009). This includes define the techniques that will be used to answer each question, as well with the resources (time, money, people, equipment) needed for its execution;
3. **Conduct the research:** execute the plan developed in the previous stage. During this step it is important pay attention about possible errors, redundancies or misunderstandings created in the plan, and if necessary rework it;
4. **Validate your user group definitions:** with the data collected it is possible to validate the assumptions made at the beginning of the process. By identifying the most relevant points of all the data collected, it is possible create a model of proper and more focused target audience, which later can be used in the creation of personas;
5. **Generate user requirements:** is the output of the research. As a conclusion, highlight the features and characteristics that the product must possess in order to meet the needs identified during the process.

For this work, the primary user group is generally represented by tourists who use trains in Belgium to move from one city to another. Furthermore, to plan the user involvement it is necessary understand what kind of questions each method aims to answer, and in which context. Rohrer (2014) developed a 3-dimensional framework that helps researches to understand which methodology use based on different realities and purposes. This framework (see Figure 36) contains 20 different methods that are placed and categorized based on the following axes:

- **Attitudinal vs. Behavioural:** is the relation between what people say (attitudinal) and what people do (behavioural), which can varies significantly;
- **Qualitative vs. Quantitative:** determine if a research seeks to answer questions like what, why and how (qualitative) or how many and how much

(quantitative). In other words, the qualitative focus on the nature of something and reflects the actual complexities of real situations, while the quantitative focus on the magnitude, amount or size of something (A. Cooper et al., 2007; RogersSharp& Preece, 2011).

- **Context of Use:** indicates details about how the research was executed, in which a product can be used in a natural environment, which usually tries to simulate the most real experience of it; scripted, which is often lab-based; not using the product at all; and hybrid; which is a combination of the previous contexts.

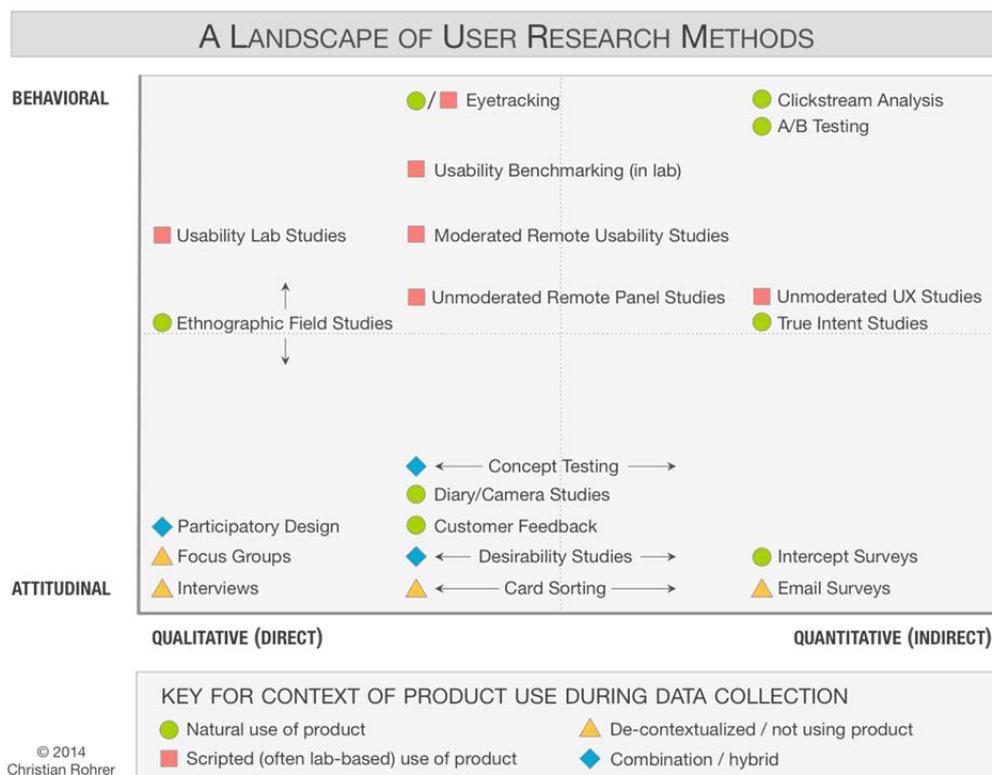


Figure 36: A landscape of user research methods developed by Rohrer (2014)<sup>8</sup>

Although this comparison is appropriate and helpful, it only focus on the surface level of users' knowledge, ignoring implicit aspects of the user experience such as tacit knowledge and latent needs, as shown in the Figure 37. On this deeper level of knowledge, there are feelings that may become so common to people, that they might

<sup>8</sup> Available on <http://www.nngroup.com/articles/which-ux-research-methods/>. Accessed on 27<sup>th</sup> of June of 2015.

not even be consciously aware of them anymore (Slegers et al., 2015). Then, it may be necessary the use of others user research methods, such as generative techniques that are capable to recall memories, evoke interpretations and connections, see and explain feelings, or imagine future experiences (Sanders & Stappers, 2012).

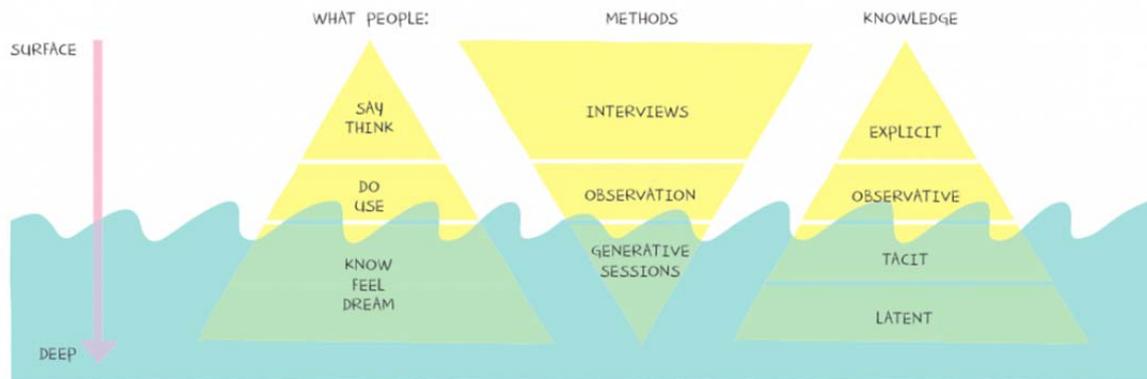


Figure 37: Relation between human behaviours, methods and level of knowledge accessed.

Source: Sanders & Stappers (2012, p. 67)

Thus, for the purpose of this study, in which focuses on reveal needs for a future product, it is important to cover as many levels as possible of knowledge, seeking to better understand and perceive the requirements of tourists using trains in Belgium and consequently be able to provide a good experience during the five phases of the tourism cycle experience.

Therefore, in a first moment three qualitative methods were chosen for the goals of this study: direct observations and focus group interviews, covering the surface level of knowledge (observative and explicit); and board game as generative tool, covering the deep level (tacit knowledge and latent needs). Each of these qualitative methods is discussed in-depth in the following sections.

### 3.3.1. Direct observations

One of the problems with a lot of products and services nowadays is related to the way they are built, mostly based on the designers' assumptions without enough research and understanding of the people who will be using it. Direct observation is an ethnographical study in which the researcher spend time watching the primary user groups interacting in the usage environment, in order to reveal current experiences and how the users achieve their goals (Kuniavsky, 2012), through a better understanding of the way they do certain tasks; the context; and their goals. It also

helps to identify possible needs and elicit problems they might have (Goodwin, 2009; Rogers et al., 2011). Thus, contributes significantly to minimize biased assumptions made by self-reporting, bringing out details and nuances that are difficult to gather in methods approaching only the explicit level of knowledge (such as what people say and/or think) (Rogers et al., 2011), considering that most people cannot assess their own behaviours accurately when they are removed from the context of their activities (A. Cooper et al., 2007; Kuniavsky, 2012). As a consequence, direct observations create a comprehensive understanding of what people do and/or use (Kuniavsky, 2012).

*It can be very difficult for people to explain what they do or to even describe accurately how they achieve a task. So it is very unlikely that an interaction designer will get a full and true story by using interviews or questionnaires (Rogers et al., 2011, p. 248).*

Although direct observations can be held in controlled environments, it is preferable to be done in the field, where the most reliable information is provided since all environments are too complex to be reproduced in lab (Kuniavsky, 2012; Rogers et al., 2011). On the other hand, gather ethnographic data is simple and it is implicit in people's daily life. For instance, on the way from home to the work, people go through a wide range of situations in which others are doing, saying and acting constantly. Most probably, during the way there were a set of observations made and processed unconsciously on the brain, without the person clearly realise about such exercise. The direct observation is very similar, except by its different purpose: the researcher is now consciously observing behaviours, conversations and attitudes in order to better understand how and why people do, say and act. However, they can be very time consuming, because it is important to see all aspects related to the behaviour of people with a product, service or situation before be ready to make conclusions (Goodwin, 2009). Then, the researcher might need to spend considerable time on the field until start feeling that the data gathered is starting to overlap (Rogers et al., 2011), what could mean a day or several, depending of the environment and problem's complexity. Even though, important observations can still be missed due the wide range of variables involved (Goodwin, 2009). For instance, imagine that one researcher observed passengers in a train station from 07:00 to 22:00. During these 15 hours a lot can happen, including the rush-hours of working. Nevertheless, the

observer could miss important insights that happen only in the last hours of train's operation, which stops overnight. What people do if they lose the last train? How do they solve the problem?

Thus, it is important to have a clearly stated goal and focus aiming to best utilize the time and avoid to generate a large amount of data that may be not relevant (Goodwin, 2009; Rogers et al., 2011). This can be done through structured frameworks, anticipating characteristics of the field study such as (Rogers et al., 2011, p. 251):

- Level of participation to adopt;
- How to make a record of the data;
- How to gain acceptance in the group being studied;
- How to handle sensitive issues such as cultural differences or access to private spaces;
- How to ensure that the study uses different perspectives (people, activities, job, roles, etc.).

These characteristics also helps to not only provide focus and define the goals of the field study, but also for organizing the observation and data gathering activity. However, only direct observation is not capable to make the user's experience familiar (Rogers et al., 2011), since it is not possible make clear assumptions about their thoughts, motivations, aptitudes, frustrations, mental models, past experiences and ideas for improvements, for instance (A. Cooper et al., 2007; Unger & Chandler, 2012). Instead, it is necessary to talk to users, which will be discussed in the next subsection.

### **3.3.2. Focus group interviews**

Focus group interviews are an effective approach that helps to outline opinions on topics relevant to the research goals. Through conversations with a group of people lead by a moderator<sup>9</sup> (Kuniavsky, 2012; Unger & Chandler, 2012), designers can clarify behaviours and attitudes observed during the observations (A. Cooper et al., 2007). This method is generally applied in the early phase of the product development,

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<sup>9</sup> Sometimes referred as facilitator (Goodwin, 2009; Rogers et al., 2011).

seeking to define what problems the product or service has to solve and how this can be accessed, even though it can be applied later with the aim of identify and prioritize features (Kuniavsky, 2012).

Although focus group can be held via Internet or telephone (Goodwin, 2009), it is more advantageous to be done face-to-face, facilitating the synergy among participants. The number of participants per session varies according to different literatures. For instance Goodwin (2009) suggests from 5 to 12 participants, while Unger & Chandler (2012) suggests between 6 to 8 participants. Moreover, Rogers et al. (2011) indicates a minimum of 3 and a maximum of 10 people per session and so on. Regardless the exact number of participants, what matters is to not lose control of the session and be able to collect useful insights from all participants through the execution of the discussion guide.

Different than in the interviews generally carried by investigative journalists or authorities (in which there is a clear hierarchy between interviewer and interviewed), during focus group interviews the moderator tries to minimize differences between he and his participants (Kuniavsky, 2012), encouraging a supportive environment where people feel comfortable to share their thoughts and feelings (Kuniavsky, 2012; Rogers et al., 2011). However, to provide this supportive environment it is crucial to conduct the interviews without lead or bias the answers (Goodwin, 2009; Kuniavsky, 2012), allowing them *“to share their view of the issues and assumptions that lie at the core of an experience and to relate them to real-world situations”* (Kuniavsky, 2012, p. 142). Thus, focus group interviews leverage the social context to come up with discussions that might otherwise be missed in individual interviews (Rogers et al., 2011), recalling user stories, highlighting relevant differences in experiences between the participants (Unger & Chandler, 2012) and empowering more ideas (Kuniavsky, 2012; Unger & Chandler, 2012).

Focus group interviews generally follow a more formal discussion guide than other types of interviews (Goodwin, 2009). Through a semi-structured model, the moderator has a guidance that helps to keep control of the session, covering the same topics for each interviewee. On the other hand, gives him flexibility to judge, accept and follow new insights that may rise during the discussions (Rogers et al., 2011). Generally, its structure of questions should be (Kuniavsky, 2012):

- **Carefully ordered:** the way of presenting the questions can play an important role on the way participants recall memories and experiences, as Kuniavsky (2012, p. 154) states: *“a careful sequence of questions takes advantage of that frame of mind to make the flow of the group discussion feel more natural, which in turn helps the participants to maintain a creative stream of ideas and produce better insights”*. Start the session with “ice break” questions warm-up participants, making them feel more comfortable and relaxed for the upcoming answers, that should be presented from the most general topic to the most specific;
- **Non-directed:** questions that do not lead or bias the answers are essential to encourage a supportive environment, as mentioned before. Then, questions cannot lead users to think about a right or wrong answer, because it should not be. Non-directed questions avoid judgemental language, focusing “on allowing the participants to fill in their own thoughts and values”. For instance, the question “What are the main differences between the trains in Belgium and in your own countries?” is preferable than “What is better in Belgium’s trains than in your country?”;
- **Open-ended and focused on specifics:** participants should be encouraged to share their experiences without feeling restricted by the question. Consequently, open-ended questions facilitates longer responses, that *“tell a greater part of the story and tend to be less ambiguous than shorter responses”* (Kuniavsky, 2012, p. 154). Moreover, they should feel welcomed to share details of this story, providing specific insights for the moderator;
- **Personal:** even though the session is held with a group of participants, the goal is to collect individual experiences. Then, it is important to formulate questions that emphasize personal experiences, such as “Which information sources do you use to check trains schedule when you are planning a trip?” instead of “Which information sources are useful for planning a trip?”;
- **Unambiguous:** avoid multiple interpretation is important to keep the flow of the session and the consistence of the data. Specific terminologies should be used carefully and be clearly understandable by the participants.

Furthermore, as focus group sessions support the discussion among participants, the conversations can easily diverge from the topic purposed. Then, the role of the moderator is very important and should assure that participants do not lose track of the session's objectives, as well as encourage quiet participants to talk more, and courteously stop participants who dominate the discussion (Goodwin, 2009; Rogers et al., 2011). However, it is important the moderator be skilled to understand whether an unanticipated issue emerges and is worth for the discussion (Rogers et al., 2011), either to bring new insights that were not imagined before or to be used as a bridge to smoothly change the conversation to another topic. Besides that, it is also moderator's role to read and interpret properly the body language (mainly facial expressions) of people participating. For being in a group, some of the participants can unwittingly change their statements for the sake of the majority opinion, transforming an personal statement into the group statement (A. Cooper et al., 2007). As many data can be generated in a focus group session, the support of both audio and video recorders can help to analyse these behaviours, as well as to analyse all the data gathered during the session.

In sum, observe people elicits what users are doing in the present, while focus group interviews tend to access past memories. In order to try to access future needs, dreams and fears of the users about the future, the use of board games as generative tool is discussed in the next subsection.

### **3.3.3. Board game workshops as generative tool**

Observing people allows a better understanding of what they do and how they use certain product or service, while talking to people reveals what they are able to express in words (Sanders & Stappers, 2012). Both methodologies, observation and focus group interviews, help the design process accessing the surface knowledge, but still lack to access a deeper level, the tacit knowledge, i.e. knowledge that cannot readily be expressed in words (Sanders & Dandavate, 1999). In order to access the tacit knowledge it is fundamental reveal latent needs, i.e. needs not recognizable until the future, through empathy (Sanders & Dandavate, 1999). Thus, it is important to uncover concerns about future needs, dreams and fears from the users (VisserStappersvan der Lugt& Sanders, 2005), approaching the experience domain allocated between the present and the future, as shown in Figure 38.

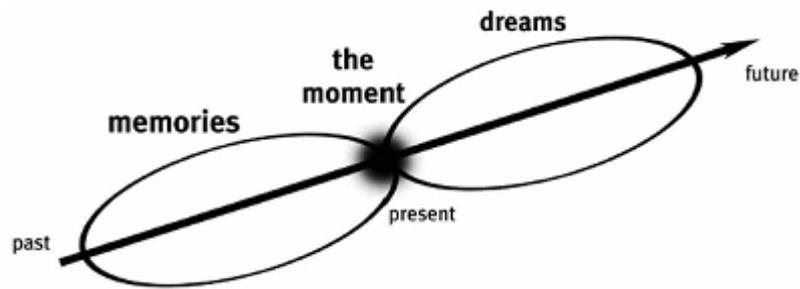


Figure 38: The experience domain

Source: Sanders (2011) apud Visser et al., (2005, p. 122)

Generative techniques can achieve that through experience-based ideas generation, in which participants can *“project their own needs and desires onto their imagined experiences”* (Sanders & Dandavate, 1999, p. 4). Less formal than direct observation and focus group, among others traditional user researches, generative techniques rely on carefully select what will be explored and how (Visser et al., 2005).

*With generative techniques, participants are guided in small steps to constructing and expressing deeper levels of knowledge about their experiences. In this way it is possible to get access to a hidden world of user experience, and thereby build a better understanding of it, which can then be used for design purposes.* (Visser et al., 2005, p. 122)

As mentioned before, there are many user research methods already developed, emerging or evolving in a wide range of disciplines, including generative techniques. Many of them were already presented as mature generative tools (BlytheSteaneRoe& Oliver, 2015; Lucero & Arrasvuori, 2010; Sanders & Dandavate, 1999; Sanders & Stappers, 2012), while others still highlight the need for further validation, although the first use stated positive results (Slegers et al., 2015).

In the case of this study, the game-based research developed by Slegers et al. (2015) is used aiming to *“bring participants into a specific setting to explore their experiences and needs regarding a future product”* (Slegers et al., 2015, p. 1225). Doing this, through the use of a board game designed for the specific purpose of the study, it may be possible to involve the target audience in a generative method where they can reflect on, re-live and re-feel their experiences while participating of the research (Visser et al., 2005). Although the literature for the use of games providing

hands-on and suggestions is limited (Slegers et al., 2015), it is believed that through playfulness is possible to improve the participants' interaction using a certain approach that provides enjoyable experiences, instead of more traditional and formal techniques (Lucero & Arrasvuori, 2010). Moreover, games are considered a safe environment for participants to fail and make mistakes (Gee, 2007), since they are applied in a relaxed way that does not imply consequences in the real life (Lucero & Arrasvuori, 2010). Furthermore, the not serious environment provided by the game may turn the discussions among participants easier, improving the diverse of information generated per workshop while they still represent unconsciously the way they look at the problem (Lucero & Arrasvuori, 2010; Slegers et al., 2015)

Thus, aiming to provide a *“safe research environment in which participants feel comfortable to share their thoughts and experiences in a group setting”* and *“a tool to facilitate users to think about their needs regarding a future product”* (Slegers et al., 2015, p. 1225), the board game is loosely based on The Game of Life, simulating a journey by means of a track on a board. From the starting point to the end point, players go through different types of tracks representative of a real journey, such as from home to the station; at the station; on the train, at the station (connecting trains); on the train again; and from the last station to the final destination. Players move their playing piece after throw two dices, and depending on the type of square they stop it is possible to draw a card from the board, adding some context to the journey. During the journey, players can rely on an omniscient train information system (TIS) via a tablet, representative of a future product's mock-up (Slegers et al., 2015). The TIS is a system able to provide information beyond train travellers would currently be able to find, aiming *“to surprise the players and stimulate them to think more creatively about questions to ask in later turns”* (Slegers et al., 2015). More details about the rules of the game are discussed later in the sub-section “4.5. Playing with users”.

Furthermore, players are distributed in pairs seeking to generate discussions during decision-making and provide insights about their thoughts, feelings and fears regarding the current situation in the game. By being a group session, three main advantages can be taken (Visser et al., 2005):

1. **A global view of the context and various user experiences will be created:** by working in pairs, participants are motivated by the rules and by the moderator to discuss each other which answer they will give to the system;
2. **Participants can react to each other's experiences:** in addition to the previous advantage, the opinion of other participants (also working in pairs) can be heard. The playfulness of the game incite their participation providing feedback to the random situations that happen during the game;
3. **A large amount of diverse information is generated in one session:** by consequence, one session can gather information from different participants facing many different situations.

On the other hand, without professional moderation, one dominant participant can influence the group (Visser et al., 2005). As in the focus group, the moderator has to be skilled enough to keep all participants in mood to contribute equally, without feeling powerless in comparison with others. In addition, as the workshops can turn into a big debate in each turn, it is highly recommended to record it, preferably both in audio and video, to be later used as support for the transcribing process.

With these combinations of techniques (direct observation, focus group and board games) it become easier to answer questions created in the early phases. However, as people act and behave differently each other, this output may be too broad for the design process (Cooper et al., 2007). For this reason, tools such as Personas and scenarios were developed to help bridge the research-design gap, informing the results without compromising the empathy and engagement with the data. Personas are used to enhance the inspiration and freedom of interpretation, yet supporting the argumentation. This way, the results can be shared in an accessible, shareable, useful and understandable way (Visser et al., 2005). Personas and scenarios are discussed in the next subsection.

### **3.3.4. Personas & Scenarios**

Personas are product definition and design tools (Goodwin, 2009) that helps researchers and designers to focus attention on a specific target audience (Pruitt & Grudin, 2003), through the development of fictitious characters (L. Nielsen, 2009). They are usually applied in the early phases of a product development, helping to elicit

what users most need from a product or service (Goodwin, 2009). However, they are also used in later phases, being helpful to communicate with stakeholders, developers, and other designers; encourage consensus; marketing the product; develop documentation; and prioritize bug fixes (A. Cooper et al., 2007; Goodwin, 2009; L. Nielsen, 2009).

Based on ethnographic researches, Personas can be built from the combination of data gathered in observations, interviews, surveys, among other methods that focus on understanding and identifying users' behaviours and feelings (Goodwin, 2008). Although they are not real people, Personas represent patterns of behaviours and goals identified in users interviewed and observed during user researches (Goodwin, 2009), being the amount of Personas per project totally dependent of these findings (Goodwin, 2009; Kuniavsky, 2012). The aim is to target specific types of users with specific needs (A. Cooper et al., 2007), helping the design process and product development to keep the team focused on creating solutions based on one type of user, instead of many.

*When you broadly and arbitrarily extend a product's functionality to include many constituencies, you increase the cognitive load and navigational overhead for all users. Facilities that may please some users will likely interfere with the satisfaction of others. (A. Cooper et al., 2007, p. 77)*

Cooper et al. (2007) illustrated (see Figure 39) the dangers of build products to different types of user, enhancing the importance of establish for who the product or service is being design, and for who is not (Pruitt & Grudin, 2003). Personas help to accomplish that maintaining the team's attention in the user, instead of on the personal assumptions of each person of the team, because a good Persona explicit the goals, behaviours and characteristics of certain type of user.



Figure 39: Example of an automobile designed aiming to please every possible driver, with every possible feature, but that pleases nobody.

Source: A. Cooper et al. (2007, p. 77)

Thus, Personas directly contribute to the definition and designing phases of a product or service, avoiding mistakes such as the elastic user, self-referential design, and edge cases are avoided (A. Cooper et al., 2007):

- **Self-referential design:** when designers or developers build a product or service based on their own assumptions, they are actually focusing on their own goals and needs. Thus, the product ends up reflecting their own mental models, expectations and behaviours, instead of focus in the target audience behaviours, goals and needs.
- **The elastic user:** as each person in a team has its own assumptions of how the user is and how the product should look like, during the product development a team can lead decision-making to a fictitious target audience that is a mix of assumptions, *“conveniently bending and stretching to fit the opinions and presuppositions of whoever’s talking”* (A. Cooper et al., 2007, p. 79).
- **Edge cases:** the overload of information is commonly caused by features that might be needed by the target audience, but usually are not. Thus, users get confused in each decision they have to make in a product or service. Using Personas this problem can be solved by deeply understanding the target audience, prioritizing features that are essential for their goals and needs, and leaving the less needed features available, but not in focus.

Furthermore, in order to avoid misunderstandings and best communicate how the Persona behaves and think, information such as name; photo; age; location; occupation; goals and bibliography are necessary (Unger & Chandler, 2012). The bibliography will depend on the purpose of the Personas’ use, but many content

variables can be mentioned, such as mental models; skills; environment; frustrations; attitudes; typical tasks; personal quotes; salary; education level; among others (Goodwin, 2009). However, it is important to use just the essential information for the purpose, and to avoid idiosyncrasies for its power of distraction (Kuniavsky, 2012). In sum, Personas must identifies (A. Cooper et al., 2007, p. 118):

- Attitudes, experiences, aspirations, and other social, cultural, environmental, and cognitive factors that influence the Persona's expectation;
- General expectations and desires the persona may have about the experience of using the product;
- Behaviour the persona will expect or desire from the product;
- How that persona thinks about basic elements or units of data.

For instance, content variables like trip budget; traveling experience; traveling behaviour and goals; languages spoken; and ICT knowledge may be relevant for the purpose of this study. Moreover, since Personas aims to elicit behaviour patterns, it is crucial identify their goals and motivations, and express them clearly (A. Cooper et al., 2007).

Well-crafted Personas facilitate the discussion and decision-making during product development by clarifying to the team who will use the product and how it will be used (Grudin & Pruitt, 2002), allowing them to debate features and iterate solutions until the team believes the Personas will find it useful, useable, and desirable (Goodwin, 2009). To achieve that, Personas can be the told using storytelling techniques, which improves the engagement of social and emotional aspects of our brains (Goodwin, 2009).

*“Humans are wired to think and communicate through stories and to understand the world as interpersonal relationships tied together in a narrative.”*

(Kuniavsky, 2012, p. 501)

For this reason, Personas are considered much more powerful if contextualised in scenarios (L. Nielsen, 2009). Scenario is a narrative written in a natural language, focusing on tell how a person behaves or thinks in certain activity or situation (Kuniavsky, 2012; L. Nielsen, 2004). Although scenarios have been used in design

process for a longer period than Personas (L. Nielsen, 2004), they are less effective when not constructed around Personas (Grudin & Pruitt, 2002; Kuniavsky, 2012), because it is difficult to memorize a full story if the reader is not engaged with it. Furthermore, Persona-based scenarios focus the stories in goals, not only tasks, helping teams to answer questions like “What should this product do?” and “How should this product look and behave?” (Kuniavsky, 2012). In scenarios, Personas act as real people, and they can be part of as many scenarios as necessary, depending of the goals and situation of use (L. Nielsen, 2004).

*“A scenario is similar to a story; it has a main character (the persona), a setting (somewhere the action takes place), a goal (what the persona wants to achieve), actions that lead to the goal (interactions with the product), and obstacles that hinder the way to the goal.”* (L. Nielsen, 2009, p. 199)

In the product development atmosphere, they have four main roles, as suggested by Bødker (2000):

1. As basis for overall design;
2. For technical implementation;
3. As means of co-operation within design teams;
4. Across professional boundaries.

Also, different types of scenarios are mentioned and conceptualised. Kuniavsky (2012) refers to two types: context (or problem) scenarios and design scenarios. Cooper et al. (2007) mention three: context scenarios, key path scenarios and validation scenarios. Furthermore, L. Nielsen (2004) presents two: external scenarios and internal scenarios. For the purpose of this study, scenarios are used aiming to serve as basis for overall design. Then, it uses context scenarios mentioned by Kuniavsky (2012) and Cooper et al. (2007), but that also relates to external scenarios proposed by L. Nielsen (2004).

Context scenarios are usually used in the early stages of the design process and aims to explore how the needs of the Personas can be fulfilled by a product or service, focusing on human activities, perceptions and desires (A. Cooper et al., 2007). To achieve that, context scenarios should tell the most important user actions and

system responses, considering possible changes after interactions with a product or service. However, they should focus primarily on actions illustrating clearly the story, not the product itself (A. Cooper et al., 2007; Kuniavsky, 2012). The idea of scenarios is to represent a “day in the life” feel:

*“A typical context scenario often has a “day in the life” feel, describing a series of tasks over the course of a few hours or a day. A context scenario should situate those activities within the flow and rhythms of life, explaining how people engage with a product or service in relation to other concerns.” (Kuniavsky, 2012, p. 504)*

Thus, context scenarios should be written in order to answer a wide range of questions, related to the experience Personas may have throughout their activities, such as (A. Cooper et al., 2007, p. 119):

- In what settings will the product be used?
- Will it be used for extended amounts of time?
- Is the persona frequently interrupted?
- Are there multiple users on a single device?
- With what other products it will be used?
- What primarily activities does the persona need to perform to meet his goals?
- What is the expected end result of using the product?
- How much complexity is permissible, based on persona skill and frequency of use?

Nevertheless, it is not necessary worry about how problems will be accomplished at this phase. At this early stages of design, Cooper et al. (2007) suggests to pretend the interface is magic, turning the design process more creative without being constantly restrictive about how the team can turn it into reality.

Lastly, Persona-based scenarios must be analysed in order to extract which requirements the target audience seeks (A. Cooper et al., 2007). These requirements

are the output of the whole process taken until here, and they serve as identified pain points of the user that must be addressed during the design of the product or service.

In the next chapter the details of how the three user researches (direct observation; focus group interviews; and board game workshops) and two design tools (Personas and scenarios) were developed are described.



CHAPTER 4

RESEARCH  
DEVELOPED

In this chapter details of the research development are discussed. It is divided in seven sections. The first one, “4.1. Introduction”, presents an introduction of the research done. The second section, “4.2. Overview of Belgian train system” provides an overview of the train system in Belgium. The third (“4.3. Observing in the field”), fourth (“4.4. Interviewing groups”), and fifth (“4.5. Playing with users”) sections discusses the details of the user researches done. The sixth section, “4.6. Analysis of the data gathered”, shows how the analysis of the data gathered was done. The seventh and last section, “4.7. Bridging the research-design gap”, discusses the details of the Persona-based scenarios’ development.

## 4.1. Introduction

This investigation sought to understand how may human-centred design be used as a design methodology for mapping the current travel experience of tourists who use Belgian trains, focusing on the future development of a mobile application. To find the answer this study followed the process shown in the Figure 40:

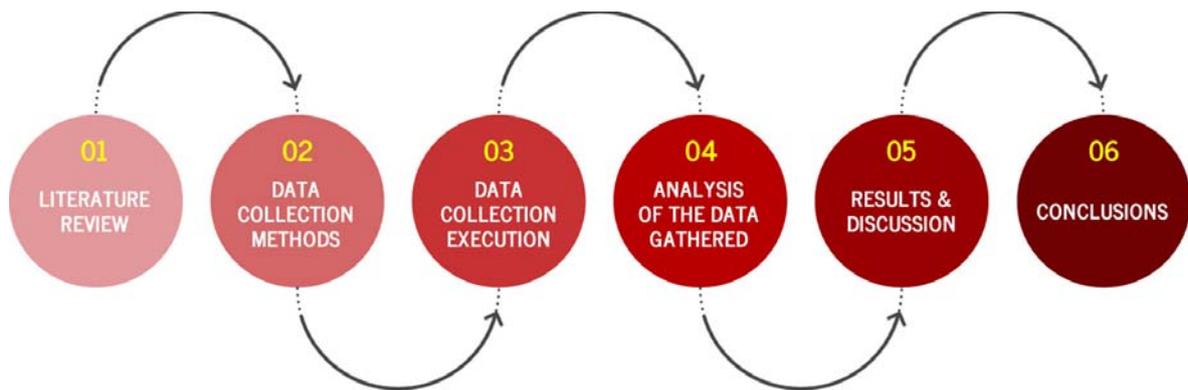


Figure 40: Overview of the general methodology process carried during this study

In a first moment, the literature review presented in the previous chapters was studied. From this learning process it was possible perceive that before choosing a user research method it is important to identify the specific questions that need answers, related to the target audience. In order to better understand the tourists who use trains in Belgium three user research methods were seen as suitable: direct observation, focus group interviews, and board game workshops. They are discussed in-depth in the sections “4.3. Observing in the field”; “4.4. Interviewing groups”; and “4.5. Playing with users”, respectively.

However, the train system in Belgium is complex and offers a wide range of official information sources; types of tickets; languages; structure of stations and facilities. Thus, aiming to get familiar with the environment of study, the main characteristics of the Belgian train system were investigated before the data collection execution. The overview of the current train system in Belgium is presented in the section “4.2. Overview of Belgian train system”.

Furthermore, the data collected during the execution of the three user researches was coded into different nodes using the software of qualitative analysis NVivo10, aiming to help the researcher to interpret the high density of data gathered. The set of nodes

used during the codification are described in detail in the section “4.6. Analysis of the data gathered”.

Moreover, Personas and scenarios were designed using the data and knowledge acquired through the observations and focus group sessions. The use of these tools aimed to better represent the diversity of tourists’ profiles identified, focusing on certain types of users, which helps to bridge the research-design gap. This process is discussed in the chapter “4.7. Bridging the research-design gap”.

Then, the analysis was interpreted and turned into conclusions through 10 main insights, that are presented in the section “5.1. User requirements for tourists”. In addition, interpretations made through the data analysis of this study (which focus on tourists) were compared with a similar study provided by the Centre of User Experience Research (CUO) of Katholieke Universiteit Leuven (KU Leuven) that sought to mapping the current travel experience by trains in Belgium, but in this case having commuters as the target audience. This comparison is presented in the section “5.2. Main differences between tourists and commuters” followed by the presentation of Persona-based scenarios in the section “5.3. Persona-based scenarios”. Then, a discussion of the results obtained in this work is presented in the section “5.4. Discussion of the results”.

Lastly, the chapter “6. CONCLUSIONS” presents the conclusions of this work, also eliciting the limitations of this study and suggesting future work in the area.

It is important to note that on this study the consortium responsible for the management of the Belgian train system was not involved due bureaucratic and time constraint reasons.

## **4.2. Overview of Belgian train system**

The Belgium train system is very complex. There are many official sources of information distributed through different channels. In the same way that there are various types of tickets being sold through other channels, and accepting different payment methods in each. In addition, there are three official languages (being used according to the region); rules for bikes, pets and luggage on board; different structure of stations and its facilities; among others. For this reason, some of these

topics<sup>10</sup> are discussed below, in order to better contextualise the reader with the content further presented in the following section.

#### 4.2.1. Official sources of information

The Belgian railway system is covered by many official sources of information. At the stations and on board it is possible gather information through various digital boards, physical resources and personnel. However, it is important to emphasize that these official sources are not available always, depending of the structure and facilities provided by the station or train. On the other hand, with the use of Internet the information can be reached from anywhere through the website (desktop and mobile versions) and mobile app. The Table 7 provides an overview about some of the official information sources provided by Belgian Rail:

Table 7: General overview of official sources of information provided by Belgian Rail

Where	Source (Type)	Description
Internet	Website (Digital)	Accessing from a computer or tablet any of the Belgian Rail domains (such as <a href="http://www.belgianrail.be">www.belgianrail.be</a> , <a href="http://www.nmbs.be">www.nmbs.be</a> , <a href="http://www.sncb.be">www.sncb.be</a> and <a href="http://www.railtime.be">www.railtime.be</a> ) it is possible to plan a trip, check real-time information about trains, timetables, tickets, rules, stations and facilities, customer service, among others.
	Mobile website (Digital)	Accessing from a mobile device any of the Belgian Rail domains (such as <a href="http://m.belgianrail.be">http://m.belgianrail.be</a> , <a href="http://m.nmbs.be">http://m.nmbs.be</a> , <a href="http://m.sncb.be">http://m.sncb.be</a> and <a href="http://m.railtime.be">http://m.railtime.be</a> ) it is possible to plan a trip, check real-time information about trains, timetables, stations and facilities, among others.
	NMBS/SNCB app (Digital)	It is the official app of Belgian Rail and is available for Android and iOS. It is possible to plan a trip, check real-time information about trains, timetables, tickets, useful numbers, among others.

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<sup>10</sup> Only the information relevant for the contextualisation of the topics presented in this study, based on the user researches, is discussed. Further and more detailed information about the complete train system in Belgium can be found on Belgian Rail's website (<http://www.belgianrail.be/>).

<b>Station</b>	Real-time timetable <sup>11</sup> (Digital)	Screen or display showing real-time information about the next trains to depart from the station, such as: destination; type of train; estimated time of departure; and unexpected delay if necessary (see Figure 41). It can also present symbols (e.g. airplane icon for trains going to the airport). Usually it is located in the hall, but it can also be found in the platform, close to ticket counters' and group of seats for people waiting.
	Printed timetable (Physical)	Collection of printed posters with the schedule of all trains departing from the station (see Figure 42). It shows the expected time of departure from the station; type of train; all the stops and the expected time of arrival on each (it highlights the most important stations of the way); and the usual platform of depart. Usually it is located in the hall, but it can also be found in some platforms. Printed timetables with the schedule of all trains arriving in the station are also available in a few stations.
	Gate display <sup>12</sup> (Digital)	Screen or display located at the gate that gives access to the platforms (see Figure 43), informing the next train to departure from that platform, with the follow information: destination; type of train; estimated time of departure; stations that will stop on the way; and unexpected delay if necessary.
	Platform display (Digital)	Display similar to <i>gate displays</i> , but located at the platform, on the sidewalk of certain track (see Figure 44).
	Information desk (Personnel)	Kiosks with staff available specific to answer personal questions related to the use of trains and means of transportation connected to it (for instance shuttles, buses, trams...). However, these kiosks are available only in a few stations.

<sup>11</sup> The use of this term in this resource does not mean that other information sources are not real-time. However, this was the term most referred by participants during the user researches.

<sup>12</sup> Usually this term is used in the airport context, but in order to clarify the different between “gate display” and “platform display” it is also used in this study involving the train context.

	Ticket counter (Personnel)	Counters with staff available to provide personal service, such as sell tickets and help passengers with questions they might have (see Figure 45). It is restricted to opening hours of each station.
	Ticket machine (Hybrid)	Physical automated machines where passengers can check for prices, compare and buy tickets (is printed after confirmation of purchase) using a touch-screen interface (see Figure 46). It is located mainly close to ticket counters and in the hall, but can also be found elsewhere.
	Disturbance screen (Digital)	Screen usually located close to the ticket counters and hall of the station informing the current disturbances in the rail network (see Figure 47).
	Audio announcement (Frequency)	Audio announcements are made through speakers at the hall of the stations and at the platforms to inform passengers that a train is arriving at certain platform, passing through the station (aiming to alert people to stay far from the tracks due its velocity), or delayed. It also informs possible disturbances on the railway network and other general information about the train service.
	Signage (Physical)	Set of signs, distributed through the whole station, indicating the directions to certain places, such as: access to platforms; ticket counter; stairs, elevators and elevators; connections with other means of transportation (for instance metro, buses, tram, etc.); bathroom; tourism office; information desk; exit; facilities; among others (see Figure 48).
Train	Conductor (Personnel)	Conductor is part of the staff of the train and is responsible to check the validity of the tickets of passengers, sell tickets on board, and provide personal service if necessary, answering questions they might have.
	Audio announcement (Frequency)	Audio announcements are made on the train to inform the next stop (usually when it is close to the arrival), unexpected events and general information about the train service.
	Display outside the train (Digital)	Display attached outside the train that shows detailed information about the route of the train, which can be final destination, type and number of the train (see Figure 49). It

		can be located in the front of the train, and/or in the side of the carriages, close to the doors. However, this source is available in just a minority of trains.
Display inside the carriage (Digital)		Display attached to the carriage that may show the stops the train will make; the next stop (usually close to the arrival and together with an audio announcement); the final destination; and some other information, such as advertisement to download the NMBS/SNCB app (see Figure 50). However, this source is available in just a minority of trains.
Screen inside the carriage (Digital)		Screen attached to the carriage that shows the final destination, type and number of the train, next stops the train will make, scheduled and actual time of arrival at each stop and current time (see Figure 50).

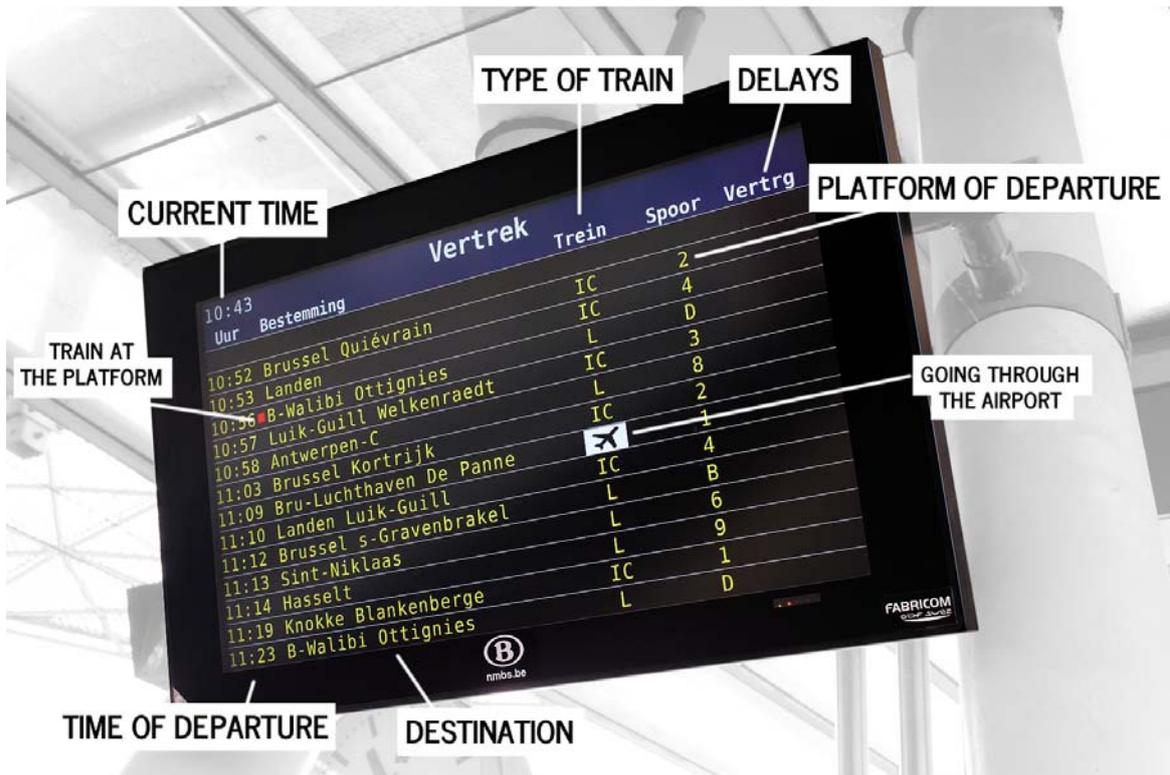


Figure 41: Real-time timetable

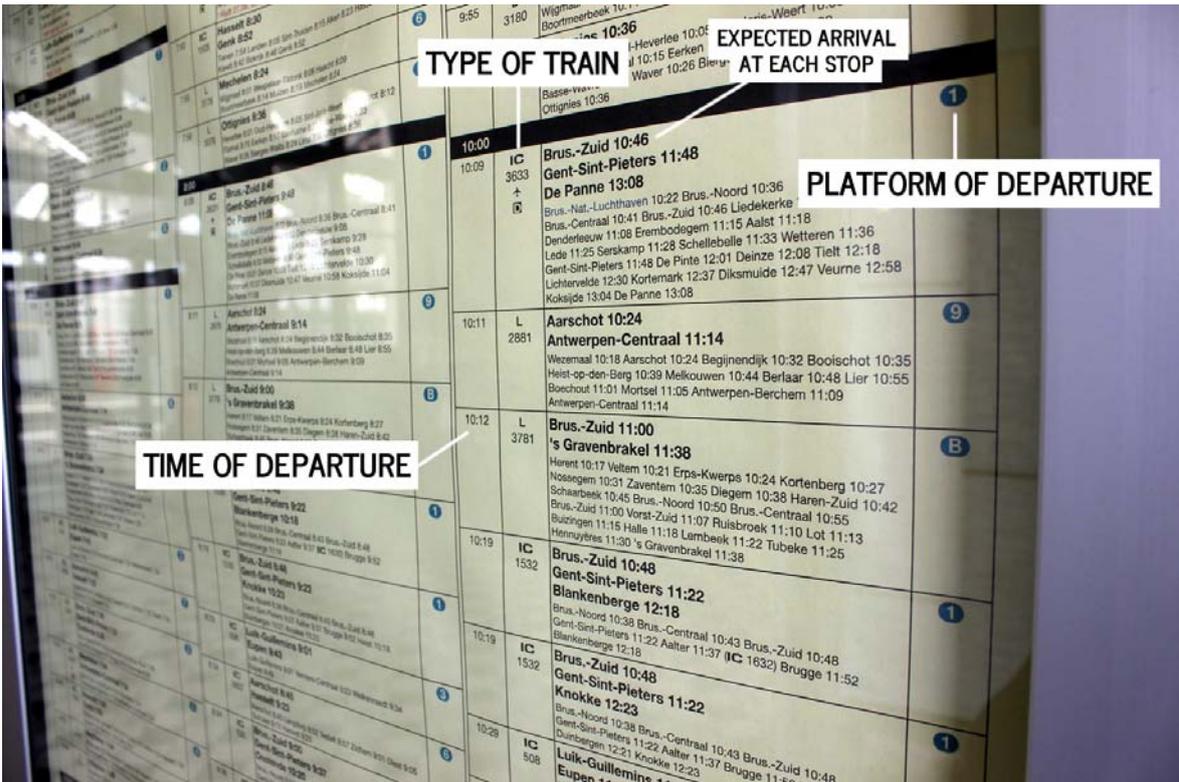


Figure 42: Printed timetable



Figure 43: Gate display



Figure 44: Platform display

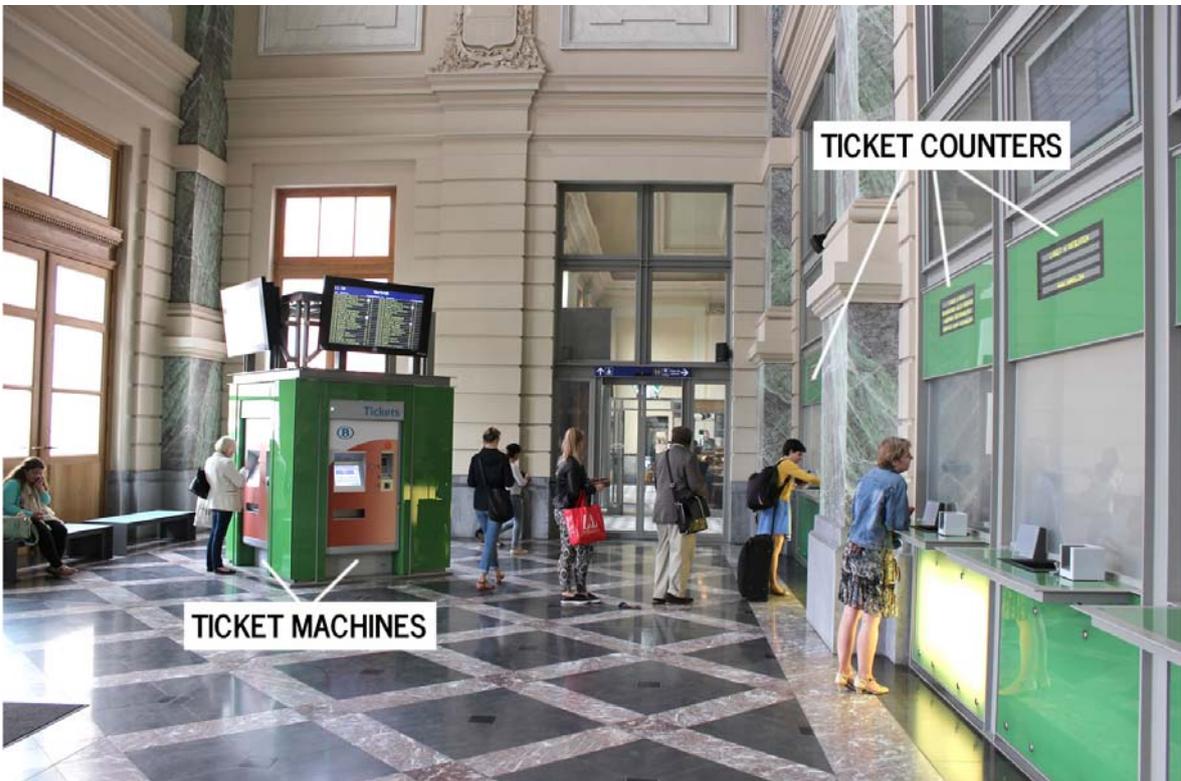


Figure 45: Ticket counter and ticket machines in the hall of Leuven's station



Figure 46: Ticket machines



Figure 47: Disturbance screen



Figure 48: Set of signs



Figure 49: Display outside the train



Figure 50: Display and screen inside the carriage.

#### 4.2.2. Types of tickets and payment methods

In total, 48 different types of tickets are offered by Belgian Rail (NMBS/SNCB), the railway operator in Belgium, for national routes and cities close to the border (for a complete overview see Appendix F).

They are classified into 4 main categories, such as:

1. **Tickets:** a wide range of tickets with specific rules for use. The types of tickets mentioned during the user research are:
  - Standard Ticket: it is the common ticket, with the price dependent of the route;
  - Weekend Ticket: round-trip ticket for trips occurring from Friday at 19:00 to Sunday evening with 50% discount on the original price. Holidays may be included but need early confirmation with official sources;

- Go Pass 1: one-way tickets for €6, restricted to young people under 26, for routes in Belgium no matter the distance neither the number of connections;
  - Tickets to the border: different prices for the same type of tickets explained above, but from or to a city in the border, such as Maastricht and Roosendaal in The Netherlands, and Aachen in Germany (e.g. Go Pass 1 to Maastricht costs 7,50€);
  - Tickets to Luxembourg or Lille: different prices for tickets from or to Luxembourg City in Luxembourg or Lille, in France.
  - Diabolo fee: extra fee necessary for tickets from or to Brussels-National-Airport station.
- 2. B-Excursions:** tickets to certain attractions in Belgium, such as nature and animal parks; parks and adventure; art, culture and science museums and expositions; festivals and concerts; among others. It is included a round-trip ticket in 2<sup>nd</sup> class, admission to the attraction and connections by bus, tram or metro, if necessary. Even though they may offer comfort and a cheaper price (this package is cheaper than buy train and entrance ticket to the attraction separately), they were not mentioned during the user research.
- 3. Passes:** set of tickets bought at once for a low price, valid for a specific amount of trips. These tickets have empty lines that must be filled by the passenger when use certain route. The types of tickets mentioned during the user research are:
- Go Pass 10: ten tickets for €51, restricted to young people under 26, for routes in Belgium no matter the distance neither the number of connections;
  - Railpass: ten tickets for €76, without age restriction, for routes in Belgium no matter the distance neither the number of connections;
- 4. Railcard:** card for people who use trains and other means of transportation very often. It is not applied for tourists.

Except by the Go Pass 1 and Go Pass 10, all tickets mentioned above are available for 1<sup>st</sup> and 2<sup>nd</sup> class. The 1<sup>st</sup> class can be identified outside of the train by the yellow band and the number “1”, as well as you can identify the 2<sup>nd</sup> class by the number “2”, as shown in Figure 51. Inside of the train it is possible to recognize the class by the number on the doors, before get into the carriage. Change the tickets from 2<sup>nd</sup> to 1<sup>st</sup> class is possible with a class upgrade, which can be bought within the ticket or inside the train with a conductor. However, all purchases made inside of the train apply an extra charge called “on-board fare”, which costs 7€. The fare is added to the original price (e.g. if a tourist is going to Brussels Airport and forget to add the “Diabolo fee” to his ticket, on the train he will be charged 7€ of “on-board fare” plus the price of “Diabolo fee”).



Figure 51: Detail of the carriages indicating the class. All area representative of the 1<sup>st</sup> class is identified with a yellow band on the outside of the carriage.

In addition, there are specific rules for passengers carrying bikes, pets, luggage, etc. on board. Carry-on cases, backpacks and suitcases are free of charge, but there is a limit of 3 items per passenger and all together must weigh less than 30kg. Furthermore, the luggage must be stored in the overhead space or below the seat. Prams, wheelchairs, sports equipment, folding bikes, unicycles and scooters are also

free. On the other hand, normal bikes, tandems and trailers are extra charged an extra of 5€ per trip, or 8€ per day (unlimited trips within 24 hours).

Moreover, the tickets mentioned above can be acquired through 6 channels:

1. **Website:** website accessed on the computer or tablet, through different domains such as [www.belgianrail.be](http://www.belgianrail.be), [www.b-rail.be](http://www.b-rail.be), [www.nmbs.be](http://www.nmbs.be), [www.sncb.be](http://www.sncb.be) or [www.railtime.be](http://www.railtime.be). The ticket has to be printed;
2. **Ticket Counter:** selling point in the stations with employees available to provide personal information. The ticket is printed by the personnel and delivered instantly;
3. **Ticket machine:** automated ticket machines available in the stations. The ticket is automated printed and delivered instantly;
4. **Train:** during the ride with conductors. The ticket is printed by the personnel and delivered instantly;
5. **NMBS/SNCB app:** mobile app accessed via a mobile device. The ticket is sent by SMS, which makes this option unavailable for the tourist audience since it requires a Belgian mobile number and a Belgian identification card;
6. **Mobile website:** mobile website accessed via a browser through different domains such as <http://mobile.b-rail.be>, <http://m.sncb.be>, <http://m.nmbs.be> or <http://m.railtime.be>. Besides the same problem mentioned above (SMS ticket), it is not possible purchase the ticket in the English and German version of the mobile website (only available for the Dutch and French versions).

Thus, since tourists do not possess a Belgian identification card, only 4 of 6 distributed channels are available for them (see Table 8):

Table 8: Availability of tickets according to the distribution channel

Type of ticket	Website	Ticket counter	Ticket machine	Train
Standard Ticket	✓	✓	✓	✓
Standard Ticket to the border	✓	✓	✓	✓
Weekend Ticket	✓	✓	✓	✓
Weekend Ticket to the border	✓	✓	✓	✓
Go Pass 1	✓	✓	✓	✓
Go Pass 1 to the border	✓	✓	✓	✓
Diabolo fee	✓	✓	✓	✓
Go Pass 10		✓	✓	
Rail Pass		✓	✓	
Bike Card single journey	✓	✓	✓	✓
Bike Day Ticket		✓	✓	✓

In total, there are 8 payment methods available, depending of the distribution channel chosen, as shown in the Table 9.

Table 9: Availability of payment methods according to distribution channel

Payment method	Website	Ticket counter	Ticket machine	Train
Cash	-	✓	✓ *	✓
Bancontact	✓	✓	✓	-
Visa	✓	✓	✓	✓
MasterCard	✓	✓	✓	✓
American Express	✓	✓	✓	✓
Homebanking	✓	-	-	-
Aurora	-	✓	-	-
Eco cheques	-	✓	-	-

\* Notes are not accepted. A maximum of 20€ in coins, when applicable (not all ticket machines accept cash).

Apart from the national and cities close to the border routes, there are also international tickets offered by SNBC Europe<sup>13</sup>, which is a partnership between Belgian Rail and others railway companies, such as ICE (Germany), TGV (France), Eurostar (UK), IC (The Netherlands) and Thalys (high-speed train from or to all these countries just mentioned).

### **4.2.3. Languages**

Belgium has three official languages: Flemish, French and German. The use of the languages depends of the region of the country, even though most of the stations observed during the user researches (and previous experience of the author) offers information both in Flemish and French. Nevertheless, it is possible to find stations presenting most of the information in only one language, i.e. Flemish in Flanders (Flemish part of Belgium) and French in Wallonia (French part of Belgium). Brussels, as the capital of the country, presents information mostly in French and Flemish, but also offers some of them in English as well, facilitating the experience of many tourists. The German language covers only a very small part of the country and it is not usually used on resources that can be found while walking through the stations.

Furthermore, the sellers working in the ticket counters; the information guides working in the information desks (when available), and the conductors on the train are all able to speak in English. About the technological devices such as the website (desktop and mobile version), the mobile apps, the ticket machine (see Figure 52) and the interactive totems, they are all available in Flemish, French, German and English.

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<sup>13</sup> More information about international tickets can be found on [www.b-europe.com](http://www.b-europe.com).



Figure 52: Interface of the ticket machine's touch-screen

#### 4.2.4. Structure of each station and its facilities

There are a wide range of facilities available on train stations in Belgium, such as bike and car parking, bike and car rentals, taxis, accessibility for mobility-impaired passengers, elevators, luggage lockers, restaurants and bars, clothes stores, tourism offices, automated ticket machines, Wi-Fi, among others. However, they vary significantly depending of the station. The last annual report published from Belgian Rail, referring for data from 2013, indicates 550 stations and stops in Belgium (SNCB & SNCB-Holding, 2014). Although many of these are representative of small stops, where the access is usually make by locals, it gives an overview of how many different environments a tourist can pass through. As each station has its own structure and facilities (compare Figure 53 and Figure 54, for instance), passengers learn how to use them mostly from the moment when they arrive on it.

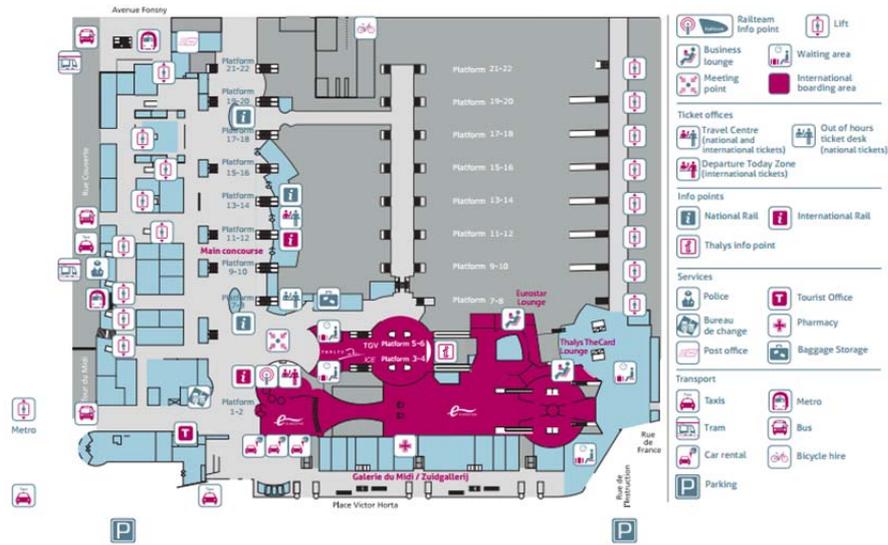


Figure 53: Station plan of Brussel-Zuid's station  
Source: B-Europe<sup>14</sup>



Figure 54: Station plan of Liège-Guillemins station  
Source: B-Europe<sup>15</sup>

<sup>14</sup> Available on <https://www.b-europe.com/Travel/Practical/Station%20information/Brussels%20Midi> - Accessed on 20<sup>th</sup> of June of 2015.

<sup>15</sup> Available on <https://www.b-europe.com/Travel/Practical/Station%20information/Li%C3%A8ge-Guillemins> - Accessed on 20<sup>th</sup> of June of 2015.

With a better understanding of the train system in Belgium, the user requirements for tourists identified during the analysis and interpretations are discussed in-depth in the next section “5.1. User requirements for tourists”.

### 4.3. Observing in the field

Seeking to better understand the key concerns related to human behaviour and their contexts, in a first moment an ethnographic field study was held, specifically a sequence of observations in the field. The main goal of this observation was to understand how tourists obtain the necessary information to travel by train. An overview of the steps done for this methodology is shown in the Figure 55:

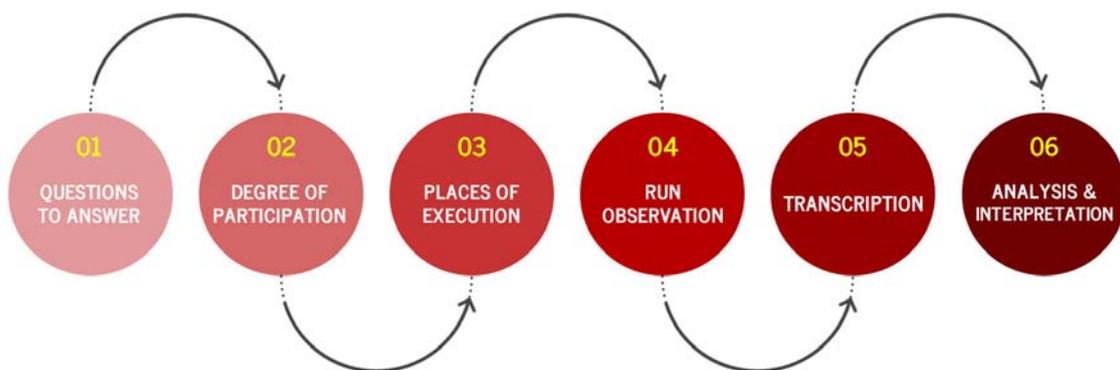


Figure 55: Overview of the steps done for the direct observation

In order to achieve this, the study sought to find answers to some questions, such as (see the complete guide of the interviews in Appendix A):

- How tourists find their way to the platform?
- What are the doubts they have while waiting the train?
- How tourists choose a carriage? And a seat?
- How tourists keep track of their location during the train ride?
- What tourists do during the train ride?
- What are the physical, technological and human resources they use?

The degree of participation utilized for the researcher was as a passive observer (Rogers et al., 2011), in order to not interfere the behaviour of the participants and

avoid actions based on the feeling of being judged by someone. As the observer was not allowed to talk with participants, it is not possible to affirm that they were indeed tourists. However, in order to assure the attention about possible variances between travellers and recognize the right people, a set of expected differences were hypothesized. Some characteristics and expected behaviour may tend to a tourist's behaviour, such as carrying luggage; unfamiliarity with the place; extra curiosity; and/or use of maps and tourist guidebooks. Spoken language may be another factor, but only in stations of smaller cities since Brussels and Antwerp, for instance, has many international workers who speak English regularly. In addition, some aspects of different types of tourists also were mentioned. For example, business travellers may travel alone; have the time as a first priority; use the time on the train to work; and/or have more general experience (prior knowledge) than others. On the other hand, leisure travellers may travel in groups; need more space for the bags; and/or use the time on the train to plan the next trip, relax or talk. Furthermore, students doing an exchange program in Belgium may have low budget and set the price as first priority; and/or may have some experience using Belgian trains. All these aspects are important for the awareness of the observer, since each one of them might influence the passengers' for a different behaviour and experience.

During nine days between 7<sup>th</sup> of February and 14<sup>th</sup> of March of 2015, passengers were observed in seven different stations, including Antwerpen-Centraal; Brugge; Brussels-National-Airport; Brussel-Centraal; Brussel-Zuid; Leuven; and Namur (see Figure 56).

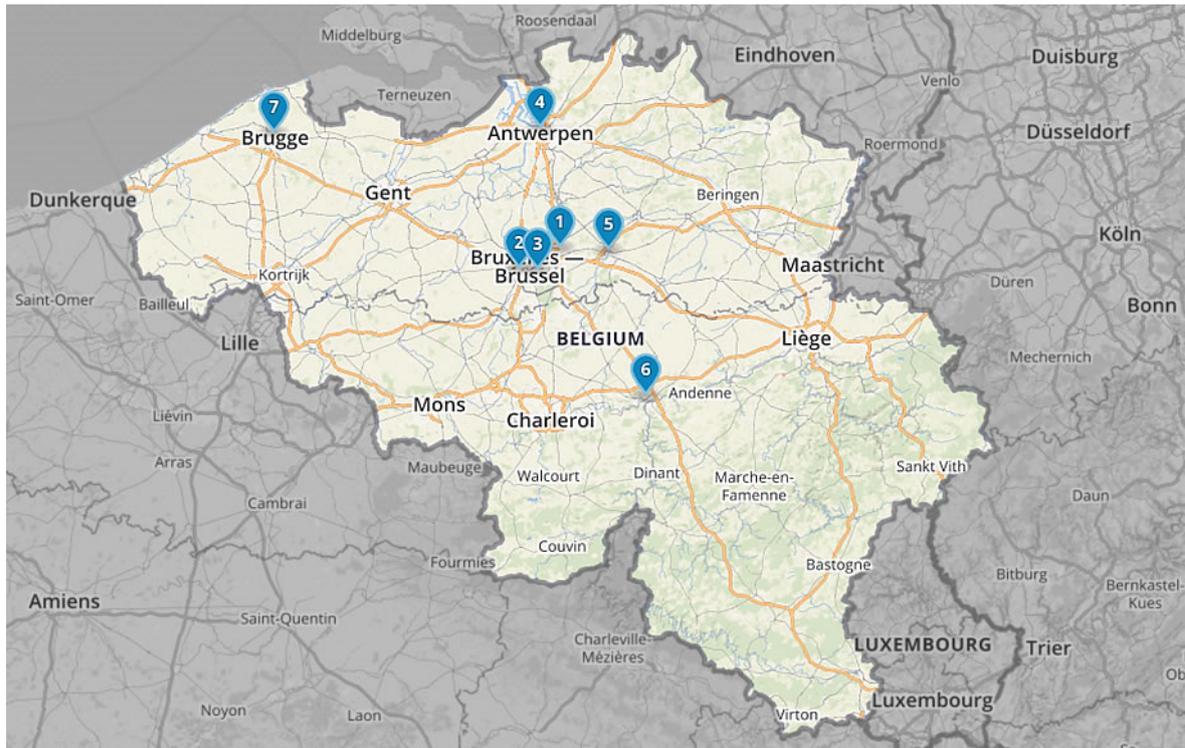


Figure 56: Plan of the stations observed in Belgium: (1) Brussels-National-Airport; (2) Brussel-Centraal; (3) Brussel-Zuid; (4) Antwerpen-Centraal; (5) Leuven; (6) Namur; and (7) Brugge.

Being precise, they were observed in the hall of stations, at the platforms, at the ticket offices and at the information desks, when available. Besides that, they were also observed on the train, at the airport and sometimes in the surroundings of each station. The reason why those sites were chosen varies:

- **Brussels-National-Airport:** the Brussels National Airport was used for more than 3 million passengers from almost 33.000 flights during February and March of 2015 (Brussels Airport, 2015a, 2015b). Although not all of these passengers used the train as transportation, from or to the airport, the Brussels-National-Airport train station was considered as the most potential place to identify tourists in Belgium, since it has direct connection with the airport dependencies.
- **Brussel-Centraal:** the Brussels-Centraal train station is located in the centre of Brussels, where many tourists are hosted everyday among the large amount of hotel, hostels and other hospitality-paid spots in this area, since it is close to most of the facilities and places of interest for tourists in the city. Furthermore, due to its central location, it is a place where tourists can easily reach the

dependences. It was considered another potential place to observe both leisure and business travellers, since it has trains leaving to any station in Belgium.

- **Brussel-Zuid:** the Brussel-Zuid train station is known as the busiest in Belgium. All international trains arriving in or leaving from Brussels passes through this station. In addition, it also connects trains coming or leaving to any station in Belgium. It also offers connections with other transports, such as shuttles, metro, trams and buses for many places either inside or outside the Belgium's borders.
- **Antwerpen-Centraal, Brugge and Namur:** due to its attractiveness as tourist cities, these three stations could offer a great amount of tourists visiting the city. For this reason they were also included in the observation plan.
- **Leuven:** for logistic reasons, Leuven was also included in the observation plan. Apart from being the starting point for the researcher, who was living there, it has a large amount of international students because of the University located there.
- **On the train:** in order to observe the behaviour of tourists during the trip, the observation was also done on the trains, while travelling in between the based city of the researcher and the destinations.
- **At the airport and surroundings of each site:** willing to understand behaviours outside the train station and the train, some observations needed to be held in different environments. Because of this, the surroundings of each station and the airport lounge were also taken into account in the observation plan.

During the observations, most of the facts and thoughts were recorded in notebooks. In addition, a few pictures were taken with the camera of the smartphone Samsung Galaxy Ace Plus S7500, which provides pictures of 5 megapixels quality and 2592 1944 pixels of resolution. Although the pictures provided by the camera lack in quality, mainly concerned to the stability of the images, it was enough for recalling moments during the transcriptions. It also helped the observer to stay anonymous and covered, as it was just a normal traveller taking pictures of the station.

The observations were finished when the observer felt that no new data were being collected anymore, while most of the behaviours previously observed were overlapping. It was considered a pivotal methodology, in which a lot of discoveries were made and approximated the researcher of the topic. Then all the data was transcribed manually from the notebooks to a virtual document, using the software as a service (SaaS) Google Docs<sup>16</sup> (see transcriptions in Appendix B). Each observation made received a composition of code “Ob” and number, in order to be better illustrated during the discussion of the user requirements (e.g. Ob0202).

As the observations were not enough to deeply understand the target audience, there was a need for another approach. The next stage discusses the use of focus group sessions in order to validate what was observed and make new discoveries that could not have been observed.

#### **4.4. Interviewing groups**

With the observation sessions a lot of interesting data were collected, highlighting behaviours, attitudes, difficulties and activity flows of the target audience. Although the observations provided a good set of discoveries based on actions, there was still a need for an in-depth understanding of the passengers’ thoughts, such as motivations, aptitudes, mental models and frustrations during the whole experience. Seeking to collect this data, three focus groups’ session were organized and held in a semi-structured interview, including questions such as (see the complete guide of the interviews in Appendix C):

- What is the biggest difficulty you face when using trains in Belgium?
- What information sources do you use to check trains when planning a trip? What about in an off-line environment?
- Buying a ticket, how do you choose it?
- How do you know which platform you have to go?
- How do you know when it is time to get off the train?

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<sup>16</sup> <https://docs.google.com/document/> - Accessed in 15<sup>th</sup> of May of 2015

- When you arrive to the destination, what are usually the next steps you take?

An overview of the steps done for this methodology is shown in the Figure 57:

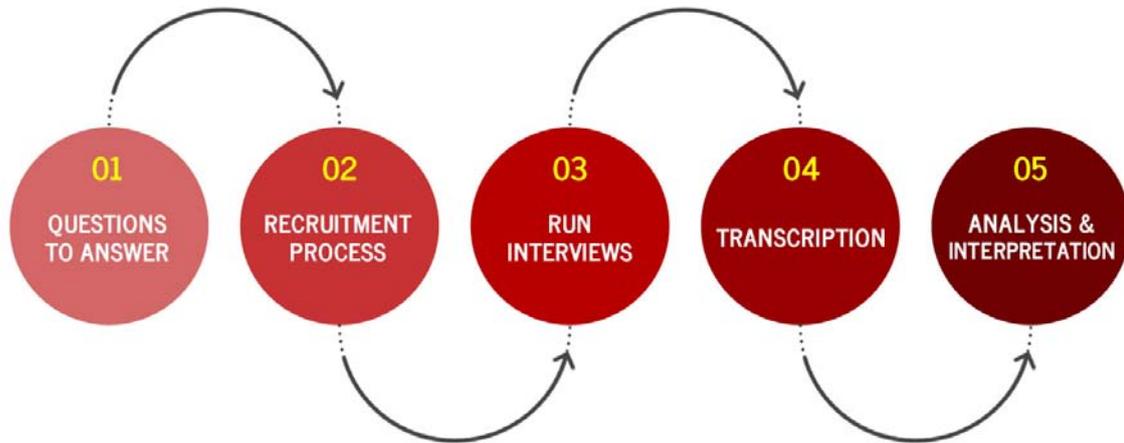


Figure 57: Overview of the steps done for the focus group sessions

The sessions were carried with international exchange students of KU Leuven, living in Belgium for less than a year. This requirement fits the concept of tourist proposed by (UNWTO, 2014) and facilitated the recruitment process, since most of the participants would easily reach the session's place without relevant loss of time and financial expenses. In order to motivate potential participants to sign up for the sessions, and encourage them to help with real data, a cinema voucher worth 7,5€ was offered as a reward.

The recruitment was made through an online form, by Google Forms<sup>17</sup>, in which participants had the chance to choose among 4 different dates (from 1<sup>st</sup> to 4<sup>th</sup> of April of 2015), and three different schedules for each day (in the morning at 10:00; in the afternoon at 16:00; and/or in the evening at 19:00, except by 4<sup>th</sup> of April – which was a Saturday – where they could apply for sessions at 14:00, 17:00 or 20:00). Besides, they also could use the field “Others” to inform any other possible schedule. The potential participants were encouraged to check more than one option, through the description “You can check as many sessions as you are available to be part. However, you will be invited to participate in only one session”. With this strategy the researcher aimed to collect as many participants as possible for any session, and then decide the

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<sup>17</sup> <https://www.google.com/forms/about/> - Accessed in 15<sup>th</sup> of May of 2015.

three most suitable schedules. The estimated time was between 45 to 90 minutes for each session, with a minimum attendance of 4 participants per session, and a maximum of 7, in order to relevant amount of feedback without losing control of the session. The online form was announced mainly via social networks through the researcher's profile, on 30<sup>th</sup> of March of 2015, in specific groups where international students of Leuven usually participate for a wide range of motivations, such as "Pangaea - Katholieke Universiteit Leuven"<sup>18</sup>, "Erasmus ESN Leuven '14/'15"<sup>19</sup> and "Leuven Junk Shop"<sup>20</sup>. In order to call their attention, an image was used to support visually the invitation (see Figure 58).

In total, 27 participants from 18 countries signed up, confirming that the strategy used for recruitment was well planned. However, one participant was disqualified for not fit the requirements, since he was living for more than 12 months in Belgium. The next step was to analyse which sessions had more potential attendance, distributing the interested students on a sheet, using the SaaS Google Sheets<sup>21</sup> (see Figure 59). Later on, the participants of the best suitable sessions were contacted through email by the researcher, in order to confirm the session's schedule and reassure the participants' availability for the specific time announced.

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<sup>18</sup> Pangaea is the name of the international meeting centre of the KU Leuven. It is located inside of the Social Sciences' campus and its described by the organization as "a place where Belgian, international students and friends can interact, play games, read newspapers, drink some coffee/beer, meet new people, all in a stress-free atmosphere". The Facebook group had more than 10.000 members in 30<sup>th</sup> of March of 2015. Link: <https://www.facebook.com/groups/PangaeaKULeuven/> (Accessed in 15<sup>th</sup> of May of 2015).

<sup>19</sup> Erasmus Student Network (ESN) is a non-profit international student organisation. Their mission is "to represent international students, thus provide opportunities for cultural understanding and self-development under the principle of Students Helping Students", as described in their official page (<http://esn.org/> - Accessed in 15<sup>th</sup> of May of 2015). The Facebook group had more than 2.000 members in 30<sup>th</sup> of March of 2015. Link: <https://www.facebook.com/groups/308415685979422/> (Accessed in 15<sup>th</sup> of May of 2015).

<sup>20</sup> Leuven Junk Shop is the most popular group on Facebook for selling and/or buying second-hand stuff, which is largely used by different type of people, including international students that need to buy or sell stuffs when they are arriving or leaving Leuven. The Facebook group had more than 14.000 members in 30<sup>th</sup> of March of 2015. Link: <https://www.facebook.com/groups/leuvenjunkshop/> (Accessed in 15<sup>th</sup> of May of 2015).

<sup>21</sup> <https://docs.google.com/spreadsheets/> - Accessed in 15<sup>th</sup> of May of 2015.



Figure 58: Image used for calling participants for focus group sessions.

	Wednesday			Thursday			Friday			Saturday		
	10H	16H	19H	10H	16H	19H	10H	16H	19H	14H	17H	20H
								Fg011				
							Fg012	Fg012	Fg012			
								FgX008				
						Fg007		Fg007	Fg007	Fg007	Fg007	
								Fg013				
								Fg014				
Fg015		Fg015		Fg015				Fg015				
	Fg001						Fg001	Fg001				
			FgX001	FgX001	FgX001	FgX001	FgX001					
						FgX002						
Fg002	Fg002	Fg002										
						Fg008						
						Fg009						
		Fg003						Fg009	Fg009			
								Fg016		Fg003	Fg003	
FgX003												
										FgX005		
							FgX004					
	Fg004											
Fg005	Fg005	Fg005										
	Fg006											
								Fg017	Fg017		Fg017	Fg017
								FgX006				
						Fg010						

Figure 59: Schedule's table for the group sessions. The green background represents the participants confirmed for the session; the red background represents that they are excluded for that session, since they confirmed another one; the blue background represents participants that confirmed the session in a first moment, but for some personal reason could not attend it; the yellow background represents that there were enough participants for the session, being these participants on the waiting list.

In sum, three focus group sessions were held in a meeting room of the Centre of User Experience Research of KU Leuven (see Figure 60), one per day, between 1<sup>st</sup> of April and 3<sup>rd</sup> of April, with a total of 17 participants, from 11 different countries (Brazil, Bulgaria, Czech Republic, Egypt, Finland, France, Italy, Portugal, Turkey, United States and Ukraine). They had an average of approximately 23 years old (minimum: 19 years old; maximum: 30 years old), and have been in Belgium for more or less 6 months (minimum: 2 months; maximum: 10 months).



Figure 60: Focus group session on going in the meeting room. The moderator is in the centre.

The sessions were recorded both in video and audio, with a camera Zoom Q4 for its quality on capturing audio with clarity and definition, through the built-in X/Y microphone. In addition, a Sony Digital Voice Recorder ICDUX533S also captured the audio from the other side of the table, giving the researcher an extra source for the transcribing process, which was made manually utilizing the SaaS oTranscribe<sup>22</sup>. The participants were attributed by a code “Fg” and number, in order to keep their privacy and better illustrate the quotes during the discussions of the user requirements (e.g. Fg004). The transcription of the interviews can be found in Appendix D.

In reflection of the data gathered through the focus group sessions, it was considered a useful methodology for the purpose. Although this kind of methodology offers a considerable amount of risk situations, the researcher could manage all the participants in a positive way, gathering important results. Having all the data from

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<sup>22</sup> <http://otranscribe.com/> - Accessed in 15<sup>th</sup> of May of 2015

the focus groups transcribed and stored in Google Docs documents, the next stage was to set up the board game workshops.

## 4.5. Playing with users

Having gathered the data from the direct observations and focus group sessions, there was still a need for collecting new insights that could not be accessed during the other two methodologies. In order to assess potential user experiences regarding a future product, a board game workshop was applied using a personalised board game designed for the specific environment. Participants were taken on a fictitious train trip from point A to point B, to capture insights regarding the information needs that travellers experience during several phases of (or following specific events during) a journey. An overview of the steps done for this methodology is shown in the Figure 61:

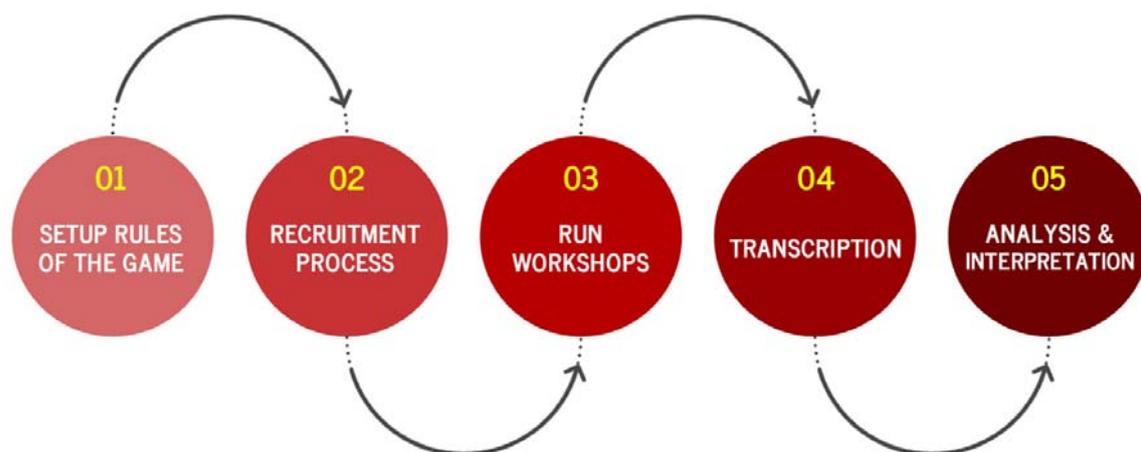


Figure 61: Overview of the steps done for the board game workshops

For this methodology, the researcher mostly followed the guidelines defined by Slegers et al. (2015), also utilizing the game board designed by her team, that is loosely based on The Game of Life, simulating a journey by means of a track on a board (see Figure 62).

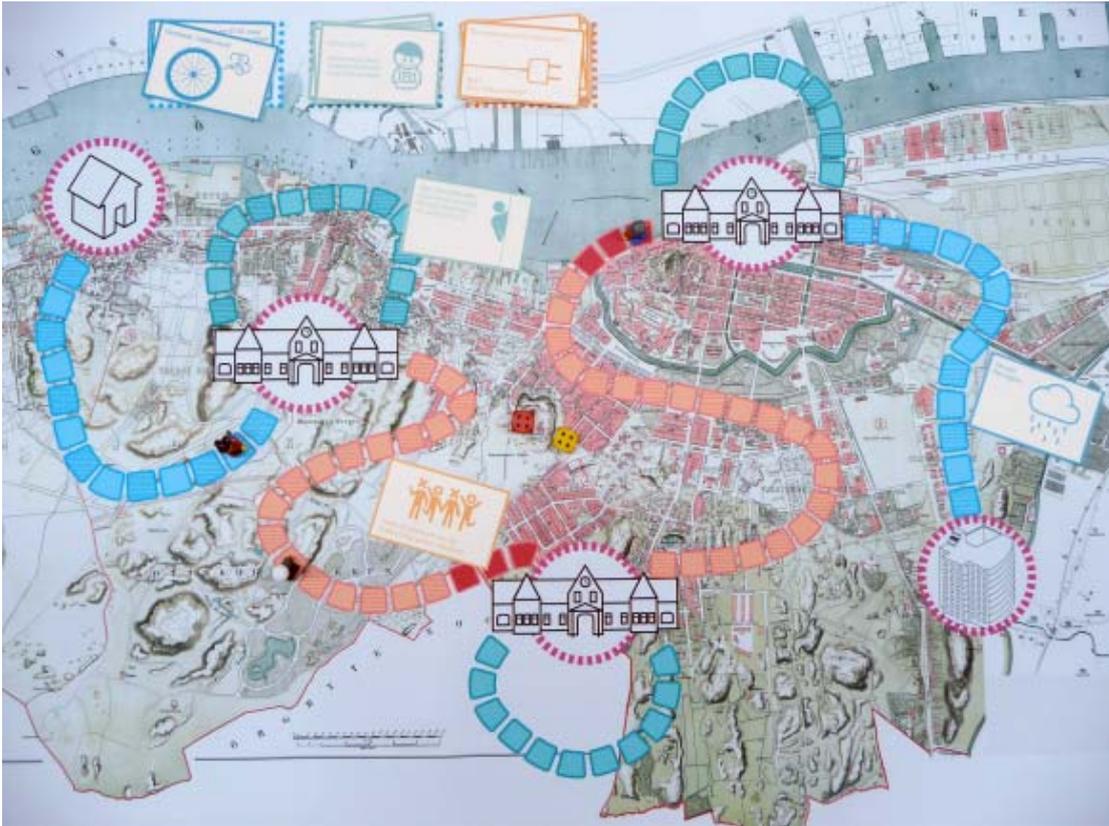


Figure 62: Board game utilized in the workshops, developed by Slegers et al. (2015)

In sum, the participant had to go from home to the final destination, passing through three different train stations, using a playing piece defined in the beginning of the game. Thus, the participant experienced fantasy situations recalling the way from home to the station; at the station; on the train, at the station (connecting trains); on the train again; and from the last station to the final destination. The goal of the game was representative for the journey: players had to reach their destination as quickly and as comfortable as possible, being the winner the first team to reach the final destination. To move along the track the players needed to throw two dices, determining how many squares they were allowed to move their playing piece. There were three types of squares, in which they should follow the rules accordingly: event squares, blank squares, and penalty squares.

The event square meant they had to draw an event card (see Figure 63), representative from the stage they were in the game (blue, light blue and orange), and were allowed to ask a question to the Train Information System (TIS) via a chat program on a tablet. The TIS was presented to the participants as a futuristic and omniscient solution able to answer all kind of questions, such as travel information as

well as indirectly relevant information, such as weather, waiting times at coffee bars, or crowds in the station. During the workshop, an assistant researcher answered the questions remotely, Wizard of Oz style, with players not aware about the human nature of the TIS beforehand. The blank square allowed players to ask an open question. As a reward, they were allowed to advance one square ahead each time they asked something. This strategy was used in order to motivate them to keep asking (consequently providing more data for the research), while they advanced faster in the game board than if they did not ask. However, this rule differs from the original purpose of Slegers et al. (2015), in which is suggested to throw the dices again, instead of just move one square ahead. The researcher decided to change this in order to guarantee more time of game playing, since throw the dices after each question could finish it very fast. When landing in a penalty square, players lost a turn. This square was representative of delay or missed connection.



Figure 63: Example of event cards used in the board game workshops

During the whole workshop, the researcher used the waiting time between asking and getting answers from the TIS to discuss the questions made by the colleagues and the answers provided by the system. Doing this, instead of collect data about one team of players, the researcher was able to get insights from everyone in the game.

For the board game workshop there were an expectation of at least 4 players, and a maximum of 6. This way the participants could work in pairs, in order to promote the discussion and increase the data gathered. Less than 4 players would not be enough,

since the players would need to play alone and all decisions could be made quickly, without discuss it with the colleague. This way, the data gathered could be poorer. On the other hand, workshops with more than 6 participants were considered risky, since the turn of each pair on the board game could take a long time.

Regarding the success of the focus group's recruitment, the researcher repeated the steps described in the previous chapter, once more carrying the study with international exchange students of KU Leuven, living in Belgium for less than a year; offering a cinema voucher worth 7,5€ as reward; and making use of the SaaS Google Forms to obtain subscriptions.

This time the participants had the chance to choose among 4 different dates (from 13<sup>th</sup> of April to 16<sup>th</sup> of April of 2015), and different schedules for each day (Monday 13<sup>th</sup> and Wednesday 15<sup>th</sup>: 10:00, 14:00 and/or 16:00; Tuesday 14<sup>th</sup>: 10:00 and/or 15:00; and Thursday 16<sup>th</sup>: 10:00). Again, they could use the field "Others" to inform any other possible schedule, and were once more encouraged to check more than one option. The announcement of the online form also was done in the same way, being published in the same groups, on 11<sup>th</sup> of April (see Figure 64). The estimated time was between 45 to 90 minutes.

It is important to highlight that the dates purposed for this methodology conflicted with the Easter break calendar, when many students went out of the city. Even though, 24 participants from 17 countries signed up. However, 3 participants were disqualified for not fit the requirements, since they were living for more than 12 months in Belgium. An interesting fact is that from the 21 participants left, 4 of them had also subscribed in the focus group session, being three of them actually participated. They were able to participate again. In the end, they were again distributed on the sheet and invited to the sessions according to the best suitable schedules (see Figure 65). The plan was to have a minimum attendance of 4 participants, and a maximum of 6.

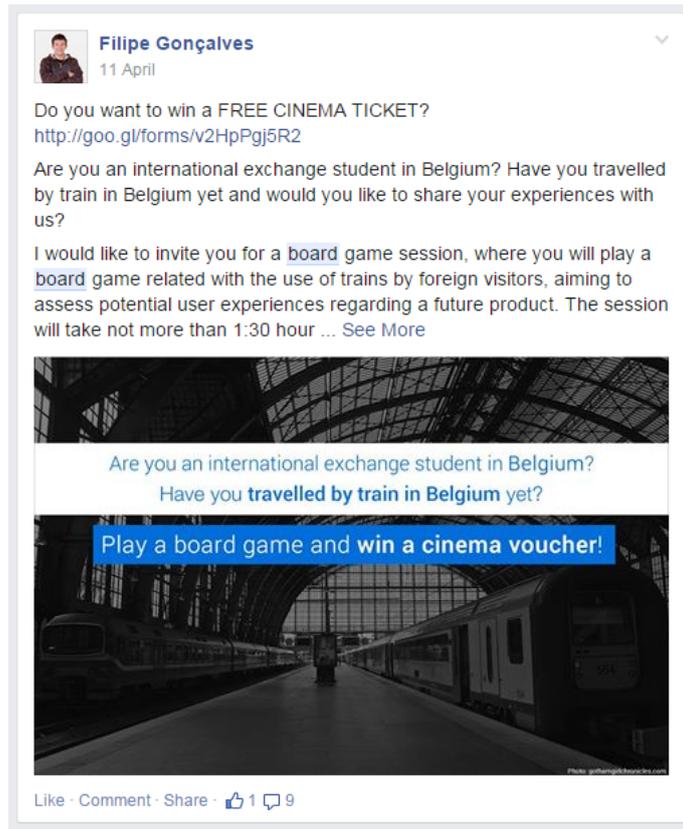


Figure 64: Image used for calling participants for the board game workshops.

Monday 10H	Monday 14H	Monday 16H	Tuesday 10H	Tuesday 15H	Wednesday 10H	Wednesday 14H	Wednesday 16H	Thursday 10H	Others
				Ga001					
				Ga007		Ga007	Ga007	Ga007	GaX007: After 18:00 Any day
							Ga008		GaX008: 17:00 - 18:00 Any day
Ga009		Ga009		Ga009		Ga009	Ga009		GaX009: After 18:00 Any day
							Ga010		GaX005: Thursday and Friday after 16:00
					GaX003				
				Ga011			Ga011		
				GaX001				GaX001	
				Ga002					
				Ga003					
				Ga004					
				Ga005					
				Ga006					
							GaX005		
							GaX006		
			GaX002						
						GaX004			
							Ga012		

Figure 65: Schedule's table for the board game workshops. The green background represents the participants confirmed for the session; the red background represents that they are excluded for that session, since they confirmed another one; the blue background represents participants that confirmed the session in a first moment, but for some personal reason could not attend it; the yellow background represents that there were enough participants for the session, being these participants on the waiting list.

In sum, two board game workshops were held in the design room of the Centre of User Experience Research of KU Leuven (see Figure 66), on 14<sup>th</sup> and 15<sup>th</sup> of April, with a total of 12 participants, from 7 different countries (Brazil, Bulgaria, Czech Republic, Egypt, Italy, Portugal and Serbia). They had an average of approximately 25 years old (minimum: 21 years old; maximum: 30 years old), and have been in Belgium for more or less 5 months (minimum: less than a month; maximum: 9 months).



Figure 66: The board game workshop being set-up with participants. In the picture the researcher is explaining the rules of the game for the participants. Specifically, the TIS is being presented.

Credits: Marlene Moura

The sessions were recorded with the same material of the focus groups sessions, due its success on helping the researcher to transcribe all the data. The transcribing process was once more done manually utilizing the SaaS oTranscribe. As made in the previous methods, the participants were attributed by a code “Ga” and number, in order to keep their privacy and better illustrate the quotes during the discussions of the user requirements (e.g. Ga001). In addition, all the conversations between the participants and the TIS were logged and available for further consult. The transcription of the conversations between participants during the game and the logs of TIS system can be found in Appendix E.

In the end, the board game workshops were confirmed as an important step of the user research for its capability to evoke discussions about certain topics that are not

commonly remembered by the participants in other methodologies. Moreover, it involved participants into the topic in a more fun and relaxed way, when compared to other traditional user experience methods. However, it seems that participants who know each other in advance tend to lose attention and diverge the topics more often, highlighting the importance of a moderator with ability to control the session, in order to not lose focus of the game and consequently waste time and resources. Besides that, this methodology proved to facilitate the understanding of latent information needs through the discussions between the teams while playing, and the questions formalized to the TIS system, as mentioned by Slegers et al. (2015) in the early published results of the method.

Finally, the data transcribed was added together with the other two methodologies in order to analyse all the content, which is discussed next.

## 4.6. Analysis of the data gathered

The data collected during the observations, focus group and board game workshops' sessions were analysed through the qualitative data analysis' software NVivo 10. On the software, several nodes were created iteratively (see Figure 67), aiming to represent a certain type of behaviour, motivation, attitude or need.

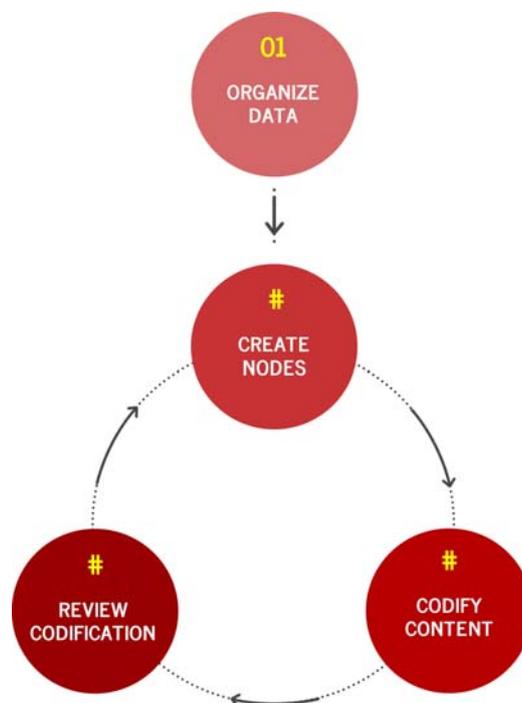


Figure 67: Overview of the steps done for the analysis of the data gathered

In the end they were attributed into nine main categories, created in order to facilitate the classification of the data collected: (1) Buying and using tickets; (2) Checking information; (3) Facilities; (4) Meanwhile; (5) Mistakes; (6) On the train; (7) Open talk; (8) Uncertainty - Worries; and (9) Unexpected events. It is important to mention that by the time the data started to be analysed (after the direct observations) there was not a clear decision about the terminology used for every word in the context of the use of trains. For instance, the node is called “Inspector – Conductor” instead of only “Conductor”, which is the terminology used later based on the words mentioned by participants during the focus group sessions and board game workshops.

Activities regarding the use and purchase of tickets were attributed under the structure *Buying and using tickets* (see Figure 68), in which was possible code where tourists bought the ticket (*Internet, Machine or Ticket Office*); if they had problems (*Problems*); and acts of comparison between types of tickets and occasions in which they paid more than necessary for a ticket (*Comparing – Paying more than necessary*). Moreover, a new node was created during the analysis since it was mentioned quite often during the interviews: the need of printing the ticket (*Print the ticket*).

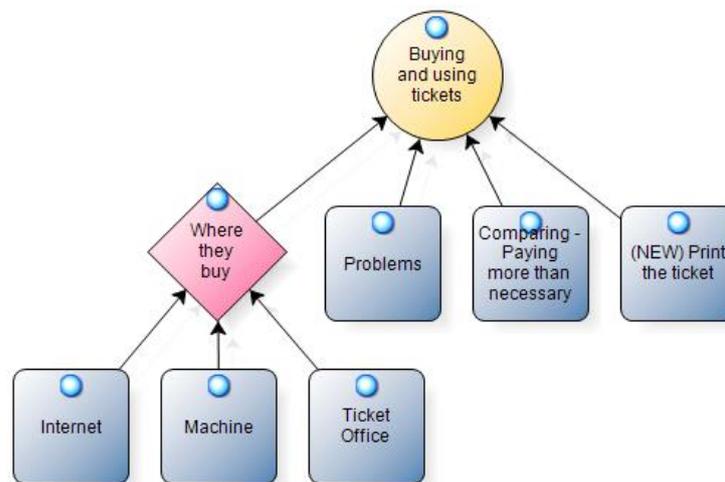


Figure 68: Structure of nodes of the category “Buying and using tickets”

The structure *Checking information* (see Figure 69) was used to code where tourists get the necessary information for their trip, such as through official sources (*Railtime; Inspector – Conductor; On train’s board; NMBS app; Timetable; Platform display; Ticket office – Information desk; BelgianRail.be; Railtime; Totten; and Audio announcements*), people (*Random – Friends; Other employees*), reading signs

(*Reading signs*) and/or alternative sources (*Tourism Office; Forecast; Printed map; Alternative transportation; Alternative mobile app*).

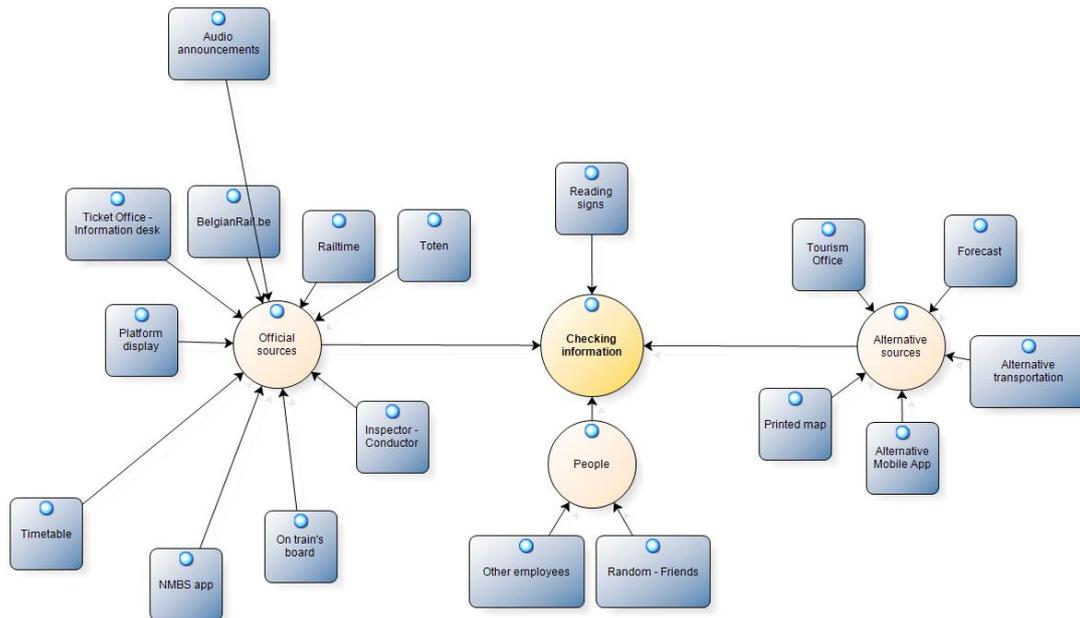


Figure 69: Structure of nodes of the category "Checking information"

Activities regarding the access and use of facilities were attributed under the structure *Facilities* (see Figure 70), such as Internet (*WiFi*); availability to parking (*Parking lot*); places to buy food and drinks (*Eat & Drink*); use of electronic devices (*Use of electronics*); and other (*Others*).

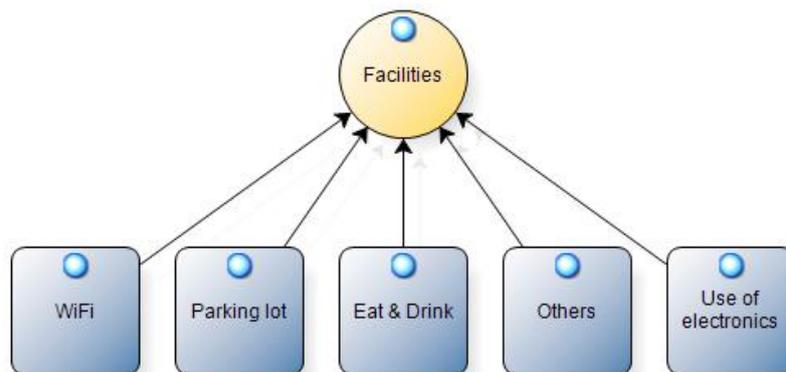


Figure 70: Structure of nodes of the category "Facilities"

The activities carried during the waiting time were coded under the structure *Meanwhile* (see Figure 71), such as when they were seen using the time for something else (*Killing time*) or just waiting (*Waiting*).

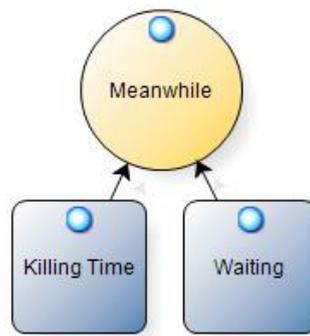


Figure 71: Structure of nodes of the category “Meanwhile”

Mistakes made during the whole experience were coded under the structure *Mistakes* (see Figure 72), highlighting the most commons mistakes, such as take the wrong train or leave in the wrong station (*Wrong train – Leaving in the wrong station*); get into the wrong carriage regarding the class (*Wrong carriage*); leave the station in the wrong exit (*Wrong exit*); access the wrong platform (*Wrong platfor*) and take a train that takes longer to arrive at the destination (*Train takes longer (Route with many stops)*).

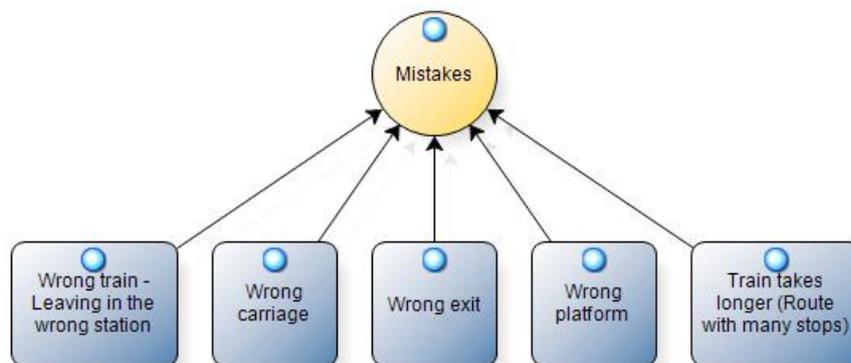


Figure 72: Structure of nodes of the category “Mistakes”

Behaviours and attitudes carried on board were coded under the structure *On the train* (see Figure 73), such as how tourists choose a carriage and seat (*Choosing a carriage and seat*); how tourists leave the train (*Leaving the train*); and displeasures occurred during the ride (*Annoyances*). Besides that, attitudes regarding the fact of having luggage were also taken into account, such as tourists observed having problems to carry the luggage (*Problems carrying*); the use of the accessibility room of the carriage to leave the luggage (*Accessibility room*); keeping the luggage close by

(*Close by*) and leaving the luggage on the top-shelf of the carriage, above the seats (*Topshelf*).

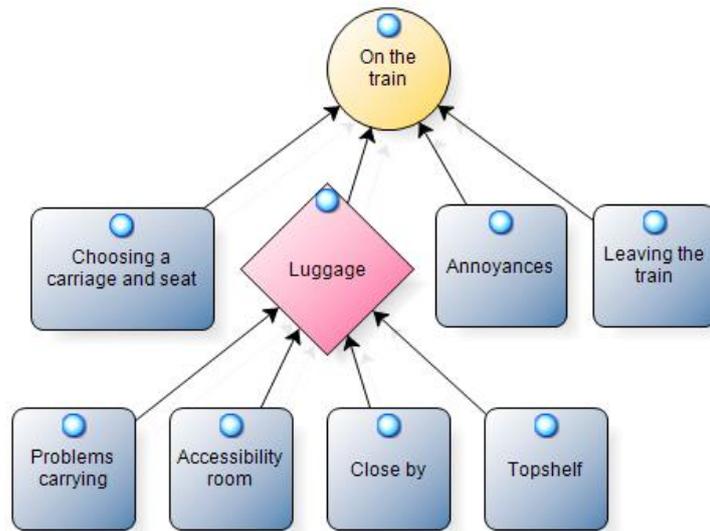


Figure 73: Structure of nodes of the category “On the train”

Open discussions carried during the focus group sessions and board game workshops were coded under the structure *Open talk* (see Figure 74), specifically reports regarding train differences among different countries (*Train differences among countries*); the quality of trains in Belgium (*Quality of trains*); positive facts about other train companies (*Good points from other trains*) and suggestions made by the participants (*Suggestions*).

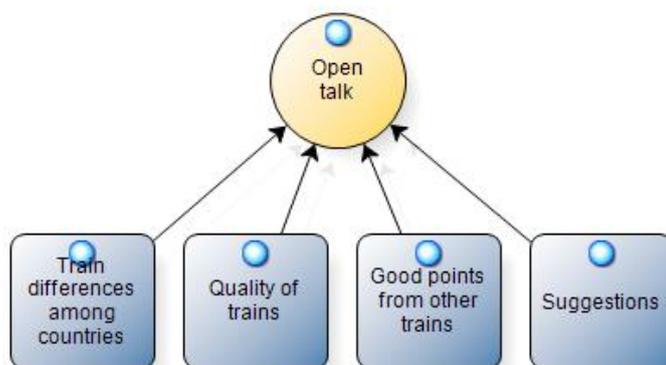


Figure 74: Structure of nodes of the category “Open talk”

Negative feelings during the train ride were coded under the structure *Uncertainty – Worries* (see Figure 75), classifying problems regarding when it is time to leave the train (*When to leave the train*); where they have to go in certain situation (*Where to go*

(Which platform, where is my train...)); fear of lose the train connection (*Lose the train connection*), being in the wrong place (*Being in the wrong place*); or getting into the wrong train (*Getting into the wrong train*); uncertainty about which zone at the platform the train stops (*Which zone the train stops*), what are the rules (*Rules*) and what is happening when the train stops suddenly, for instance (*What is happening*); or if the place is safe or has any security team available (*Safety-Security*); worry about bother other people (*Bothering other people*); uncertainty about managing time (*How many time left*); doubts about availability of accessibility features (*Accessibility*); and uncertainty about details of certain route (*Certain route*).

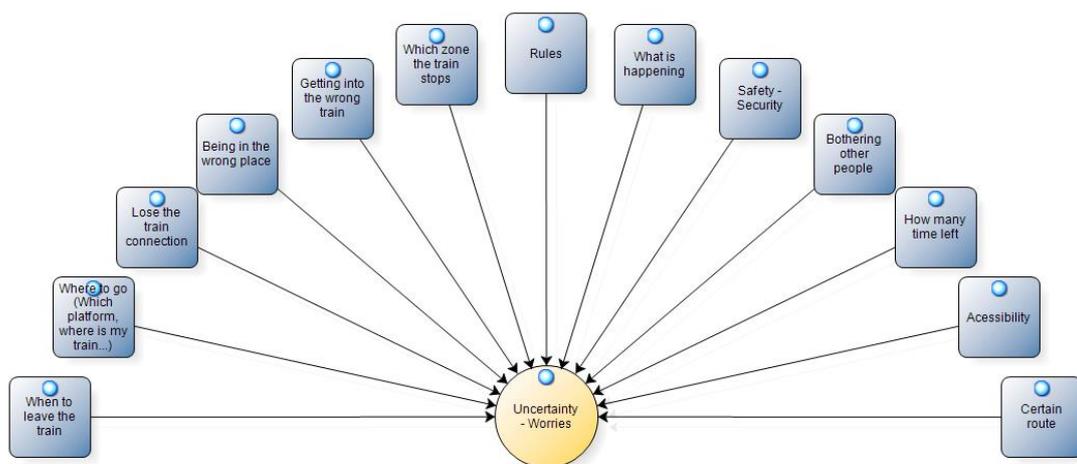


Figure 75: Structure of nodes of the category “Uncertainty - Worries”

Lastly, events not expected to happen were coded under the structure *Unexpected events*, such as when a tourist lost the train (*Lost the train*); had language barrier issues (*Language barrier*); could not find any train available in the next minutes or hours (*Lack of trains*); delays on the planned trains (*Delays*); and others (*Others*).

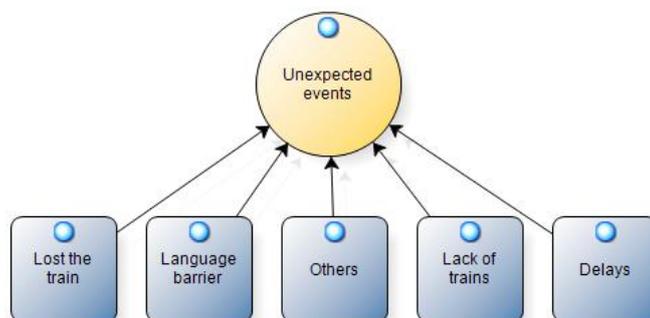


Figure 76: Structure of nodes of the category “Unexpected events”

This classification improved the interpretations and conclusions made from a large amount of data, consequently leading to a better understanding of the patterns observed and discussed during the user research sessions. The interpretations were written down informally, through the use of bullet lists aiming to facilitate the reading and comprehension for future use. The results from this analysis are presented in the section “5. RESULTS”.

## 4.7. Bridging the research-design gap

Utilizing the knowledge gathered from the user researches, Persona-based scenarios were developed based on behaviour patterns identified during the observations and interviews. For this, two processes were made: development of Personas and development of scenarios.

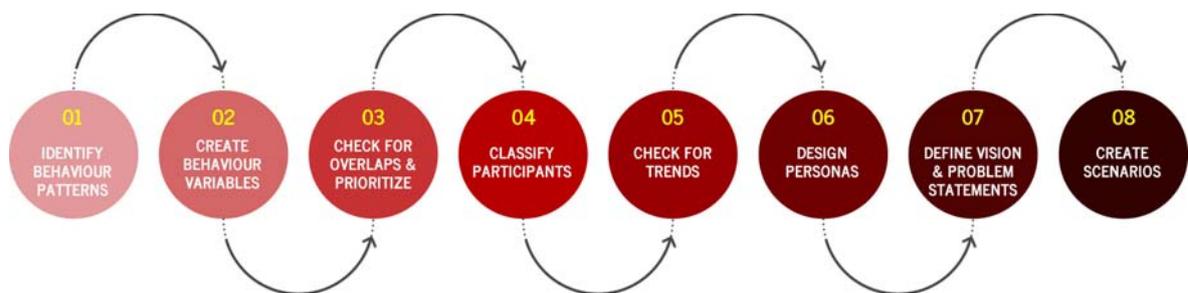


Figure 77: Overview of the steps done during the Persona-based scenarios

For the Persona development, the behaviour patterns identified during the user researches were converted in behavioural variables, mostly specifying a continuous range of behaviour (e.g.: newbie or expert, related to ICT knowledge). After identifying possible overlaps and prioritizing certain variables, 12 behavioural variables sustained among 4 different categories (see Table 10).

Table 10: Structure of the behavioural variables and categories

Categories	Behavioural variables #1	Behavioural variables #2
Checking information	Trial-and-error	Get to know
	On-line	Off-line
	Once	Many times
	In advance	Last time
	Consult others	By himself
During the ride	Use time for something	Relax
	Efficiency	Comfort
	Price	Comfort
	Enjoyment	Transportation
ICT background	High	Low
Travel experience	Explorer	Planner
	Expert	Newbie

In order to create the basis of each persona, each behaviour variable was written in yellow post-its and allocated in opposite sides (e.g. explorer in the left, planner in the right). The idea aimed to symbolise a scale, in which the researcher could attribute characteristics for each persona. To accomplish that, each participant of the interviews was masked with a letter (e.g. participant 01 was masked with “A”) and then mapped on the scale between the variables, later on forming the basis of the persona. It was not relevant whether a participant falls precisely or approximately at the centre of the imaginary scale. Instead, it is important be able to interpret the clusters with clarity, as shown in the Figure 78: In relation to the use of time during the ride, a group of participants “HBCYV” is situated slightly to the left of the scale, closer to “Use time for something” variable. On the other hand, a group of participants “OT” is located slightly to the right, closer to “Relax” variable. This means that “HBCYV” has a small tendency to use the time during the ride for something, while “OT” has a small tendency to relax in the same situation.



Figure 78: Example of attribution for each participant (pink post-its) in the scale between behavioural variables (yellow post-its) of certain category (orange post-its).

With all the participants placed somewhere in the scales, as shown in Figure 79, the researcher spent time analysing the overview of participants and their behaviours, trying to identify trends through clusters that are used simultaneously in multiple ranges (A. Cooper et al., 2007), which means a behaviour pattern between the participants classified. By the end, three relevant behaviour patterns were identified among 12 behaviour variables and synthesized into the design of three personas.

In order to keep the personas relevant for the goal of the study, each one of them was designed with details generally based on the data, such as: personal information; media & technology usage; travel background, goals, behaviour, concerns and budget. Besides, it was also included the information sources in which they mostly rely on, measured by hierarchy. Moreover, in order to create a set of imaginary, travel dreams were also included. Lastly, one behaviour variables from each category were chosen to illustrate their personality through a scale, such as ICT knowledge (low - high), traveller profile (explorer – planner), reassurance level (low - high), use of trains as (enjoyment – transport). All three Personas are presented in detail in the section “5.3. Persona-based scenarios”.

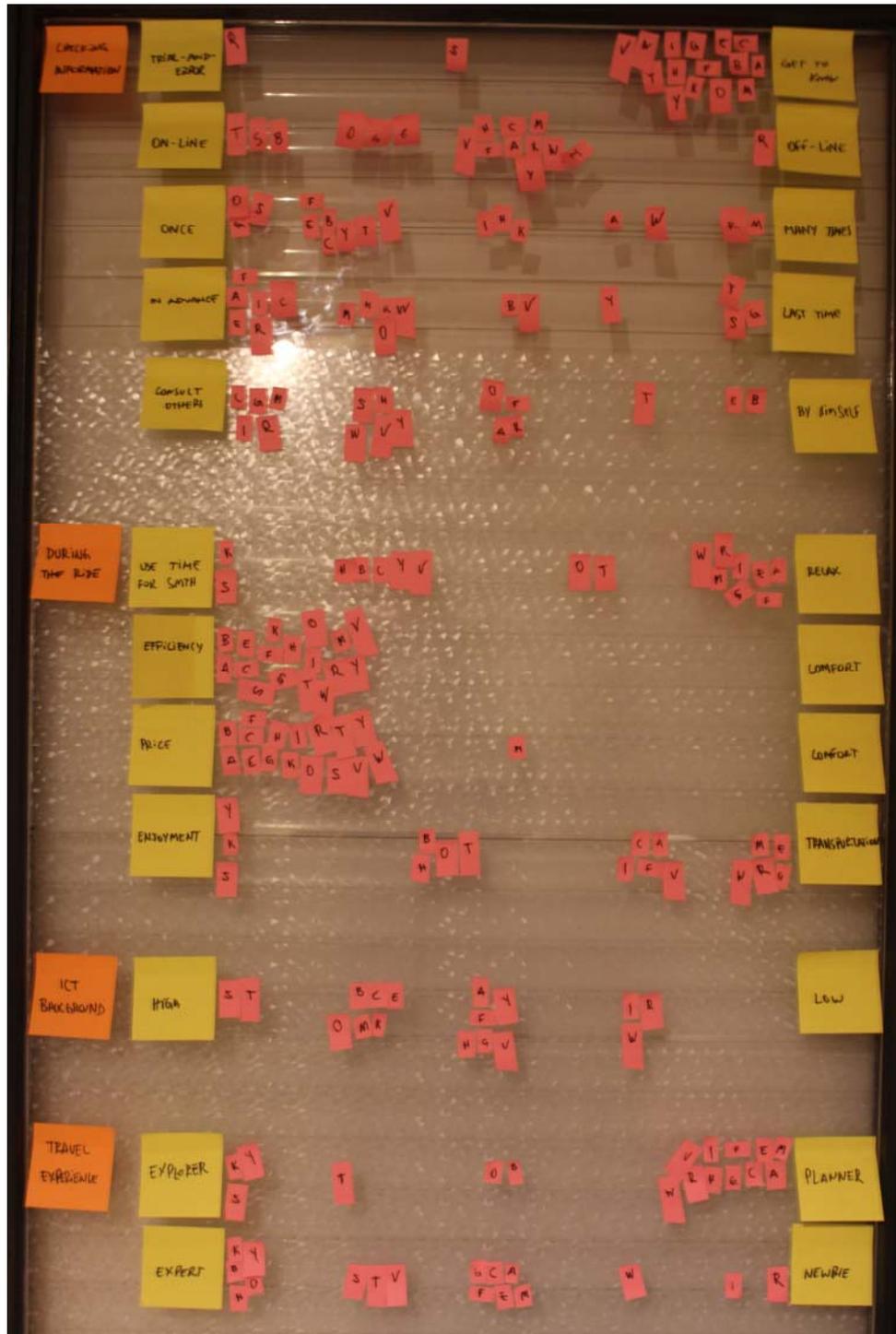


Figure 79: Board with the personas' exercise completed, being all participants disposed somewhere in between the behaviour variables.

In the sequence, in order to elucidate the needs and goals that the design should assess by using Persona-based scenarios, context scenarios were developed using narrative as a design tool for each of the personas. As Cooper et al. (2007) points, the use of scenarios helps to bridge the research-design gap and define requirements,

which turns to define the fundamental interaction framework for the product. Then, firstly a problem and vision statements of the product were created based on the questions of this study aiming to keep in mind the reasons of the design initiative and its objectives. Furthermore, the Personas' expectations designed earlier were checked in order to confirm that all the aspects previously described in "3.3.4. Personas & Scenarios" were enough illustrated and ready to serve as base (together with the visual and problems statements) to the context scenario narrative. Lastly, one narrative per Persona was written focused on high-level actions of each Persona (and not the product itself), without any multimedia file support: entirely textual. The needs and user requirements for each phase of the story were highlighted apart.

Thus, the outputs gained through these tools should directly facilitate the design and development of a product. The details of the Personas-based scenarios are also discussed in the section "5.3. Persona-based scenarios".



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# CHAPTER 5 RESULTS

In this chapter is presented the results gained during the study. It is divided in 4 sections. The first one, “5.1. User requirements for tourists”, presents the interpretations made through the analysis of the data gathered. The second one, “5.2. Main differences between tourists and commuters”, elicit the points in which tourists and commuters differ regarding the use of trains in Belgium. The third section, “5.3. Persona-based scenarios”, shows the results of the Personas and context-scenarios development. Lastly, the fourth section, “5.4. Discussion of the results”, discuss the findings of this study.

## **5.1. User requirements for tourists**

Through the iterative analysis of the nodes created based on the data gathered during the user researches, it was possible to identify ten main insights about the tourist's experience with trains in Belgium. They are (1) Primary information: collecting and understanding; (2) Buying and using tickets; (3) Getting to know the rules; (4) Facing language barriers; (5) Constant reassurance and being up to date; (6) Managing unexpected events; (7) Behaviour on board; (8) Complementary information: finding and using; (9) Managing time; (10) Social features. Each one of these insights is presented in-depth in the sequence.

### **5.1.1. Primary information: collecting and understanding**

Even for travellers that do not plan a train trip beforehand, but still has a destination in mind, collect and understand information about a journey is vital. Sooner or later, the traveller needs to get to know from where a train departs, at what time, and if it is going to reach the desired destination. Thus, primary information is the base of a tourist trip and involves all the sources able to provide information about how to get from one place to another.

The train system in Belgium has a wide range of official sources providing information related to its services, as partially shown in the subsection "4.2.1. Official sources of information". Moreover, tourists also rely on non-official sources, such as the opinion of fellow passengers. Each of these sources that are approached, interpreted, used or ignored by tourists is discussed in the sequence.

#### **5.1.1.1. Real-time timetable**

The real-time timetable is digital and offers real-time information about the next trains departing from the station. However, the information displayed is insufficient and confusing for most tourists, being one of the biggest problems identified on the data gathered. Tourists often do not find their destination displayed, and consequently do not know which platform and train they should take. The major problem is that this source of information only displays the final destination (e.g. "Hasselt") or two stations on the route (e.g. "Aarschot Antwerpen-C"), as shown in the Figure 80.

Time	Destination	Type/Icon	Platform
12:04	Brussel Kortrijk	IC	3
12:09	Bru-Luchthaven De Panne	✈️	1
12:10	Landen Luik-Guill	IC	4
12:12	Brussel s-Gravenbrakel	L	B
12:13	Sint-Niklaas	L	6
12:14	Hasselt	L	9
12:19	Knokke Blankenberge	IC	1
12:23	B-Walibi Ottignies	L	D
12:26	Bru-Luchth Antwerpen-C	✈️	7
12:29	Luik-Guill Eupen	IC	3
12:34	Brussel Oostende	IC	2
12:36	Aarschot Antwerpen-C	IC	9
12:42	Brussel s-Gravenbrakel	L	B
12:42	Mechelen Gent-St-P	IC	5
12:43	Hasselt	IC	7
12:43	Hasselt Genk	IC	4
12:52	Brussel Quiévrain	IC	1

Figure 80: Detail of real-time timetable in Leuven's station displaying the upcoming trains to depart

As tourists may be not familiar about the Belgium's territory, they do not relate "Knokke Blankenberge", for instance, as the final stop of a train route that is going towards Bruges, as mentioned in a focus group session: *"I found it a bit annoying. In the main table they always put last stop, not Ghent. (...) I want to go to Brussels, but I don't know which one is that, because it says some strange French cities, and I don't know"* (Fg003). Consequently, passengers often do not find their train displayed on the real-time timetable.

Furthermore, real-time timetables may display a symbol close to the train information (e.g. airport icon on routes passing through the airport; blinking red square for trains approaching the platform; static red square for trains parked at the platform). However, during the observation only a few screens were found with legends supporting the meaning of the code, even though in the local language and using a physical resource, as shown in the Figure 81. As a consequence, it may lead tourists to take wrong decisions or cause worries and uncertainty, as observed in Antwerpen-Centraal station where two tourists were seen discussing about what the code *\*\*\*\** meant (it was being showed on the place of the platform number).

14:15 Aankomst					
Uur	Herkomst	Trein SpoorVertrj	Uur	Herkomst	Trein SpoorVertrj
14:06	Charleroi-Zuid	IC 22	14:48	Puurs	L 22
14:09	Gent-St-P	IC 2	14:51	Brussel-Zuid	IC 21
14:10	Roosendaal	L R4	14:51	Hamont	IC 6
14:12	Turnhout	IC 14	14:54	Oostende	IC 3
14:15	Amsterdam C	IC 23	14:55	Nijvel	L 11A
14:16	Hasselt	IC 21	15:03	Leuven	L 13
14:21	Brussel-Zuid	IC 22	15:06	Charleroi-Zuid	IC 5
14:22	Noorderkempen	IC 21	15:09	Gent-St-P	IC 2
14:23	Poperinge	IC 12	15:10	Roosendaal	L 23
14:24	Brussel-Zuid	L 11	15:12	Turnhout	IC 14A
14:27	INA 9339 Paris-Nord	IC 22	15:15	Amsterdam C	IC 23
14:29	Leuven	IC 13	15:16	Hasselt	IC 21
14:30	YHA 9352 Amsterdam C	IC 23 +OH1	15:21	Brussel-Zuid	IC 22
14:35	Mol	L 4	15:22	Noorderkempen	IC 21
14:36	Charleroi-Zuid	IC 24	15:23	Poperinge	IC 3
14:37	Essen	IC 23	15:24	Brussel-Zuid	L 11
14:42	Lokeren	L 1	15:29	Leuven	IC 12
14:43	Brussel-Zuid	IC 22	15:35	Mol	L 6
			15:36	Charleroi-Zuid	IC 24
			15:37	Essen	IC 23

■ = trein aangekomen

Figure 81: Real-time timetable with an improvised sticker to support the meaning of the green square, which means that the train has arrived at the platform.

In addition, it is very difficult for tourists to understand which train will take them to the destination in the least amount of time. Even though this information is available (e.g. on the printed timetables), it is often missed by unaware tourists: *“Sometimes you have two trains going to the same destination, at the same time. And they are on different platforms. (...) There is no information in the train station that is telling you which one is faster.”* (Fg010). Consequently, the chances of getting into a train that will take longer to reach the destination occur frequently: *“(...) I made this wrong decision, and I wasted one hour of my life”* (Fg003).

### 5.1.1.2. Printed timetable

Printed timetables are available in all stations providing static information about the expected train departures from the station, such as type of train and time of departure. Moreover, it also informs all the stops a train will make and the expected time of arrival on each station, what could help tourists to compare and understand which train is faster, avoiding mistakes like the ones mentioned previously in “5.1.1.1. Real-time timetable”. Although a good amount of tourists were observed using printed timetable and one focus group’s participant mentioned have it as preferred “off-line” resource (*“For me is either mobile or timetable”* - Fg001), many others have

shown a resistance for using this information source: *“I rather ask to a person where I have to go, instead of looking for the timetable because I think that the timetable is a bit difficult to understand”*(Fg005).

The reason is that if a passenger passes by the set of printed timetables and hastily glance at it, will most probably only see a large amount of table cells filled with text (see Figure 82). Then, coming a bit closer, it will probably firstly see the title of each table written in Dutch or French. Thus, the language barrier and overload of information in a first sight seems to prevent more people to use it: *“the timetable is not electronic or anything and it's only in Dutch or French”*(Fg002).



Figure 82: Passengers looking for the right information on timetables at Leuven station. If they are looking for trains within the next minutes, it is safe assume that one of them is wrong since the information is arranged by date and time.

### 5.1.1.3. Gate display

The gate display is digital and is located at the gates that gives access to a particular platform, offering real-time information about the next train to depart from the related platform. They are often checked by passengers that could not find their train information in the real-time timetable, in a sort of trial-and-error strategy since they do not know exactly in which gate their train is departing. Although the stops that the train is going to make on the way are displayed, only the final destination (or two stations on the route) is highlighted. Thus, passengers that do not come closer to the gate display (or that do not pay much attention) may lose the detailed plan of the train

and consequently get lost. It was observed that the more gate displays a passenger look and fail trying to find his train, the more nervous and feeling lost they become.

On the other hand, gate displays seem to be sufficient for passengers when the name of their stop is being highlighted (e.g.: wants to go to Leuven and the display highlights “Leuven – Luik”), or when they are aware about the final destination of the train they have to take (e.g. wants to go to Leuven and knows that the train to “Landen” will bring him there). Moreover, gate displays are often used for reassurance before go to the platform, as shown in the Figure 83.

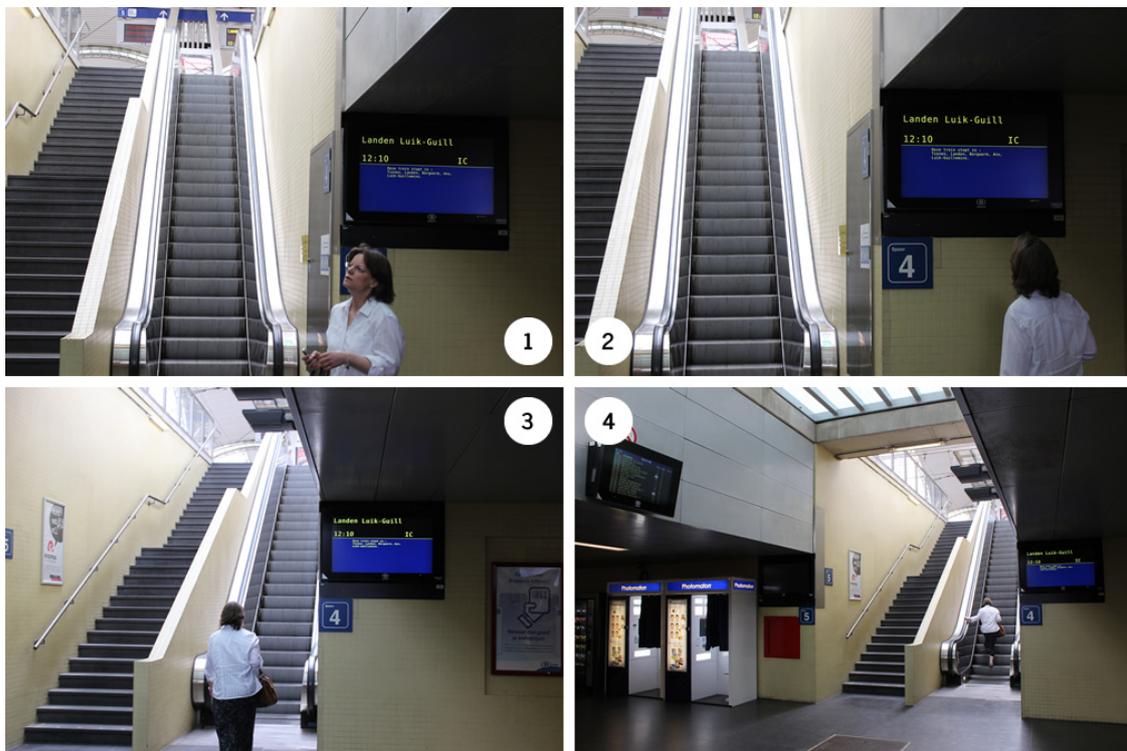


Figure 83: Passengers checking real-time timetable (1), then the gate display (2), and then moving to the platform (3 and 4).

#### 5.1.1.4. Platform display

As the gate display, the platform display is digital and offers real-time information about the next train to depart from a certain platform. The difference, besides the interface, is that the platform display is located on the sidewalk of the related platform (see Figure 84). Thus, it is a reference for passengers that already reached the platform, usually being glanced at for reassurance, in order to confirm an information gathered through other sources: *“I’m always looking at the board, so I look the time*

*and if it is like one minute and the train is there, I suppose it is mine and then I go in. I never had a problem”(Fg007).*



Figure 84: Platform display in two different platforms (“Luik-Guill Welkenraedt” in platform 3 and “Brussel Quiévrain” in platform 2).

However, the platform display may be not enough for passengers making connections<sup>23</sup>. In these cases, the passenger leaves the train and is immediately situated at the platform. Then, if the passenger did not have gather information about his next train in advance, he may need access to other information sources in order to get to know from which platform his next train is going to depart: *“I had to change the train in the Wallonia part and I found it difficult because all the voices were just in French, so it was difficult to understand the platform where my other train was”* (Fg006).

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<sup>23</sup> Connection is the act of change from one train to another in order to reach a final destination. For instance, a passenger wants to go from Bruges to Liège. To accomplish this, he takes first a train from Bruges to Brussels. In Brussels he leaves the train and get into another one that is going from Brussels to Liège.

### 5.1.1.5. Internet

Tourists make use of different sources of information provided through Internet<sup>24</sup>, such as the official website; NMBS/SNCB app<sup>25</sup>; alternative apps and third websites, according to their needs and environment.

The official website of Belgian Rail seems to be used mostly beforehand, when tourists are planning the trip from home. It is a good source for checking schedules and how long a train would take to certain destination. On the other hand, the NMBS/SNCB app is mostly used for last minute decisions, helping tourists to get to know about possible delays and mainly to find specific and practical information on the way to the station, such as the type of train and from which platform departs. A participant contextualised his situation on a focus group: *“Well, I use (the website) in advance for the trip to the destination. But when I'm at the destination I use the app because I don't know (...) how many hours I will spend there” (Fg017).*

Moreover, a tourist may prefer to use alternative mobile apps during the tourism experience, such as journey planners. A participant mentioned the need to use the *NS Reisplanner Xtra app* (which is the official journey planner of the Dutch railway system) due the limitation of the NMBS/SNCB app to plan International trips: *“When I use the app from the Netherlands it shows the platforms from Belgium, but the Belgium app doesn't show the stations from other countries. This is the main problem” (Fg009).* Another participant mentioned use another alternative app called *Offi Journey Planner*: *“This app I use for the whole Europe, actually. And it works pretty fine. So there is no need to change to another app” (Fg010).*

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<sup>24</sup> Although the restriction of use of Internet in a foreign country was not mentioned during the user research, it is important caveat that this might be a problem to consider in a scenario involving all type of tourists, due the prices and availability of roaming highly dependent of mobile networking operators. It is believable that such problem did not come up during this research because of the fact that most of the participants are temporary residents in Belgium and possess a Belgian mobile networking plan.

<sup>25</sup> Although it is a native app (i.e. installed in the system), most of its potential is lost without Internet connection. Thus, this information source is approached in this study together with website and mobile website.

#### 5.1.1.6. Information desk

The Information Desk is a customer service provided in the biggest train stations of Belgium. There, customers can talk with adequate employees ready to solve questions related to the train system. During the observations it became clear that the personal information provided by this service is helpful for passengers and a good alternative for people who could not solve their problems using other official sources. In addition, it is also useful for collecting information about third parties, such as alternative means of transport (shuttle and buses, for instance), as observed mainly in observations at Brussel-Zuid station. However, during the focus group interviews and board game workshops, most of the interviewees mentioned the word “information desk” referring to the “ticket counter”. This was possible to realise because they often mentioned the words “buy tickets” and “to ask questions” in the same context (it is not possible buy tickets in the information desk, but it is possible ask questions in the ticket counter).

#### 5.1.1.7. Ticket counter

The ticket counter is very useful for tourists to collect precise and correct information about their trains. During the observations, tourists were seen several times with tickets in their hands, but going to the ticket office to confirm which platform they should go, consequently which train they should take. Apparently, it was difficult for them to interpret the information provided from other official sources properly. Consequently, tourists may prefer to buy a ticket at the ticket counter in order to enjoy the service to ask the sellers for more personalised information: *“I go to the desk and when I buy the ticket I also ask for the platform. It's the easier way to find the platform.”* (Fg005). Even though they may need to wait on the line, getting information in the ticket counter saves cognitive effort, and provides trusted information. It seems tourists feel more confident following instructions given there, than acquired by themselves through other sources: *“(...) I cannot be bother to go and first look at which train can possibly be the one, then go and check the other screen (...) I always go to the cashier and speak to if they can speak English and let me know when is the faster, the sooner (train) to the destination”* (Fg013). However, be dependent of this information may cause discomfort, because they feel bothering others on the line, since they suppose that most people are in a hurry and their questions are delaying the service, as mentioned: *“I also have this problem that*

*people behind me are always in a hurry and get me stressed out, you start to missing your English and (...) you cannot communicate properly” (Fg004).*

#### **5.1.1.8. Display & Screen inside the carriage**

Some of the trains have inside the carriages a display and/or a TV screen that helps passengers to keep on track the ride, and get to know how many stations are left until get off the train. However, these display and screen are not often available. Consequently, get to know when the tourist’s destination is getting closer is a very difficult task, demanding a big cognitive effort from the passenger. Without this type of source of information, the last resource possibly provided on the train (except personnel and Internet) is the audio announcement.

#### **5.1.1.9. Audio announcement**

Audio announcements are made in the station, platforms and on board. Anyway, they are hardly useful for tourists because most of it is done in French or Dutch (except in Brussels, where announcements are always both in French and in Dutch, and for announcements concerning international trains, which are always in French, Dutch and English), which implies a language barrier and may cause more worries than solutions. This topic is further discussed in “5.1.4. Facing language barrier”. Besides that, the noisy environment can easily compromise the perception of the information: *“Sometimes you cannot hear the recording when there are some much noise around you, and people are talking and speaking on the phone. So I don't always hear them” (Fg015).*

#### **5.1.1.10. Conductor**

The employee responsible for checking tickets, and assuring that all passengers embarked the train before its leaves the platform, is very often consulted by tourists. Although it is not his main job, the conductors were observed dialoguing with passengers several times (see Figure 85). It seems that tourists enjoy the chance of having the conductor close by to reassure that the information gathered and interpreted before is right, as observed in Brussel-Zuid station: a guy read the panel saying ‘Bru-Airport Amsterdam C’ and still decided to ask the conductor, who was close by, if that train would go to Amsterdam (Ob0329).



Figure 85: Conductor giving instructions for a passenger

#### 5.1.1.11. Signage

Every station has a set of signs distributed among the public spaces aiming to indicate the directions to certain places to the passengers. However, the way it is distributed varies a lot among different stations. People seem to usually find their way following the crowd, reading the signs or just intuitively, according to their previous knowledge and experience. But in some stations this may cause some extra difficulties due its complexity, such as the one in Antwerp: *“I think that the main problem depends of the station. For example, in Antwerp there are a lot of floors and you just don't know which floor (to go). But most of the stations (...) have a logical sequence of platforms: one, two, three...”* (Fg009), or even some station being rebuilt: *“Some stations like for example Brussel-Schuman, its being renovating right now and it is a bit difficult to know where you should go. And there are only two options, one in two. But still I made a mistake.”* (Fg012). Moreover, during the observations some people were seen ignoring the signs for the elevator and using the stairs or escalators to reach the platform, even though they were carrying big luggage or carrying babies on prams, for instance.

On the other hand, the signage seems to be very important for passengers who are not familiar with the route the train is taking. These passengers may rely on the signage of the platform while riding the train in order to count the stops and keep themselves on track of the ride: *“and from time to time, when there is a stop I try to look which station I am”*(Fg007).

### 5.1.1.12. Fellow passengers

In addition to the official sources, tourists also rely on fellow passengers' information. They regularly ask the help of strangers, friends or random employees when in doubt (see Figure 86). This seems to occur not only when they do not know what to do, but also when they want to reassure their thoughts are right. In the case of unexpected events, mainly on board, the opinion of fellow passengers may be crucial since the tourist might need to gather information and decide what to do in a very short time.



Figure 86: Passengers discussing about certain train information

Generally, tourists seem to trust fellow passengers opinions, following the instructions received from them. However, there are also tourists who may prefer to reassure the information asking the same questions for more than one person: *“And*

*not only (ask) one (person), but like two or three to confirm. And sometimes I just got, you know, contradicting information. Somebody just tell me go like this, and go like that. So I need to, you know, confirm more and more”* (Fg010). However, the act of talk with strangers may make tourists feel uncomfortable, mainly introverts or the ones who does feel confident enough to speak the local language or English: *“(...) talk to people can actually help, but if you are not comfortable or you just arrived here, ‘Hey, so anonymous, can you help me please?’... This is not so easy”* (Fg008).

## **5.1.2. Buying and using a ticket**

The previous section presented how tourists collect and understand primary information in order to go from one place to another, but did not approach how tourists choose, buy and use tickets in order to be able to make use of train services. These topics are discussed in the sequence.

### **5.1.2.1. Choosing a type of ticket**

According from the data gathered, tourists have a preference for the cheapest ticket no matter the type, since nobody mentioned a desire to use the first class, neither was observed using it on purpose. This can be consequence of Belgium as a small country, being the comfort provided by the second class good enough for the tourists’ expectation, and may not be worth expend more money for better comfort in such a short ride.

Nevertheless, understand which ticket is the cheapest for certain route is very complex. Different factors influence this, such as:

- **Age:** people under 26 years-old (i.e. maximum 25 years-old) can use special tickets like the *GoPass 1* ticket or *GoPass 10* card. On the other hand, people older than 25 years-old can use the *Railpass* ticket;
- **Route:** depending on the route, a *Standard Ticket* can be even cheaper than a *GoPass*. For example, a *Standard Ticket* from Leuven to Brussels costs 5,30€, while the *GoPass 1* costs 6€;
- **When:** if travelling during the weekends, a *Weekend Pass* provides 50% under the *Standard Ticket* price. This means that the passenger can get a round trip ticket paying for only one way. This can be cheaper than any other ticket, but

again depends of the route. For instance, a round trip from Leuven to Brussels costs 12€ with the *GoPass 1*, and only 6,20€ with the *Weekend Pass*. However, the round trip from Liège to Bruges costs 12€ with the *GoPass 1*, and 22,20€ with the *Weekend Pass*.

It is very difficult for tourists to get to know and understand all these options. Consequently, the chances of ending up spending more money than necessary because of the lack of knowledge are very high. Most of the interviewees assumed to have done that in the past, and this makes them feel damaged. Another important fact about choosing a type of ticket is that, apparently, many of them got to know about the cheapest option through friends, confirming that the current information is not clear for the user: *“The thing is that all the information [about types of tickets and price] is on the website. But still I needed friends to let me know”* (Fg013).

Furthermore, seems that the tickets to the border are even more confusing because it is not clear what is the best procedure to be taken in order to pay less and reach another country, as mentioned in focus group sessions: *“When I was planning to go to Koln for carnival they [friends] told us that there was a special ticket for Aachen with discount price. But it was quite complicated. (...) It was really complicated that I stayed alright [referring that he did not travelled].”* (Fg003); *“It happened the same to me and I decided to go to Koln by bus because it was too complicated by train”* (Fg006).

Therefore, the choice of which type of ticket to buy seems to be closely related to the need of understand what is the cheapest option available.

### **5.1.2.2. Buying a ticket**

The train system in Belgium offers six distribution channels where a passenger can buy tickets (even though only four of them are available for tourists), as shown previously in the subsection “4.2.2. Types of tickets and payment methods”. Each of these channels is discussed in the sequence.

#### **5.1.2.2.1. Website**

Buy a ticket on the website can be very convenient, but the need for printing it out is not, as mentioned in a focus group: *“I know that the Internet (referring to the website)*

*is more convenient, but you have to print it out, so that's not very convenient.*" (Fg002). Thus, it may discourage tourists to use this channel if they do not have a printer available, even if they use the website to check information: *"But I don't buy online because I don't have a printer at home, so I don't have how to print"* (Fg007). Besides, not being allowed to present the ticket in a mobile device can lead tourists to mistakes, as it happened during one observation and is further discussed in "5.1.3. Getting to know the rules".

#### **5.1.2.2.2. Ticket machine**

Face the difficulties of understand which type and price of ticket fits best for the tourist, the ticket machines were confirmed as a way of comparing prices of tickets. Tourists simulate the trip and its conditions in order to check the price before conclude the purchase, as mentioned in during focus group sessions: "I always do that. I check if the GoPass or Weekend pass is the cheapest. So I just check at the machine" (Fg016); *"(...) actually I always use the automated ticket machine so I know the cheapest. (...) Well, I will just put in different options, go back, go another option, and then I will see each option is the cheapest and just buy there"* (Fg011), and observed in the hall of Bruges station, where five friends were discussing in front of the ticket machine which option would be cheaper, before finally purchase the tickets (Ob0110). However, it may be an annoying task that takes a lot of time and cognitive effort if the tourist does not have a briefly idea of which type of tickets he needs to look for, as mentioned by two focus group participants: *"That's too long. You have to enter several stuff and you have different tickets, because there are so many options for tickets..."* (Fg017); *"Too many options. Like, it's a bit difficult to know what to choose. Too many options"* (Fg014).

Furthermore, many people were seen failing while trying to purchase a ticket through the ticket machine (see Figure 87). Not all the reasons could be observed in detail, but some of them are consequence of difficulty in understand which type of ticket is the best to buy; what is the cheapest option; and problems with payment methods, since the ticket machine does not accept notes and the ones that accept coins (not all of the ticket machines) has a limit of 20€.



Figure 87: Passengers failed buying a ticket on the ticket machine and then moved to the ticket counter

A participant mentioned this issue about payment method in a focus group session: *“I just have a card and the machine doesn't accept (this specific) card... Or you need to have coins and you don't have coins”* (Fg009). Besides, difficulties to use the interface of the ticket machine may be another reason, since a participant mentioned the need to go to the ticket counter even though the type of ticket he wanted to buy (ticket to the border) could be purchased in the ticket machine: *“They only work if you have to go to another Belgium's city. If you have to go out of the border they don't work. You cannot buy your ticket in there”* (Fg003).

#### 5.1.2.2.3. Ticket counter

The ticket counters are frequently used for tickets purchases by tourists. As briefly discussed in “5.1.1. Primary information: collecting and understanding”, tourists often rely on ticket counters to get primary information about their trip. Thus, it turns out to be a multiuse source where a tourist can ask questions, buy and get a printed ticket in the same time: *“(...) It's the easier way to find the platform. I also can ask the person which is the cheapest way to get in another place. So I think it's the cheapest and easier way to move to another place”* (Fg005). Moreover, tourists also mentioned to make use of this channel to acquire tickets that in their previous knowledge could not be acquired anywhere else: *“You could, but not always (referring to use the machine). For this one you have to fill in a big form, which you cannot do online I think”* (Fg014).

On the other hand, ticket counters were observed many times with huge lines of people waiting to be served. The use of ticket counters as a provider of primary information can give a false perspective of how much time will be necessary to be served, since a short line does not mean that the next turn will come faster.

Consequently, it can easily delay someone's trip and increase the chances of missing a train: *"I never buy in the station because normally there are lines or, maybe you are late and you just get there and 'ok, I don't have time to get it'"* (Fg009).

#### **5.1.2.2.4. On board**

During the user researches nobody mentioned neither was observed buying a ticket on board on purpose. This may relate to the fact that a) tourists did not know this was possible or b) tourists are not willing to pay the *on-board fare* discussed in "4.2.2. Types of tickets and payment methods". However, cases in which tourists had to pay a fee or buy another ticket were mentioned in both focus group sessions and board game workshops and are related with the use of tickets, which will be discussed next.

#### **5.1.2.2. Using a ticket**

Tickets for national routes in Belgium do not provide any reservation for given train at certain time. They can be used in all trains on the trajectory to the final destination until the expiration date. Thus, tickets do not have printed any detailed information about which train a passenger has to take (neither which platform is going to stop). However, tourists may expect to find this information printed in the ticket in order to look for their trains: *"Once you get a ticket it doesn't really give you any additional information, it just says from which station to station it goes, but it doesn't show you like stops, or platforms, or anything"* (Fg002). As a consequence, tourists were observed many times checking their tickets for a while and then moving to other sources of information in order to gather primary information, as discussed in "5.1.1. Primary information: collecting and understanding".

Furthermore, does not matter which type of ticket a passenger has, the procedure is default: after get into the train, the passenger can find a seat and wait the conductor comes to ask to present the ticket. In relation to that, the vast majority of people observed and interviewed does not highlighted any issue, even though two tourists were observed, in different times, asking if it is necessary validate the ticket somewhere before ride the train (Ob0416, Ob0222). Since many public transports in the World requires a ticket validation, this issue may be an example of tourists using previous knowledge in consequence of their ignorance related to specific conditions (i.e. rules) in the Belgian train system.

Further problems identified about the use of tickets are related to the knowledge and understanding of rules in the Belgian train system. They are discussed in-depth in the next session together with other rules-related issues.

### 5.1.3. Getting to know the rules

With the data gathered in the user researches became clear that tourists are not always aware or confident about how to use or behave regarding the use of tickets, such as:

- **It is only valid for a given date:** as mentioned previously, a ticket does not provide a given reservation. However, it is restricted to the date mentioned during the purchase. This information may be missed by tourists and results in extra surcharge: *"...she made a mistake and on the train she had to buy another one, and paid like 7€ just for the mistake. Extra!"* (Fg007);
- **How long a ticket is valid during the day:** although a ticket is valid for all trains available in certain route in a specific day, it is unclear for how long it can be used in a certain route. A group of tourists was coming from Dinant direction Brussels and decided to stop in Namur (that is in between Dinant and Brussels) to get to know the city. The conductor had already stamped their tickets on the way Dinant-Namur, and they became in doubt whether they could use the same ticket and keep the trip to Brussels, or they needed to buy new tickets from Namur to Brussels (Ob0505);
- **Extra fee to Brussels-National-Airport:** all tickets arriving or departing from the Brussels-National-Airport station must be extra charged through the *Diabolo Fee*. Although all singular tickets (such as *Standard ticket*, *Weekend ticket* and *Go Pass1*) automatically implement this fee, the passes (such as *Go Pass 10* and *Railpass*) do not. Thus, although this information can be found in most of the official information sources, unaware tourists may have problems presenting their ticket to the conductor: *"The controllers (referring to conductors) said: 'Oohh no, GoPass doesn't work to go to the airport so you have to pay another ticket'"* (Fg012);
- **How to fill the GoPass 10:** it seems to be confusing for tourists whether the same GoPass 10 can be used by only one person or more. Moreover, it may

not be clear if a GoPass 10 should be filled in before the conductor approach the passenger, or in front of the conductor, or even if the conductor should fill in the information: *"But if you never fill it before it's always like 'Hey, how should I fill in the GoPass?' (...) Then you might get screwed."* (Fg017).

- **Present the ticket on a mobile device:** tickets bought through Internet (website) must be printed. However, tourists may not be aware about this requirement. During an observation on board, two tourists presented their tickets to the conductor through the tablet. The conductor refused it and they started a discussion, which clearly caused many discomfort to both passenger and conductor (Ob0105).

Apart from get to know what their obligations when using the service are, tourists also have shown an interested about get to know what are their rights regarding the use of train services. During a board game workshop, players asked the TIS: *"Should the station be hold responsible for the delays, when we miss something really important?"* (Ga009).

Yet, part of those problems is closely related to the language barrier, which is discussed in the sequence.

#### **5.1.4. Facing language barriers**

A big issue for tourists riding trains in Belgium is related with the language barrier. It is surprising for them that in most of the trains and stations the real-time information is mostly presented only in the official languages, such as Dutch and French (German is used in a very small part of the country and was not observed neither mentioned during the sessions). Tourists seem to be not prepared to face this problem since they hope to find information in English everywhere: *"(...) at least this train that I caught today they don't speak English, they just speak Dutch or French. There are others that speak English too, but why not everyone?"* (Fg008).

The language barrier turns the process of getting to know the rules harder. Although tickets do not include all the conditions of its use, some basic information is usually provided. Thus, even when such rules are easily accessible for reading, tourists may not be able to do it except if they master the local language: *"(...) because if you buy the ticket, there are some information written in Dutch or in French. (...) If you do it by*

*yourself then you don't know. Then you might get screwed*". From the problems discussed in the previous subsection, at least three of them could be avoid if there were not language barriers: on the tickets there are information about the need to present the ticket printed to conductors, and that they are only valid for the date mentioned; while the Go Pass 10 includes a short description that is necessary fill in the information before get into the train.

Furthermore, most of the information screens and displays do not provide a version in English, such as the disturbance screens in the station, that seeks to inform people about problems that may change the original schedule (see Figure 88), as well as audio announcements on board, that can also be used to inform passengers any general information about the train service. However, these messages are not understood by tourists, and as a consequence may compromises their tourism experience by increasing the feeling of uncertainty, as mentioned on a focus group session: *"Sometimes there are some problems or accidents on the way and they just speak, in Dutch or French, that there is a problem or whatever and then you don't understand anything"* (Fg010). In addition, the approach to conductors can also face language barriers. Although conductors are often used as providers of primary information (as discussed in "5.1.1. Primary information: collecting and understanding"), participants mentioned that their level of English is basic and not enough for helping solving more complex problems, as the rules of the tickets: *"Some of them speak English, but the English is okay... on the really basic level. And if they have some troubles then it's kind of hard to explain what is the problem. They cannot explain for you what is the problem. For example, we were travelling from Dinant back to Leuven. And my friend filled the GoPass wrong. And because he [the conductor] couldn't speak English very well he just said some basic explanations and then charged her one more time for the same ride. But she didn't understand why. So she was kind of annoyed by this situation"*(Fg017).

Moreover, the name of the cities in different languages may cause confusions for tourists unaware about the bi-lingual nomenclature of cities (e.g. Antwerp is called Antwerpen in Dutch and Anvers in French), as discussed during a focus group session where they explicated their doubts about the nomenclature used for Leuven:

*(Fg010): In the beginning I thought that Louvain it was the same thing of Leuven, (...) the French translation. But afterwards I knew that this is just another place.*

(Fg007): *But they [referring to French speakers] say Louvain as well.*

(Fg008): *You don't catch from the beginning what is the difference (...). If it is just a translation or another city.*

(Fg007): *Yeah, you are right. Because, sometimes, if you are in the French part [of Belgium] they translate Leuven as Louvain, just Louvain. So it's similar. You have to pay attention if it is just Louvain or Louvain-la-Neuve.*



Figure 88: Disturbance screen displaying information in Dutch about something wrong with the “Line 75: Gent-Sint-Pieters – Moeskroen”.

### 5.1.5. Constant reassurance and being up to date

Tourists are very afraid of being in the wrong place, asking fellow passengers or employees around to confirm if they are in the right platform or train. They seem to be regularly paying attention on everything that happens during their train experience, trying to avoid mistakes and reach the destination without major problems.

The use of different sources helps them to check whether the information gathered in certain source match the information gathered in another one: *“The app is telling me even which platform I should take. But sometimes I also keep in eye, because the app is not perfect. Sometimes it has some, you know, pitfalls. So when I go [to the station] I just check [the real-time timetable]: ‘Oh, this IC [type of train] going to which*

*platform...'*" (Fg010). For many times tourists were seen accessing the platform and immediately asking to fellow passengers with they are on the right way.

Furthermore, while waiting the train, many times tourists were observed restless, continually checking the platform display and the tracks. In cases in which the train was delayed this attitude became clearer, and in some of the situations observed they even started to talk each other to reassure about the train and platform information. On the other hand, when a late announcement is shown on the screens, tourists seem to feel more relaxed since they know that the problem is already being held by the train service. Moreover, it was observed many times that tourists frequently double check their information, sometimes even retreating the steps taken in order to be sure that the information gathered is still right: *"I'm used to confirm information over and over again, so... I like to be really sure"* (Fg007). In stations such as Brussel-Zuid, Brussel-Centraal and Brussels-National-Airport, where real-time timetables are also available in many of the platforms, tourists have shown a tendency to wait their train close to this screen, in which they constantly check the information to make sure that nothing changes, even though the platform displays still indicated that the next departure would be their train. In addition, tourists also rely on the conductors' knowledge to reassure one last time before get into the train that everything is right, as observed in Brussel-Zuid station when a guy came to the platform, checked the platform display (that was showing "Bru-Aeroporto Amsterdam C") and still decided to ask the conductor if that train would go to Amsterdam (Ob0329). However, when do not find or are not close to the conductors, the opinion of fellow passengers is an alternative frequently used.

Beyond that, tourists are continuously checking if it is everything still going according to the plan. Thus, when tourists cannot understand some unexpected event (for instance an audio announcement made; a screen displaying some random information; or simply a train slowing down/stopping in the middle of nowhere), they easily become afraid and usually start to try to find an explanation as quick as possible, as a participant during a focus group session highlighted: *"I got to the train station and I found that bomb alert [announcement on the disturbance screen, but in Dutch and French]. 'What's bomb alert? What's going on?' (...) And nobody knows what's up... No trains are moving, and whatever. And then I asked one guy and tell me that is a bomb alert. (...) 'What we should do? Should we run or what?'"* (Fg010). In this case, the participant could only understand the words "Bomb alert" on the disturbance

screen, but due the unusual situation he did not took the information literarily and decided to ask a fellow passenger, in order to understand what was the real meaning. This behaviour of seeking to understand what is happening in order to be updated about the scenario seems to be very common in the tourism train experience in Belgium: “[Asking himself] ‘What's the problem?’, then somebody will answer you and tell you that there is a problem and we gonna have to wait. But normally, you know, you don't feel comfortable that you don't understand anything. Especially in emergency cases or delay cases.” (Fg010).

Although tourists make a big effort to reassure their information and keep updated about what is happening, sometimes unexpected events happens and they need to make new decisions in order to manage the situation and reach their goal, as discussed next.

#### **5.1.6. Managing unexpected events**

During the train's trip, many unexpected events can occur. Some of them happen often, and then passengers are more used to it and know how to deal with. Others are not common even to experience passengers, and then need much more attention and effort to find an alternative or solution. Based on the observations done and the opinion gathered during focus group sessions, delays seem to be one of the unexpected events that happen often: *“It is always the train delays. Because if it's 5 minutes delay, which is typical...”* (Fg001). Although just one of the participants mentioned look for an alternative way of transport (*“...or if there is a possibility of going by bus then I will try that also”* – Fg001), it seems that many of tourists do not take much action in relation to that. Instead, they seem to assimilate the problem and complain about it: *“I know that delay is a problem in all countries, delay in the trains. But I still... We have to complain because it's not a good thing, especially when the delays are more than 30 minutes and then they cancelled it”* (Fg016). However, as mentioned by one participant, delays can imply consequences not only for their lives, but also others: *“You should go at certain time and you have a meeting at certain time, but because of the delay of the train you come... later”* (Fg010). In sum, most of the tourists may not have a “plan b” to put into action, neither possess ready information to overcome delays and find a quick solution.

Furthermore, many tourists get confused about which platform to go due the problems presented in “5.1.1. Primary information: collecting and understanding”,

often making the mistake of being in the wrong one, as observed many times during the observations. In a worse scenario, tourists may even take the wrong train, or get off in the wrong station, as mentioned during a focus group session: *"It was dark when I was going home so I couldn't really see the signs, so I would always get off a stop earlier before the one I supposed to get off. And that place seems like a farmers' town, so I had to wait 30 minutes for the next train just to get in a train that was supposed to take 2 minutes (to the next station). I just mean that if not a very populated stop and you miss your train, or get off too late or too early, it have to wait a long time for the next one"*(Fg001).

Beyond that, the lack of trains can results in a lot of problems for them. Tourists feel very affected when the trains are on strike (*"There were a lot of strikes so it was kind a hard to avoid this strikes and sometimes made a lot of problems to get to the airport or something like that"* – Fg017) or not running, such as during the night when there is no trains, as pointed by a participant in a focus group session: *"Another difficulty is when I get from the airport and there are not trains after, I don't know, midnight, or in the morning. And I have to wait in the airport or station for more than 4 hours to get the first train in the next day (...) I just had to wait and it was really bad. (...) It was a really bad experience"*(Fg009).

### **5.1.7. Behaviour on board**

According to the observations, tourists do not know where exactly the train will stop at the platform, since in most of the stations this information is not provided. As a consequence, sometimes they have to run along the platform to reach the train, what implies long lines in the first carriage to be reached by the passengers. This seems to happen because they feel worried about losing the train, consequently choosing the closest carriage from where they are standing or accessing the platform: *"I just get out from the stairs and then I see... It depends of my mood. If I am just like in a hurry and don't consider much stuff, so I just see the first doors that I have and get in"* (Fg010). However, during the focus group sessions, many participants mentioned to avoid this crowd in order to find a carriage with less people: *"I always go to the back [last carriage]. Just because people wants to go to the [carriage] closest to the stairs [i.e. access to the platform], and If I have enough time and I am not sprinting I go to the last one"* (Fg001); *"I also look for where there are less people, and it's usually the beginning or the end of the train, and I just go there"* (Fg002).

For choosing a seat, a couple of variables may differ their behaviour, such as being alone or with friends, carrying something or not, having a preference of side, facilities, among others. Being alone they mostly look for as much space as possible, trying to find a 4 or 2 set of empty seats where they can relax and enjoy the ride comfortably and in privacy. When travelling with friends, however, they seem to prioritize the social interaction between the members of the group, usually looking for a set of seats where everybody can sit close each other: *"I just check if it's 2nd class and then I try to sit where there is less people. Not so crowded. And I try to have a seat just for myself, but I don't mind if someone comes. If I'm alone I sit in one group of 2-seats. If I'm with other people I try to look for a seat where we can be together, all together usually."* (Fg007). In addition, desires for having different environment of carriages were discussed during focus group sessions and board games workshops and are presented in the subsection "5.1.10. Social features".

Traveling with luggage is very common among tourists, so a place to leave it is very important and its determinant. Most of them are happy when able to find a 4-seat place where they can leave the luggage and keep an eye on it: *"If I have a big luggage then I need a big space (...) to concentrate with my luggage, not you know... any other thing. So I just try to find some place where I have some space and then even not putting my luggage in proper places (...) I just reserve a seat for my luggage"* (Fg010). But some of them also rely on the overhead shelf, when the luggage is not that big. Many of these people were seen leaving their luggage there and sitting right under it.

Another factor that seems to influence the tourists' choice is the presence of sockets on the train, where they usually charge the phone, but also cameras and laptops, for instance. However, there are some people who prefer to not even get into the carriage room, staying in the hall of the carriage where people can access the doors: *"I stay in that place between (the carriages). Normally there is more space to put your luggage. I think some of the trains have signs where you can leave your luggage, and I think it's better stay next to the door so when it's time to get off the train is easier if you stay close to the door"* (Fg009). Moreover, this place was observed a couple of times being used by passengers carrying babies on prams. These passengers have a lot of difficulties to ride the trains, and usually have to search for help at the platform, since the time of the train in the platform is very short. They usually do not get into the carriage, staying in the hall or in the accessibility carriage, when available.

Furthermore, during the focus group an important fact came along, even though it was the only one: the need of sitting in the same direction of the train's ride, in order to avoid feeling sick. In addition, tourists may not pay attention and access by mistake a carriage from a different class than the one indicated on the ticket. In these cases the conductor usually advises them to look for the right carriage, what may cause discomfort during the trip: *"I had a problem that I was seating in a seat which was the 1<sup>st</sup> class, but in the same compartment [of the 2<sup>nd</sup> class], there is no division there. And then the conductor came and 'Hum, you have to go. Your ticket is to the 2nd class'. But it was 10 minutes"* (Fg002).

Regarding when to leave the train, most of the tourists make use of alternative techniques and sources to understand when it is time to get off, which implies a big cognitive effort and compromises their ride since they may need to focus on the stops the train is making. As they don't know the stations very well, they keep an eye on each station (*"Sometimes there is not this screens, or they don't say anything so you just have to guess. Or you going counting how many times you had stop already"* – Fg015); set an alarm a few minutes before the expected arrival (*"I always pay attention at the time, so I know how long it will take the trip. So I pay attention to my watch or put some alarms in the smartphone just to alert me."* – Fg016); or ask to people around (*"If I haven't heard this is the place, like from the speakers, I just ask somebody from aside..."* – Fg010). Besides, seems that the tourists also do not trust very much the audio announcement and digital board, what makes their trip even more uncertain about the right station to leave: *"Because if you are in one station and they are talking about the other I wonder like... 'Is it now? Not yet.' They are talking about the other, and not this one. So it's a bit tricky. So I count all the stations."* (Fg008). In addition to that, sometimes the name of the station can lead to misunderstandings, as observed on the train to Antwerp, where three tourists stood up to get off the train in the station *"Antwerpen-Berchem"*. Then, a fellow passenger told them to wait for *"Antwerpen-Centraal"* in case they want to get off closer to the centre of the city (Ob0806).

### **5.1.8. Complementary information: finding and using**

It is important for the tourist to have information and tools available to make his departure and arrival less complicated. Although the ride on the train can be enjoyed as an activity of the tourism planned, it rarely means the most important step of the

whole experience regarding fun. In most of the cases, tourists take the ride just as a matter of transportation. Then, complementary information is also essential for improve the tourism experience, such as:

- **Use of maps:** the support of maps is very important for their tourism experience, since it can help tourists to explore the city more effectively, as pointed in a focus group session: *“If you want to go sightseeing you just go to the info centre and get a map for the city and go out”* (Fg011). It is possible find Tourism Offices inside Belgium’s stations, but they are limited by opening hours and available in just a few of stations. In addition to that, some people are not concerned about the presence of these offices, as observed in Antwerpen-Centraal station where tourists got to know about the office by coincidence;
- **Activities happening in the city:** during a board game workshop, participants discussed the idea of having notifications about activities happening in the city: *“(...) I would ask why is full (...), because maybe there is some event and there is a lot of people then I would like to join the event”* (Ga001). This illustrates that tourists may be open to suggestions about what to do in the city;
- **Alternative ways of transportation:** providing this information can be crucial not only for improving the tourism experience itself, but also for solving a critical problem. During the observations in Brussel-Zuid a considerable amount of people were seen looking for shuttle buses. Besides, during the focus group sessions, participants mentioned the need for public transportation in the cities: *“You make plans, which place to visit, if you have to take a tram or a bus to go to the centre. For example, in Ghent when you arrive, if you don't want to walk like 25 minutes from the train station to the centre you have to get the tram, or a bus...”* (Fg011). In case of major unexpected events, such as strikes or delays, participants also mentioned the use of carpooling: *“There was a lot of strikes so it was kind a hard to avoid this strikes and sometimes made a lot problems to get to the airport or something like that. (...) The taxi was expensive and there is not so many people coming or going to Brussels every day [sharing car]. So we had really luck to be the first to contact the guy on Blablacar, otherwise we would be stuck in Leuven”* (Fg017);

- **Parking lots:** during the board game workshops, discussions about the use of bike and train came up, highlighting the uncertainty of tourists about the consequences of parking a bike in front of the station:

*Event: "I forgot where I parked my bike"*

*Ga003: Have you seen someone cleaning the place that caught my bike?*

*Ga006: I think this is kind of stupid question, you know?*

*Ga004: I don't think so. It's really clever one.*

*Ga003: The people who clean the street of the building, if your bike is just in front of the entrance of the building, they take your bike.*

*Ga006: Really?*

*Event card: The bike parking is full again.*

*Ga001: It's crazy because like we can park anywhere the bike. So we can just lock it to the lamp.*

*Ga003: And then you cannot find it again.*

Thus, it seems important for tourists to have information about where to park their bikes;

- **Weather forecast:** questions related to the weather forecast came up during board game workshops, in which tourists demonstrated that this information can help them to decide whether to wait or to take an action:

*Event card: Oh no! Rain!*

*Ga012: When the rain will stop?*

*Event card: "It's colder than I thought. Should I go back to get a coat? Or shouldn't? Or I should?"*

*Ga006: Ok, it's cold. I need a jacket. There is any shop around?*

*Ga004: I don't know, ask for the weather, no?*

*Ga001: She is already cold.*

*Ga004: Ah, she is already cold. Ok, maybe is getting [better] in 10 minutes...*

- **Lockers:** the availability of lockers it seems to be important in a tourism experience. Tourists can decide to do a day trip, or spend the night in a concert, for instance, and then may need a place to keep their luggage safe: *"We were in Brussels, he had a big luggage and he wanted to just drop the luggage, so he used this lockers and it was also not really expensive. He drops it over there, kinda safe, in the station... You can go back and collect it before you go to Leuven"*(Fg003);
- **Food and drinks in the surroundings:** In order to provide a better assistance for the passenger's trip, many stations offer a variety of facilities, what was confirmed to be very handy for tourists. During the observations many people were seen grabbing food before reach the platform, mostly in automated machines. The interviewees also shown a big interested in have some coffee and snacks before take the train: *"(...) it's nice to travel with a coffee, especially in the morning"* (Fg003). When the stores (or automated machines) are located at the platform, or at least very close by, they seem to be even more intended to do that. A reason for this behaviour can be related with time management. But it seems to be also important to have options during the ride, facilitating the time spent inside the train for something that the tourist would have to consume time out of it: *"But if you don't have time, if you are late or you are running, in the train would be nice have like a small bar, you know, the essential: tea, coffee, sandwich..."*(Fg007);
- **Access to authorities:** As a tourist, it can also be very important know how to reach easily authorities in case of any unexpected problem during the trip, as discussed during the board game workshop: *"Where is the police station?"* (Ga004); *"Where I can inform a rob... a stealer?"* (Ga012); *"If it is possible to have a police at the next station to stop the train?"*(Ga008);
- **Energy:** Sockets also seem to be very handy for tourists. It is useful for charging devices, such as smartphones, tablets, cameras and laptops. In the stations where they provide it, people were seen using very often. Furthermore, on the train it also plays an important role, even though tourists complained about difficulties to find it on board: *"I think the trains are very comfortable, especially with the chargers beside, so you can go and charge your devices"*

*which is really nice” (Fg002); “I do agree that the trains are comfortable and there are charges, but only 2 in one [carriage]” (Fg006).*

- **Wi-Fi:** Internet wireless was widely mentioned by tourists during the focus group sessions, and people were observed a couple of times in the central hall of the stations trying to find an open network to connect their devices. The lack of network in stations and trains may increase their doubts about the real-time information through the app and makes unfeasible the use of third applications, such as Google Maps, to help their tourism experience in the city, as mentioned by participants from focus group sessions (*“I think the Wi-Fi is the most important. That's why I have a city walk, because it works offline. But the app, specific app for the train... if don't have Wi-Fi or connection it doesn't work” – Fg007*) and board game workshops (*“But now the app doesn't work. Because we are in the middle of nowhere and the train hasn't move for a long time” – Fg010*).

### **5.1.9. Managing time**

It is not an easy task for tourists understand how many free time they still have, such as before reach the station; find their train; the train leaves; change trains; among others. During the observations, a family with 3 bags and one kid was wondering if they would have time to go upstairs to do something. They were uncertain about how much time they would have, and then they decided to stay (Ob0404). Their trip could be better utilised if they have a better management of how much time they still have left.

As discussed before, tourists seem to buy more food and drinks when the facilities are available in the platform. This may happen because they already went through other steps in order to find their platform and train, being then able to relax and wait the train arrives. Many people goes to the platform even though their train will take a while until arrive. Often people were seen waiting in the cold weather of the platform, instead of being comfortably waiting in the hall of the station. It seems that they are worried to lose it, so they feel more relaxed staying at the platform than using their time for other purposes.

To kill time people do a wide range of activities, such as use of computers, tablets, smartphones, books and journals/magazines, smoke, charge their devices, among

others. Some people also enjoy the time to take pictures in the station, as mentioned in a focus group session: *"I take pictures inside the station. (...) I collect pictures of train station"* (Fg001). During the observations, a person was observed going back to the city and then coming back for a train later. This may happen because she prefers to kill time visiting the city than staying in the station. Another interesting behaviour identified is that some tourists enjoy the meanwhile to plan the next trip, or discuss the last trip, as seen on the train to Bruges, where a couple were analysing and discussing about which route they would make when arriving in their final destination (Ob0108). In this case, the use of maps and guide resources helps them go through this process.

### **5.1.10. Social features**

Sometimes it is important for the tourist to keep friends updated about his current position or expected time of arrival. When tourists are travelling to meet friends, it is common to agree a meeting point according to the train's arrival. In addition, even though tourists were observed and had said they look for more space and privacy during the ride, this does not mean that they are closed for interactions. Tourists have shown positive feedbacks during the user research related to the possibility of having specific carriages for social interactions during the trip. It seems to be interesting and useful provide information about different types of carriages based on the mood, encouraging behaviours that may be hidden because of the current environment: *"(...) I was trying to speak with people. (...) I go to the train and just check if there are some nice people around and start talking. Some people welcome that, and some others don't. They don't feel like talking or something like that. (...) It's good to not stay in my computer all the time, or in my phone... I like to talk with some human beings"* (Fg010).

Moreover, a specific case highlighted the importance of keeping in touch with partners. During an observation in Antwerpen-Centraal station, a couple was seen splitting because the man could not get into the train on time. The doors closed and he stayed at the platform while his partner stayed on the train (Ob0713).

Finally, the 10 main insights just presented were compared with the commuters' audience, highlighting key points encountered between these two different target audiences.

## 5.2. Main differences between tourists and commuters

The experience of riding a train in Belgium is not exclusive for tourists. Every day thousands of people make use of trains in Belgium to commute. However, the experience faced by those people and tourists differ in some aspects, whilst are similar in others. The main differences between these two target audiences are presented in the sequence, and were obtained through the comparison of the user requirements discussed previously in “5.1. User requirements for tourists” and user requirements uncovered by DuysburghRuelensSlegers& Vissers (2014), in which they aimed to map the current travel experience of commuters using trains in Belgium.

Related to collecting and understanding primary information, commuters prioritize different sources of information:

- Real-time timetable that was mentioned often among tourists is also checked by nearly all commuters. However, commuters make use of this source as a quick check to confirm the planned train trajectory, such as the platform and estimated time of arrival. This implies that commuters already know which train they have to look for, thus they do not have to spend much time analysing the whole scenario of departures as many tourists do;
- Printed timetables that seemed to scary tourists are often used by commuters to acquire detailed information about stops and time of arrival. Thus, the reason why commuters make use of printed timetables relates with the reasons of the few tourists that mentioned also make use of this source;
- The website is more used by commuters beforehand for less familiar trajectories. As tourists are not familiar at all with trajectories in Belgium, this behaviour relates. However, commuters use the website also to map out two, or more, scenarios for their route as back-up plan in case of any unpredictable event with the plan A. This behaviour was not mentioned by tourists during the user researches carried;
- The mobile app is used more often by commuters than tourists. Commuters seemed to be more critical requiring faster announcements of delays. On the other hand, tourists who use the app seemed to be satisfied with the

information provided on the app, even though tourists cannot make use of the in-app ticket system;

- Information desk and ticket counters were not mentioned very often by commuters. This is a huge difference between the two target audiences, since tourists rely on these sources very often;
- Audio announcements are often useless for tourists due the language barrier. On the other hand, they are appreciated by commuters, even though they are not always listened with attention. However, audio announcements tend to lead confusion for commuters when the information is not very clear. In this case, both commuters and tourists have their worries increased by audio announcements;
- Conductors are less used by commuters than tourists. While tourists may rely on their opinion before get into the train in order to reassure that is the right train, commuters basically approach them after unexpected events happened (e.g. delays), what is also done by tourists;
- Fellow passengers are often consulted by tourists: young, adults, seniors. However, for the commuters' audience this behaviour is more often observed with older people. Furthermore, commuters rely on fellow passengers mostly when unexpected events are announced or perceived, while tourists rely on fellow passengers for many other reasons as well, such as to: gather information, reassure some information, get to know the rules, get complementary information, among others.

Moreover, commuters have much more prior knowledge in the context of trains in Belgium than tourists. Thus, they are much more likely to use it in order to make their trips easier. They have better understanding of:

- how much time they may need to reach the station and catch the train;
- which type of train is preferred;
- the type of train (e.g. old vs. modern) as reassurance if it is the correct train;

- where to wait in the platform in order to improve the chances of finding less crowded carriages;
- which carriage to get into in order to increase efficiency when arriving at the destination;
- when to start preparing to get off the train.

Furthermore, commuters are more aware about possible problems on the railway network, checking for information just to make sure that everything is working as expected. For tourists, this behaviour is not common since they do not know the frequency of problems neither expects to have this kind of issues exactly in their routes.

Other issues that were mentioned among commuters but were not by tourists are:

- Avoid group travellers: some commuters mentioned the importance of get to know if some carriage is filled by a group of travellers. This attitude relates to the desire of travel in a quiet carriage, avoiding big groups that are most probably louder than lonely travellers. Although tourists also mentioned the desire for quiet places, the specific case of group travellers were not mentioned;
- Inform colleagues about delays: commuters often need to inform others about delays on their arrival, either by sending a message or allowing them to keep on track the travel status. Although this situation was not mentioned by tourists, it may be an important factor for them in cases of going to meet friends at the destination;
- Short news bulletins or updates on the public screens: some commuters mentioned that they want short news bulletins or updates on the public screens. Tourists did not showed any clear need or desire on this kind of information. On the other hand, tourists are much more willing to be informed about tourist information and temporary events happening on the destination;
- Annoyed by audio announcements: very experienced commuters can get annoyed by hearing the same information about their journey on a daily basis.

On the other hand, other issues mentioned by tourists that were not seen on the commuters' report are:

- Language barrier: commuters are used to the language provided by the rail services and most probably master at least one of the official languages used on train stations and trains. Commuters that do not master these languages may be more used to the train system, and thus have less problems because of this specific issue;
- Extra fee to Brussels-National Airport: although the commuters' study reports difficulties on understanding the wide range of prices and tickets, this specific issue is not mentioned;
- Use of maps: in a sense of explore the destination is not mentioned by commuters, even though the use of Google Maps website is refereed as a tool to get directions from home to the station or from the station to the final destination.
- Activities happening in the city: some commuters welcome short new bulletins, as mentioned previously, but there is not any specific desire for activities happening in the destination;
- Wi-Fi: one of the most required services by tourists was never mentioned during the commuters' report. This may happen because commuters rely on mobile network plans and thus do not need Wi-Fi.

Apart from these differences, tourists and commuters relate in many of the needs and desires studied, such as making use of many different sources; buying and using tickets; constant reassurance; choosing a seat and understanding when it is time to get off the train; understand what is happening; managing unexpected events; finding and using facilities; managing time; being social or having privacy; and comparing options.

Seeking to better illustrate the profile of tourists identified during this study, the next chapter presents the Personas and context-scenarios developed based on the data gathered during this study.

### 5.3. Persona-based scenarios

In order to facilitate the research-design gap, Persona-based scenarios were developed. They consisted in the development of a narrative based on the profile of each Persona designed. As this study elicited three different behaviour patterns, three Personas were used to build three different narratives focusing on two statements:

- **Problem statement:** Tourists spent a lot of [cognitive, physical and affective] effort when using trains in Belgium because they are not familiar with the environment, and do not know how to best use the information and facilities provided by rail services in order to reach the destination in a pleasant way, effectively and spending less effort possible.
- **Vision statement:** The new mobile app will help tourists to better understand the environment of trains in Belgium by facilitating the access and comprehension of information and facilities provided by rail services. This will improve the tourist experience minimizing tourists' efforts allowing them to make the best use of the time during the trip in a pleasant way.

The first Persona is Sarah, a 31 years old girl from Switzerland who speaks three languages (English, French and German). She likes privacy, but also likes to consider joining social activities when invited by friends. In other words, Sarah likes to have her own space but be able to decide to join others when she feels doing so. She owns an iPhone and has an average ICT knowledge. Sarah likes to plan her trip in advance because this way she does not feel the need for constant reassurance during the trip, even though she does sometimes. Her goal is to arrive at the destination with less effort possible. Sarah makes use of train mostly for transportation reasons, but she also likes to use the time of the ride for doing other activities, such as read. Sarah has a bit of experience travelling, and her main reasons for planning trips are related to visit friends living abroad, experience new restaurants and do shopping. Her favourite information sources are the official website, in which she likes to plan the trip in advance, and the ticket counter, where she can get updated information directly with the personnel a few minutes before the schedule gathered through the website. The full profile of Sarah can be seen in the Figure 89. The Table 11 shows the scenario based on her profile.



**SARAH, 31** 

Writing thesis, 3 months in Brussels.  
Speaks French, English and German.

“I do spend time planning my trip to not have to worry during about it later”

**INFORMATION SOURCES OF PREFERENCE**

website		ticket counter		
gate display	platform display	signs	on board	audio

**TRAVEL BUDGET**



## PERSONAL BEHAVIOUR



## MEDIA & TECH USAGE

Owens an iPhone in which she constantly checks messages and updates from friends (Facebook, WhatsApp and Instagram), forecast (app default of the iOS) and news (apps from different newspaper and magazines, mostly from her country). Google Maps is useful always when she needs to know where is located a place, but it is limited to places where she can find WiFi since her mobile networking plan is still from Switzerland very expensive for 3G in roaming. Thus, MAPS.ME is her favourite off-line maps app. She also likes to check references about restaurants on TripAdvisor app and movies on IMDB. She uses her iPhone camera for daily pictures and a Canon D90 on trips.

## BIOGRAPHY

Sarah came to Belgium to develop the practical work of her thesis in the psychology area. She rented a studio to have the maximum of privacy during her free time. Although she has a driver license, she does not own a car and mostly rely on public transportation since she does not have a bike either. During working days she spends most of time at the University, while on weekends/holidays she prefer to relax at home reading and watching movies. However, she likes to be invited for social meetings and be able to decide whether to go or not.

Sarah has a bit of travelling experience and likes to make at least one international trip per year, usually going to meet a friend in the destination. In her home country she prefers to travel by car because of the comfort and convenience. Big cities where she has a wide range of recommended restaurants and trend stores to go shopping are her favourite.

Since have a relaxed trip is one of her priorities, Sarah likes to plan the trip in advance from her computer. Her goal is to arrive in the destination with less effort possible, which means that she may avoid connections in order to not have to worry about possible delays, missing a train or even getting into the wrong one. In her opinion, it is stupid that the real-time timetable does not offer an overview of all stops, what makes Sarah very confused about which of the trains is the one she has to take. Thus, she likes to go a bit earlier to the station to look for the ticket counter in order to reassure the information gathered through Internet, and understand which one is her train.

The variety of tickets is very confusing and annoying to Sarah, what makes her sticks for only two types, which she got to know through friends: Standard Ticket on working days and Weekend Ticket during weekends. On the train, if travelling with friends she prefers to stay together and talk with them during the ride. Travelling alone she usually looks for a quiet place on the window-side to read a book or just relax, even though always paying attention to the signs of each stop in order to keeping track of the stops the train is making. Sarah is very afraid of miss her station and need to plan everything again.

In Belgium, Sarah plans to visit some of the most famous cities of the country to photograph sightseeing and experiment the local food and drinks without feeling in a hurry. To find this places, Sarah mostly rely on recommendations she read previously on Internet and off-line maps she download beforehand, so she can arrive in the destination and situate herself in the place. On the other hand, she also feels open to enjoy day-trips with friends to smaller cities, in which she expect to not need to worry about train information.

## TRAVEL DREAMS

Sarah loves to taste new food. She is always looking for new concept of restaurants and cuisine, selecting the best pictures and “pinning” them at different boards on Pinterest. Her dream is to be able to make a World trip focused on experience traditional and local food of the places she pass through, documenting everything and giving reviews on a personal website.

Figure 89: Sarah's Persona

Table 11: Sarah's based scenario

Phase	Scene	Need/User requirement
<p><b>01</b> <b>Anticipation</b></p>	<p>It is Friday morning! Sarah have been working very hard during the whole week that she decides to make a day-trip on Saturday to somewhere else than Brussels, so she can enjoy the Weekend ticket to relief the stress discovering a new city and still would have all Sunday to relax at home before go work hard again on Monday. However, as she is already aware about how the weather in Belgium changes suddenly, Sarah first checks the forecast for the day after on her iPhone's default weather app. She really doesn't want to stress with raining. The forecast calls incredible 25 degrees Celsius for most part of the country, especially on the West, and sunny! Happy with that, Sarah decides to take her computer and check some nice destinations for her day trip.</p> <p>As she likes to taste local food and drinks, she decides to check TripAdvisor suggestions for restaurants all over Belgium. After some browsing over different suggestions in different cities, Sarah realises that would be interesting to experience a Belgian restaurant in front of the sea. As the website suggests at least 5 different good destinations, she decides to also check which of these cities would offer her the easiest trip since she doesn't like to make train connections. The price is also important for her since she wants to make the trip as cheap as possible.</p> <p>She opens another tab on the browser and accesses the Belgian Rail's website through the domain <a href="http://www.belgianrail.be">http://www.belgianrail.be</a>. On the home screen she searches for schedules of trains departing from Brussels North in the morning (so she could have lunch at the destination) and coming back at night (so she could have dinner at the destination too). She repeats the process for each of the cities described, taking notes in a notebook of all schedules available without connection. After compare the notes she realises that all prices are very similar, and then she decides to go to Ostend at 09:52 and come back at 21:40, but doesn't buy the ticket yet. She is afraid of unexpected events on the rail network and thus prefers to buy it in situ.</p>	<p>Complementary information: Weather forecast Info about destination Suggestions of places</p> <p>Primary information: Official source (Website)</p> <p>Choosing a type of ticket</p>
<p><b>02</b> <b>Travel to the site (Home - Station)</b></p>	<p>On Saturday morning, Sarah walks to the metro station and takes the metro to Brussel-Noord metro station. She arrives 30 minutes before her train depart in order to make sure she has enough time to buy a ticket and get instructions of her train. Sarah follows the signs of the station until find the ticket counter and stand in the quite big line of people waiting to be served. The line moves slow and she starts to think how terrible would be if she not had arrived at the station so early.</p>	<p>Multi modal travel</p> <p>Primary information – Official sources (Signage; Ticket counter)</p> <p>Buying a ticket (Ticket counter)</p>

	<p>However, she is not worried since she still has some time left. When her turn comes she tells the personnel the destination and asks if everything is okay with the route. The personnel informs her that there isn't any unforeseen on the rail network. Happy with that, she order a Weekend ticket to Ostend and asks the personnel which platform she has to go, highlighting that she only wants direct trains. The personnel answer her and she leaves the ticket counter.</p>	<p>Constant reassurance and being up to date</p>
<p><b>03</b> <b>Travel to the site (Station)</b></p>	<p>Following the signs Sarah reaches the gate of platform 5 and checks the gate display. As there is still 10 minutes until her train departs, the gate display shows information about other trains. Anyway, Sarah trusts the personnel information and goes to the platform by escalator. At the platform Sarah walks a bit further from the escalator and waits her train in a place where she can see the platform displays. With her smartphone on hands she keeps checking the time and the platform displays, until it is announced on the platform display that her train is the next to depart from that platform. She usually knows this because of the time of depart, but this time she is also happy because Ostend is the last stop, and thus it is being showed at the platform display. Then, Sarah starts looking at the tracks to check if her train is coming. When she sees it, Sarah puts her smartphone back on the purse and get ready to get into the train.</p>	<p>Primary information – Official sources (Signage; Gate display; Platform display)</p> <p>Constant reassurance and being up to date</p>
<p><b>04</b> <b>Travel to the site (Train)</b></p>	<p>When the train stops at the platform, she walks to the closest door from where she is standing and get into the carriage. On the carriage she takes an overview of the seats available and start walking through the carriage in order to choose one where she can have the most of space possible. As the carriage is not empty, she decides to sit in a 4-seat place together with another person already there. She sits in the opposite side of this person and keeps her purse on her legs. She realises that the train doesn't have on board displays, but as her destination is the last stop she is not too much afraid. Furthermore, she knows that the ride last about 1:30 hour, so she sets the alarm clock on her smartphone for 1:20 of ride, takes her book and start reading. When the alarm rings Sarah puts her book back in the purse and starts to get ready to leave the train. As the train ride takes longer than 1:30 hour, Sarah becomes afraid and starts wondering if there is still much time left until the arrival. She has done a reservation in the restaurant and do not want to be late. She decides to wait more 15 minutes before asks someone. Luckily, the train arrives in Ostend with 10 minutes delay.</p>	<p>Behaviour on board (Choosing a carriage; choosing a seat)</p> <p>Managing time</p> <p>Primary information – Alternative sources (Alarm clock; Previous knowledge)</p> <p>Constant reassurance and being up to date</p> <p>Managing unexpected events</p>
<p><b>05</b></p>	<p>Sarah leaves the train from the closest door of her seat.</p>	<p>Primary information –</p>

<b>On-site experience</b>	At the station, she follows the crowd as it is a very small station and doesn't offer much complexity and choices. After reach the hall of the station Sarah takes her smartphone from the purse and tries to find a Wi-Fi signal, so she could get directions from the station to the restaurant using Google Maps. As she couldn't find any open network, she then opens the MAPS.ME app, in which she has an off-line map of Ostend. She situates herself in the map and starts walking to the restaurant.	Alternative sources (Fellow passengers) Complementary information (Wi-Fi; Use of maps; Google Maps; MAPS.ME)
<b>06 Travel back home (Station)</b>	After spent the whole day visiting the city, it is 21:00 and Sarah starts to wonder if everything is okay with the rail network and her expected train of 21:40. Thus, she decides to go back to the station and check if everything is going according to the plan. Sarah arrives in the station 30 minutes in advance of her train, but finds the ticket counter closed, which makes Sarah feels upset. Then she decides to the check the real-time timetable and found her train to Brussels announced without delays. After got to know how to reach the platform of departure on the display, Sarah comes back to the hall and decides to drink a tea in one of the stands, since she still has 15 minutes left. She finishes her tea and move to the platform using the previous knowledge acquired on the coming trip.	Constant reassurance and being up to date  Managing unexpected events  Primary information – Official sources (Real-time timetable)  Managing time  Complementary information (Food and drinks in the surroundings)  Primary information – Alternative sources (Previous knowledge)
<b>07 Travel back home (Train – Station – Home)</b>	At the platform and on the train backing home Sarah repeats the same behaviour of when she was going from Brussels to Ostend. Arriving in Brussels North she leaves the train and goes to the hall of the station. From there she takes the smartphone and calls a taxi as it is very late and she doesn't want to go back home by public transportation.	Multi modal travel Alternative ways of transport Previous knowledge

The second Persona is Carlos, a 27 years old guy from Spain who only speaks Spanish and a bit of English. Carlos is considered an explorer traveller, in which the train ride is a matter of enjoyment itself where he is always looking for meeting new people. Carlos enjoys the trip not only at the destination, but from the moment he leaves home. Carlos has a very low budget and consider very frustrating the difficulty to find the cheapest ticket. His ICT knowledge is low; even though he owns an Android 2.3 based smartphone and knows how make online purchases. For Carlos the website is useful for checking possible destinations. At the station he often relies on real-time timetables and his level of reassurance is very low. The full profile of Carlos can be seen in the Figure 90. The Table 12 shows the scenario based on her profile.



## CARLOS, 27

Student internship, 7 months in Ghent.  
Speaks Spanish, and a bit of English.

**“I like to be moving. I just choose a place and once there I decide what to do.”**

INFORMATION SOURCES OF PREFERENCE

		website
real-time timetable		
printed timetable	fellow passengers	platform displays
		signs

TRAVEL BUDGET



### PERSONAL BEHAVIOUR



### MEDIA & TECH USAGE

Owens an old Samsung with Android 2.3, in which he has installed WhatsApp for chatting; Facebook for keeping updated about friends life and news in general; and travel-related apps such as Google Maps for checking routes inside the city; and Offi Journey Planer for checking available transportation around Europe. Although his smartphone camera does not have good quality, it is the only one he owns. His mobile networking plan does not include Internet data.

### BIOGRAPHY

Carlos is doing an internship in archaeology at the University of Ghent, what keeps him busy from Monday to Saturday. He rented a house with more 3 friends in the surroundings of Ghent, in which each one has a room, even though they spend most of the time in the living room socializing, studying or sharing meals. As the city is relatively small, Carlos bought a second-hand bike, that is his main way of transport in Ghent, except when it is raining a lot or he needs to go for a field study far from the city centre.

Carlos has done many trips in his life, since he sees travelling as an escape for the routine. For this reason, Carlos doesn't consider too much the type of destination: if a big or a small city, busy or quiet, urban or countryside. The act of go to travel and discover a new interesting place is a pleasure itself for him, mainly if it has something related to local culture to offer. Although he enjoy a trip with friends, he cannot wait for them to plan everything ahead and take the risk of see them giving up in the last minute. Instead, he prefers to go and meet new people on the trip. Moreover, Carlos collect maps and objects of the places that he pass through, storing all them in a metal box he has at home.

Carlos often relies on the Website to collect information about possible destinations and its costs involved. However, this is a very nasty job for him since there are so many types of tickets and he does not really have a certain destination in mind. But as the price of the tickets is a major factor for him, he still does it. He also likes to buy it online in order to not lose time on ticket counter line. At the station he always goes first to the real-time timetable in order to check the next departures, which is not always clear to him depending on the destination he chose. For this reason, the printed timetables are his alternative because provides all the stops of certain route. However, he often feels very lost in between the large amount of data provided by these tables. Carlos feel the need to ask fellow passengers for help, but as his destinations may be not well known in general, he may consider do it just in last case. At the destination Carlos usually tries to find a Tourism Office aiming to get a printed map that may support his activity of exploring the city.

In Belgium Carlos has a clear goal: utilise his weekends to get to know as many places as possible, synchronizing his trips to festivals and temporary events happening in the surroundings of the country.

### TRAVEL DREAMS

Carlos has a backpacker's spirit. He leaves home not only to reach a destination, but to enjoy the ride. He dreams a World without borders with people interacting and exchanging cultures in an open way, where he can experience different traditions in the same way that he can teach his own traditions to others.

Figure 90: Carlos' Persona

Table 12: Carlos' based scenario

Phase	Scene	Need/User requirement
<b>01 Anticipation</b>	It's Tuesday and Carlos just got to know that he doesn't need to work because it's holiday. Thus, Carlos goes immediately to the computer search more information about the meaning of the holiday and where in the country people celebrate it in order to choose a nice place where he can visit and enjoy the festivities of the local people. On Internet Carlos discovered that in Wallonia (the French part of Belgium) there are several small cities with people celebrating on the streets. Carlos decides to go to Dinant. He checks the schedule on Belgian Rail website and sees that a train is going to leave in 20 minutes. Although it's very tight, Carlos buys the tickets and prints them at home.	Complementary information: Weather forecast Info about destination Suggestions of places  Primary information – Official sources (Real-time timetable)  Buying ticket (Internet)
<b>02 Travel to the site</b>	After get the printed ticket he goes running (as he lives closes) to the station, using the shortest path he knows. Arriving there Carlos goes straight to the real-time timetable and realises that the train he looked on the website is gone. By previous knowledge Carlos knows that most of trains pass by Brussels before reach most parts of the country, and then he decides to take the next one to there so he can make a connection direction Dinant over there. He thinks that this way he gonna reach Dinant faster than if he moves to the printed timetables. Carlos looks at the real-time timetable again and checks the platform of the next train to Brussels, which he identifies easily because the name "Brussels" is displayed there. He follows the signs of the station to reach the platform.	Primary information – Official sources (Real-time timetable; Signage)  Primary information – Alternative sources (Previous knowledge)  Managing unexpected events  Managing time
<b>03 Travel to the site</b>	At the platform Carlos waits close to the exit and when the train arrive he gets into the closest door and tries to find a seat close to young people, so he may have some conversations on the way. When he finds a group of students he looks for an available space and sits close to them. Carlos starts talking to the group while keeping an eye on the stops the train makes. After 10 minutes ride he realises that the train he took will take longer to Brussels because it has many stops. He perceives this by previous knowledge since normally the train doesn't stop so many times before reach the main stations of Brussels. Consequently, Carlos knows that he will arrive to Dinant even later, but he still doesn't know when. However, Carlos knows that the station of Brussels is recognizable for being big and busy, so he doesn't pay attention on the stops on the way and keep focus on the talk with the group.	Behaviour on board (Choosing a carriage; choosing a seat)  Social features  Managing unexpected events  Primary information – Alternative sources (Previous knowledge)
<b>04 Travel to</b>	After some while, arriving in Brussels, Carlos leaves the train and looks for the real-time timetable again. He	Primary information – Official sources (Real-time

<p><b>the site</b></p>	<p>searches for Dinant on the screen but can't find it. Then, he looks for a printed timetable at the platform, checks on his clock what time is, and start looking for trains going to Dinant. Carlos face a problem: there is a lot of information there and he doesn't know which train goes to Dinant, since he is not much aware about cities in Wallonia. He knows they may have names in French but the overload of information confuses him. Thus, he decides to ask fellow passengers. The first 2 of them can't help him, but a third one indicates on the printed timetable what is the next train. Carlos memorises the arrival time and name of the final destination. He goes once more to the real-time timetable and checks his platform. After find it he sees that the train will leave in 20 minutes and decides to go drink some water first. He leaves the platform and goes to the hall where he knows he will find some bars open.</p>	<p>timetable; Printed timetable)</p> <p>Primary information – Alternative sources (Fellow passengers)</p> <p>Managing time</p> <p>Complementary information (Food and drinks in the surroundings)</p>
<p><b>05 Travel to the site</b></p>	<p>When there are 5 minutes left to the train departure he leaves the bar and goes straight to the platform following signs. He arrives at the platform 2 minutes before the expected arrival of the train, but the platform display is announcing 5 minutes delay. Carlos just waits. When the train arrive Carlos gets into the carriage repeating the behaviour of the first train regarding where to sit. However, he cannot find a group of travellers with available sits in the surrounding. Thus, he sits in an available sit on the window side; close to some busy passengers reading books or typing on their smartphones. Carlos keeps an eye on each station he is going through to keep track of the ride and also to see the movement in each city regarding the holiday. When the train is passing through Namur, Carlos sees that a lot of people drops off the train, making him starts to wonder whether there is any interesting activity around there that may be as interesting as Dinant. However, the train close the doors and start running again. While that, Carlos is still considering drop off in the next station and go back to Namur, as he thinks that may have something worth to see and is closer than Dinant. However, he doesn't know how much time would take for a train to pass by and leave him in Namur again. So, he keeps the trip to Dinant.</p>	<p>Primary information – Official sources (Signage)</p> <p>Behaviour on board (Choosing a carriage; choosing a seat)</p> <p>Primary information – Alternative sources (Counting the stops)</p> <p>Complementary information (Activities in the surroundings)</p>
<p><b>06 On-site experience</b></p>	<p>Arriving in Dinant Carlos leaves the train and walk straight to leave the station, as it is very small. He doesn't know for which side he has to go to reach the centre of the city, but he decides to follow fellow passengers and look for a map in a Tourism Office in the centre in order to better understand the geography of the city and ask information about sites offering local activities due the holiday.</p>	<p>Primary information – Alternative sources (Fellow passengers)</p> <p>Complementary information (Use of maps; Tourism Office)</p>

The third Persona is Liisa, a 22 years old girl from Estonia who is easily influenced by others. Liisa is always afraid of making mistakes, even though she loses attention easily. Thus, Liisa has a high level of constant reassurance and often relies on her mobile phone to keep update about any situation. As an addicted younger for smartphones, Liisa is always connected to friends through social networks on her Nokia Lumia 920. Her favourite information source is the official app of Belgian Rail. Although she does not have much experience travelling, she is motivated to travel with her new friends and party a lot. However, her main concern is to arrive safely at the destination and to not have any major problem that could compromise her confidence about travelling. As a consequence, during the train ride she is usually worried to arrive at the destination, what makes her see the train trip only as a matter of transport. The full profile of Liisa can be seen in the Figure 91. The Table 13 shows the scenario based on her profile.

**LIISA, 22**

Studying, 5 months in Leuven.  
Speaks Estonian, Russian and English.

"I am always afraid of making mistakes, but I lose attention easily and suddenly it's all screwed up"

**INFORMATION SOURCES OF PREFERENCE**

mobile app			
gate display	platform display	conductor	fellow passengers

**TRAVEL BUDGET**

## PERSONAL BEHAVIOUR



## MEDIA & TECH USAGE

Liisa is always checking notifications on her Nokia Lumia 920. She frequently use many apps in different purposes, such as to: communicate with friends (Facebook Messenger and WhatsApp); get to know new people (Tinder); edit photos (Photo Editor and Lomogram+) and videos (Hyperlapse Mobile); listen to and discover new musics (Spotify); search flights (Skyscanner); navigation (HERE maps); journey planner in Belgium (NMBS/SNCB app); and keep friends updated about her life (Instagram and Snapchat). Her mobile plan includes a good amount of Internet data.

## BIOGRAPHY

Liisa is a law exchange student that just arrived to Leuven, where she gonna stay for one semester. Hopeful to make new friends, party a lot and spend the best time of her life, she rented a private room in a big residence, this way she can be surrounded by people all the time she felt homesick. As she likes to walk around, Liisa didn't plan to buy a bike for such a small city. However, her friends at the residence easily convinced her that it would be a good idea to have one. As Liisa consider herself very fumbling, she decided to take a very old bike, this way she wouldn't feel very bad when lose or forget it by any reason.

Although Liisa has not travelled much in her life(mostly because she always feel afraid of having unexpected events and ends up in dangerous situations), she is using her time in Leuven to get to know the most important cities of the country and surroundings, since Belgium is well located in Europe and Ryanair offers cheap flights from Zaventem, an airport only 20 minutes from Leuven. At these places, Liisa would like to follow free guide tours and party with friends. Liisa felt motivated to take such decision after see a set of reports (with pictures and videos) about the daily life of a friend during an exchange program in Portugal. However, it is not by her nature plan too much, even though she likes to have an idea of what to expect about how to get in certain places and how they look like.

One of the main concerns to Liisa is to arrive safely in the destination. It is important to Liisa to not have any major problem that could compromise her confidence about travelling, what could make her reconsider the decision of getting to know important cities in Belgium and other countries. Thus, it is important to Liisa to have her mobile phone charged and with enough network signal, in case she needs to call anyone because of unpredictable issues. However, she is often using her mobile for multiple purposes, making the battery level decrease very fast. Because of these reasons, she still does not feel very confident to travel alone, and then would prefer to find friends to travel with.

Liisa likes to use the NMBS/SNCB app to check the schedules of trains because it gives her the precise information about the time they are leaving and the platform, but she does not like the idea of not being able to buy a ticket through it. Thus, she relies mostly in the ticket dispensers because she can compare prices calmly without feeling bothering other people in the line, even though she consider it very complex and is always afraid of having paid more than the necessary. On the train, Liisa keeps using the mobile app to keep all the stops on track. She does not understand how tourists can make it without knowing the place. Even with the mobile app on hands she feels very nervous and anxious to reach the destination. She is afraid that some networking data problem delays her real-time information and consequently she misses a stop, or even a distraction make her make this mistake. As the whole experience is very stressful for her, arriving at the destination she likes to have a coffee or eat something. However, she is always in doubt about how are the restaurants and bars available in the surroundings.

## TRAVEL DREAMS

Liisa is willing to live the best time of her life. She is full of energy and delighted by the youth environment provided in universities. Thus, her dream is feel safety, skilled and energetic enough to travel across European university cities doing parties and gathering people from all over the places, documenting and getting recognized among her friends in Estonia for having accomplish this.

Figure 91: Liisa's Persona

Table 13: Liisa's based scenario

Phase	Scene	Need/User requirement
<b>01 Anticipation</b>	<p>It's Thursday morning and Liisa is excited to meet her friends that are coming from Estonia to visit her. They will arrive at 11:30 at Brussels National Airport and decided to meet her at the train station of the airport at 12:30, so they can go together to visit Ghent before go to Leuven to sleep at her place.</p> <p>Liisa checks on the NMBS mobile app what are the available trains and decides to take the one going at 12:09 with expected arrival at 12:22. Taking this train she could drop off the train, find her friends and get into the next train to Ghent without losing much time.</p>	<p>Primary information - Official sources (NMBS app) Constant reassurance and being up to date</p>
<b>02 Anticipation</b>	<p>At 11:45 Liisa checks the NMBS app again in order to make sure that the train is still planned. After confirm it, she leaves home direction to the train station of Leuven by bike. Arriving there she looks for a safe and not so crowded spot to lock the bike since Liisa is afraid of not finding it when back to the city. She finds a spot besides the building where just a few bikes are locked on poles. After lock her bike she walks into the station and checks how many people are in the line of ticket counter. As there are some people there, Liisa decides go to the ticket machine to buy her ticket. At the ticket machine she chooses Ghent as destination and buys a GoPass1.</p>	<p>Constant reassurance and being up to date Complementary information (Parking lot) Safety Buying ticket (Ticket machine)</p>
<b>03 Anticipation</b>	<p>With the ticket on hands Liisa checks once more her NMBS app in order to confirm that the train to Brussels-National-Airport is not delayed and from which platform is going to depart. The train is going to depart from platform 1, but Liisa still have 10 minutes left and starts to think if she has enough time to grab a coffee in Starbucks store as she already know the station. Afraid of losing the train, she decides to not grab it and walks straight to the platform 1 using previous knowledge acquired in other trips. At the platform she looks to the platform display that is already displaying "Bru-Lutch – Antwerpen C". Liisa grab her smartphone once more and checks the NMBS app to reassure that "Bru-Lutch" is the acronym for Brussels-National-Airport. As the app confirms it Liisa stays waiting at the platform close to the platform display.</p>	<p>Primary information - Official source (NMBS app; Platform display) Constant reassurance and being up to date Previous knowledge Managing time Food and drinks in the surroundings</p>
<b>04 Travel to the site (Home – Station 01)</b>	<p>When the train arrives Liisa tries to walk into the closest door, but as it is too busy she walks away and get into the second closest door. As she knows that the airport is very close, Liisa decides to not get into the place with seats and keeps standing close to the door of the carriage. As soon as the train start moving Liisa</p>	<p>Primary information – Alternative sources (Fellow passengers) Behaviour on board (Choosing a carriage; not seating)</p>

	<p>hear very bad to some audio announcements and don't understand them because of the language. She becomes afraid of being in the wrong train and decides to get into the space with seats to ask someone what is going on. After understand that nothing special happened she comes back to the place close to the door.</p>	<p>Language barrier Constant reassurance and being up to date</p>
<p><b>05</b> <b>Travel to the site (Home – Station 01)</b></p>	<p>The conductor comes to her carriage and asks her for a ticket. She immediately shows her GoPass1 to Ghent to the conductor that doesn't understand. He says to her that this train is going to the Airport and Antwerp, but not to Ghent. Liisa explains that she is going to drop off in the Airport and then get another train to Ghent. However, the conductor tells her that this is not possible without paying the Diabolo fee. Liisa gets nervous and don't understand what is happening. She tries to explain the conductor what is her plan, but the conductor is irreducible, charging her for the Diabolo fee plus the on board fee. Liisa feels very disappointed and damaged, but decides to pay since the airport station is the first one and she cannot miss it. When the train stopped Liisa dropped off.</p>	<p>Language barrier Getting to know the rules</p>
<p><b>06</b> <b>Travel to the site (Station 01)</b></p>	<p>At the platform Liisa looks for her friends, but cannot find them. She decides to wait some minutes, but they don't show up. Then, Liisa realises that she agreed to meet at the train station, and not precisely at the platform. She decides to look for them at the hall of the station, upstairs. She finds them there and after some talk invites them to keep the journey. She asks if they already have tickets and them all show Standard tickets from Brussels-National-Airport to Ghent. Liisa realises that they all could have paid less using GoPass1, as they are all students under 26 years-old, but she decides to not say anything at the moment. Liisa checks her NMBS app again and looks for the next train to Ghent. As the next train departs 30 minutes later, she invites them to grab some coffee or eat something at the station. As they accept, Liisa starts leading them around in order to find what kind of food and drinks are available over there. After some walk they finally found something of their interested, but there is some people waiting to be served on the line. Liisa checks the time and see that might be time enough for a take away food. They stay on the line. After grab the food and drinks Liisa checks her NMBS app again in order to see if it's everything according to the plan and checks the platform. As everything is alright, they move again to the platform using the same way. At the platform Liisa checks the platform display in order to confirm the train. She gets confused as the platform shows Knokke and then checks the takes her smartphone to check the app again. At this moment</p>	<p>Lose partners Getting to know the rules Primary information – Official sources (NMBS app) Food and drinks in the surroundings Previous knowledge</p>

	<p>the train starts approaching the platform and Liisa decides to look for a conductor in order to confirm the destination.</p>	
<p><b>07</b> <b>Travel to the site (Station 01-Final destination)</b></p>	<p>After find the conductor over the platform Liisa confirms the destination and she and her friends get into the carriage. As they are 4 people with luggage, they walk over the carriage trying to find a 4-seat space. On the 3<sup>rd</sup> carriage they finally find it and sit all together, leaving the luggage on the space in between their legs.</p> <p>At this moment Liisa realises that the train doesn't have on board displays, but she is happy that there is still enough battery to check on the app how many stops it takes until Ghent. She counts it and tell her friends in order to make all them keep an eye on each station, in case her battery dies. Happily her battery is still on and she advises that the last stop before Ghent is coming. They all prepare to drop off. When the train starts slowing down they move closer to the doors. As soon as the train arrives at the platform Liisa asks a passenger that is at the platform if it is Ghent station. As the passenger confirms it they all drop off the train.</p>	<p>Behaviour on board (Choosing a carriage; choosing a seat)</p> <p>Primary information – Official sources (NMBS app; Platform display; Conductor)</p> <p>Primary information – Alternative sources (Fellow passengers; Counting the stops)</p> <p>Constant reassurance and being up to date</p> <p>Behaviour on board (Choosing a carriage; choosing a seat)</p>
<p><b>08</b> <b>On-site experience</b></p>	<p>At the station Liisa and her friends follow the crowd in order to reach the hall of the station. On the way Liisa decides to ask another fellow passenger if there is any locker available on the station, so her friends can leave the luggage while they walk around the city. As the fellow passenger don't know, Liisa keeps going to the hall of the station and over there decides to ask in the ticket counter. They point to her where the lockers are. Then, Liisa lead her friends to the place where they can lock their luggage. After this, Liisa and her friends leave the station in order to explore the city. Liisa planned to use her mobile networking plan to support Google Maps during the trip, but the battery is dying. Thus, she decides to look for sockets at the station to charge her phone for a while, but her friends convince her to let it go and discover the city by themselves. As Liisa feels more comfortable with them, she agrees and they leave the station to enjoy the city.</p>	<p>Primary information – Official sources (Ticket counter)</p> <p>Primary information – Alternative sources (Fellow passengers)</p> <p>Complementary information (Lockers; Sockets)</p>
<p><b>09</b> <b>Travel back home</b></p>	<p>Later on, Liisa and her friends come back to the station by public transportation, based on a tip received by a person they met on the city. At the station, the friends of Liisa take their bags while she buys GoPass1 tickets to Leuven for everyone. However, she realises that her credit card does not have enough fund and the ticket machine does not accept notes. Thus, she decides to go to the ticket counter and buy there. After wait on the line, Liisa order the tickets but do not ask which platform she has to go, afraid of bothering others on</p>	<p>Multi-modal travel</p> <p>Buying a ticket (Ticket machine; Ticket counter)</p> <p>Primary information – Official sources (Real-time timetable; Ticket counter)</p> <p>Primary information – Alternative sources (Fellow passengers)</p>

	<p>the line. She and her friends check the real-time timetables but are not able to find any Leuven. Then, they decide to ask a fellow passenger passing by, that advise them to take the first train to Brussels and then check another one to Leuven. However, Liisa doesn't feel comfortable with that decision because she is afraid of having problems with the ticket again. Thus, she decides to ask for information at the ticket counter.</p>	
<p><b>10</b> <b>Travel back home</b></p>	<p>With the information provided by the ticket counter Liisa and her friends walk to the platform indicated and wait the train to Brussels there. When the train comes they follow the carriages in order to get into the first one. There they find empty places and sit all together. In Brussels they leave the train and goes straight to the platform indicated by the ticket counter in Ghent. There they wait the next train close to the real-time timetable where they keep checking if there is any delay. When the train comes they repeat the behaviour of the last trip getting into the first carriage.</p>	<p>Behaviour on board (Choosing a carriage; choosing a seat)</p> <p>Primary information – Official sources (Real-time timetable; Platform display)</p>
<p><b>11</b> <b>Travel back home</b></p>	<p>Arriving in Leuven Liisa realises that she forgot where the bike is parked, and then she and her friends start to look around the station, based on the bike's description gave by Liisa. After some minutes they find it and move all together by foot to home.</p>	<p>Complementary information (Parking lot)</p>

In the next section the results of the study are discussed in general considering the interpretations and work presented in the previous and current section of this chapter.

## 5.4. Discussion of the results

The practical development of this study applied human-centred design methodologies in order to map the current travel experience of tourists who use trains in Belgium, focusing on the future development of a mobile application.

Primarily, three different user researches were carried: direct observation, focus group interviews and board game workshops. With this combination of methodologies the study aimed to gather qualitative data to better understand the needs, problems, expectations and desires of tourists during the tourist experience regarding the use of trains in Belgium. After the data analysis, there were 10 main insights identified through the data gathered. These insights were compared with a similar study carried focusing on the commuters' audience, aiming to elicit the main differences and

common problems between the two user groups. From these exercises it was possible to learn about many characteristics that a future mobile application should have in order to improve the tourism experience cycle.

It is crucial to facilitate the comprehension of train's schedules. The quantity of information provided in the stations is often huge and thus requires a big mental and cognitive effort from tourists, confirming the problems identified through the literature about information in tourist transportation. The provision of personal information could be a solution by offering only the information needed by the user in the right moment. Moreover, provide alternative solutions in case of unexpected events could increase their tourism experience and avoid a sequence of other troubles in their schedule, such as lose a connection or appointment; arrive after the closing time of stores; and make a friend wait longer.

Regarding the train ride, the app should support the tourist on tracking the stops and may even provide tourist information about the places where the train is going through, as an entertainment for the passenger. Moreover, it is important to provide the current overview of empty seats in the carriages. This overview could also suggest the best place for tourists carrying luggage so they could keep an eye on it while travelling, since most of them do prefer to keep it close by. The availability of sockets on the carriage also may play a role on the tourist's decision when looking for a place to sit. Thus, provide this information is also relevant.

The purchase and use of tickets also need to be supported. Offer the best deals and conditions of use according to the user's preferences and trip could solve the current difficult task of understanding the best option available. Moreover, the access to computers can be very limited during a trip, so it is important to provide an in-app purchase and an in-app ticket's proof easy and accessible for tourists. Currently, buy a ticket through a mobile device requires a Belgian cell phone number in order to send a SMS confirmation message of the purchase, which is the ticket's proof. Therewith, foreign tourists are not able to buy it. However, even if they could insert an international number, problems regarding roaming costs could create difficulties for the operation. Thus, it is important to make this process simple and usable for tourists regardless their origin, which could improve a lot the dull experience of buying a ticket and printing it out, as some of the apps previously studied already do.

Furthermore, it is understandable that tourists do not cautiously look for all the rules in the context of use of trains in Belgium. Instead, tourists seem to rely on their previous knowledge in order to act according with what they think it is right and expected by the company. However, if they do not have any previous knowledge related to certain situation, or do not feel confident about applying the same behaviour in Belgium, the tourism experience can be seriously affected by the feeling of uncertainty. Thus, the future mobile application should provide assistance regarding the basic rules of the Belgian train system, as well as the rights of the passengers in case of unexpected events. For instance, disturbances may be very common in the rail network making tourists feel damaged by those problems and willing to complain in order to get a refund.

In addition, as tourists do not know very well how the system works and what are the common unexpected events that often occur, any unusual activity can make them feel that they are missing something, or that they may need to collect more information in order to be updated about the situation. For instance, an audio announcement made, a screen displaying some random information, or simply a train slowing down or stopping in the middle of nowhere. Thus, it is important to keep them updated about any surprising event. Even in cases when the activity is not directly related to the train of the tourist, inform him that everything is still going according to the plan could be positive.

Another point that the future mobile app should support is the language barrier. Many tourists do not master French or Dutch languages. Consequently, they are much more exposed to miss important information than others. To solve this, real-time translations for disturbances and a glossary in-app for common terms could improve tourists' feeling of being up to date in the environment. This feature could support not only English, but also other main languages such as Spanish and Chinese.

Moreover, travellers may spend a considerable amount of time during the whole process of leaving home, catching a train and reaching the destination. In order to increase their tourism experience, facilities are provided in the train stations and in the train. However, sometimes tourists are in a rush and they do not have time to explore the station or the carriage to check what is available. The future mobile app should help them finding and discovering it, allowing them to make better use of all facilities available within the time available before the train departs, including tourism

offices where the tourist can collect information about the destination even before leave the station.

Besides the facilities, the app also should provide information about alternative transportation in the surroundings, minimizing the effort of the tourist, who would need to look for this information by himself. Moreover, alternative transportation seems to be very important in case of unexpected events, such as delays, missing a train or strikes. In terms of shared mobility, solutions like bike or car rentals can also increase their experience in the destination. The use of bicycles can improve the tourism experience by offering a more efficient way of transport in cities where the public transportation system is not very adequate, for example. While the car rentals can make easier to reach certain points of the country that would be very time consuming if relying on public transportation (such as buses and metro), or very expensive if relying on private transportation (such as taxi). It would be also important provide information about parking lots in the surroundings, relating the tourists' needs with the commuters' needs.

Inform the tourist about on-going activities happening in the destination can improve their tourism experience offering a wide range of things to do that would not be known through common guide resources, or it would consume a lot of time through searches and common websites. On the other hand, also makes them aware about the possibility of an unusual atmosphere or behaviours in certain places, for instance a beer festival, which could create a loud and messy atmosphere in the surroundings.

Additionally, tourists care about weather forecasts since it can make a huge difference in their trip's experience. Thus, inform them about the weather predictions can save time and effort in advance, allowing them to prioritize the clothes and tools that best match the upcoming weather, contributing to avoid bad experiences such as get wet by an unexpected storm.

Lastly, it is important that many of these features can be accessed offline due the lack of Internet. As only a few stations have Wi-Fi connection and this service is not provided on the trains, the mobile app has to be built as much prepared as possible for this factor. In addition, it is important that the app includes necessary information regarding useful numbers that could be very important in case of any emergency.

Moreover, Personas and scenarios were developed based on the data gathered during the direct observations and focus group interviews. With these tools the study aimed to focus attention on a specific type of user, offering a kick-start for transforming all those discoveries into creative ideas for a future mobile application.

By the end of this study it is concluded that the methodologies used throughout the investigation were adequate to answer the research question, being the use of human-centred design methodologies, as presented previously, sufficient for mapping the current travel experience of tourists who use Belgian trains.

Direct observations helped to minimize self-reporting and biased assumptions, clarifying part of the tourists' needs and problems in different stations and trains across Belgium. Although it was not possible to assure who is a tourist and who is not, the data gathered during this methodology was validated and complemented by the feedback received during the next two user researches. Moreover, this process was crucial for a better understanding of the Belgian train system, even though previous research has been made. From all stations observed, the Airport's station was the one which more feedback provided, while the Namur's station was the field with less new data collected, even though it provided a new perspective due to the particularities of the station and region (French part of Belgium).

Focus group sessions also contributed with this work. Although the literature is aware about this methodology's risks due to the fragility regarding participants diverging the topic and controlling the sessions, all meetings occurred positively. The participants' discussions provided valuable user stories, highlighted relevant differences in experiences between them, and empowered more ideas.

Board game workshops as a generative tool also gave its important contribution to the results. The use of board games created an informal and enjoyable environment in which players felt very comfortable to play the game, to give opinions and to suggest opinions to others. Moreover, the use of the TIS as Wizard of Oz style (players were not aware about the human nature of the TIS beforehand) incited questions that probably would not be made in traditional methodologies, as well as brought to the discussion situations that were not mentioned neither observed before, such as safety issues, hygiene, parking lots and weather. However, in both sessions some of the participants knew each other, which required an extra effort in order to control the workshop and not diverge from the topic throughout the game. To solve this problem

it is suggested to make sure that participants do not know each other and also consider the use of two moderators.

Moreover, during the data analysis, mainly of the focus group, it was possible identify four of the five profile of tourists regarding the use of Internet, as discussed in the section “2.2. Tourism experience cycle”: online planners; online explores; online keepsakers; and online equilibrists. Although the amount of participants it is not very relevant for a quantitative analysis, it seems interesting to point that most of the participants were identified as online planners or online explorers, which means that they go online before the trip or before and during the trip, respectively. Again, the costs of mobile data usage may play a role on this case.

Another point to be mentioned is related to the use of terminologies regarding the context of trains. It was difficult perceive a pattern in the terminologies used for certain words among the user researches. This may happened because of the multiculturalist characteristic of the participants, who were from 12 different countries (Brazil, Bulgaria, Czech Republic, Egypt, Finland, France, Italy, Portugal, Serbia, Turkey, United States and Ukraine). In some situations this factor became clear, as in a board game workshop when participants started to discuss the terminology for “carriage”, mentioning how they call it in other languages: *vagão* (Portuguese); *vagón* (Spanish); and *vagone* (Italian). However, some terminologies seemed more popular than others and were used in this study, such as “ticket machine”, which is called “ticket dispenser” on Belgian Rail’s website; “real-time”, referring to the real-time timetable; and “conductor” instead of “inspector”.

Apart from the user research methodologies, the developed Persona-based scenarios provided an important step for the next phases of the product development. By offering those tools, the goals, behaviours and characteristics of the participants studied are compiled in patterns and presented in a friendly way that inspires and give freedom for interpretations, yet supporting the argumentation, as discussed previously in this study. The use of these tools helped to focus attention on specific types of users and may save a considerable effort for future work.

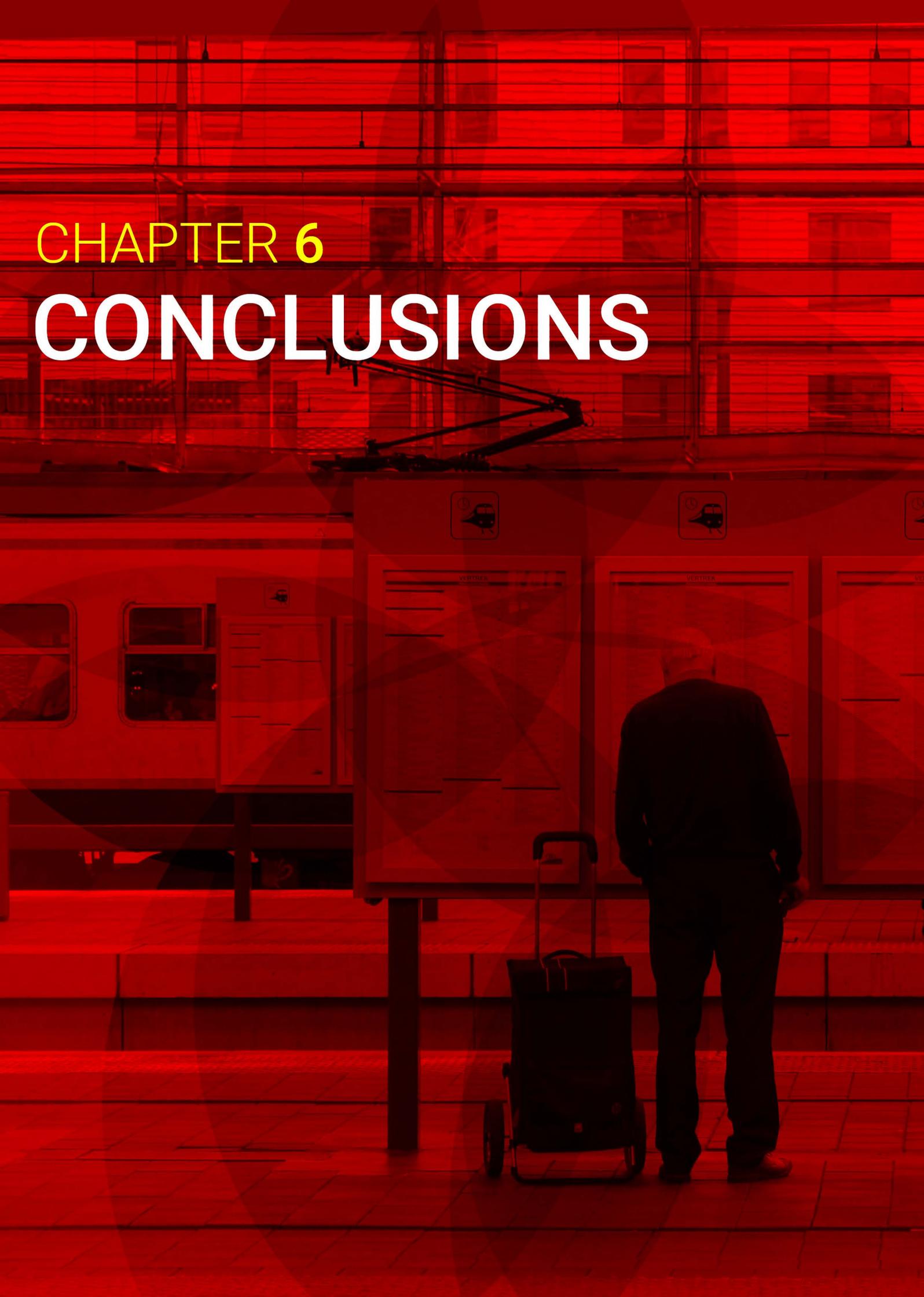
Thus, from the hypothesis made, this study points out that the application of an empirical study using a set of methodological methods and tools which collect the information directly from the target audience identified is valuable, and thus the second hypothesis (development of a mobile application done through the use of a

common design development cycle in which potential users are given the possibility to have direct participation in the process) was not carried due time constraints.

In the next chapter the conclusions of this study are presented offering a discussion regarding the literature presented in the second and third chapter and the results obtained afterwards.

## CHAPTER 6

# CONCLUSIONS



In this chapter is presented the conclusions of this study. It is divided in three sections. The first one, "6.1. Conclusions", discuss the outcomes of the study. The second section, "6.2. Limitations of the study", elicits the boundaries faced by the researcher that may bias the data gathered. The third and last section, "6.3. Future work", it is suggested some future work that may be valuable for the area.

## 6.1. Conclusions

The development of new technologies, such as the ICTs, allowed the creation of a new concept, e-Tourism. Through the digitalisation of all the processes and value chains in the tourism, travel, hospitality and catering industries, the tourism sector has been increasing due a set of competitive advantages, such as the decreased costs of tourism activities; rise in the price competition among companies; wide range of products and use of the information as a product itself; development and evolution of business focused on niche markets; geographical expansion and quality of services. In addition, e-Tourism allowed customers to become less dependent of companies, supporting the democratization of the tourism activity.

Furthermore, the use of mobile devices in tourism promoted an even bigger evolution to the sector, breaking space-temporal barriers by providing access to information and services during all the phases of the tourism cycle experience. As a consequence, the tourism activity became more flexible and personalised. The travellers, as well as the companies, are not restrictive to geographical locations anymore, being able to communicate each other at any time, from anywhere, as far as the Internet connection is established. On the other side, the geographical location can be used to provide specific information regarding the place where the tourist is at the moment when accessed or required certain information.

Due its changes, a wide range of activities became part of the tourism experience cycle through the use of smartphones, such as find and discover new places; getting geo-located directions; find facilities; be informed about activities; update about weather forecast; plan a trip and book services. These two last services, plan a trip and book services, are good examples of the behaviour change, in which the tourist started to go on a trip less planned, since it is possible to do it on-the-go.

However, the offer of public transportations in tourism still having lacks in quality, as it has been reported by different researches. Thus, motivated by the changes and growth of the sector and the room for improvement regarding the communication of information in tourist transportation, this study sought to understand how human-centred design may be used as a design methodology for mapping the current travel experience of tourists who use Belgian trains, focusing on the future development of a mobile application.

Through the use of three different user researches methods (direct observation, focus group interviews and board games workshops) the study included users in the centre of the process seeking to elicit user habits, behaviours, needs, expectations and desires regarding the use of trains in Belgium. Thus, the direct observations were carried to elicit what users do in the present, while the focus group interviews brought to the discussion past memories. These two methodologies helped the design process accessing the surface knowledge. Moreover, the use of board game workshops aimed to access future needs, dreams and fears of tourists. With this methodology it was possible to access a deeper level, the tacit knowledge. Through the reveal of latent needs this methodology approach an experience's domain located between the present and the future. Apart from that, the development of Persona-based scenarios was carried in order to bridge the research-design gap and may be fundamental as a kick-start for future work.

Thus, the first hypothesis proposed (an empirical study may be carried by applying a set of methods and tools which collect the information directly from the target group identified, eliciting the main points to be considered in a future mobile application) was carried and confirmed as sufficient to answer the research question of this study. As a consequence, the second hypothesis (the development of the mobile application may be done through the use of a common design development cycle in which potential users are given the possibility to have direct participation in the process) could not be executed due time constraints and therefore is not refuted, but could not be confirmed as a real solution either.

By pursuing the first hypothesis and following the goals of this study, this investigation highlighted the importance of the literature studied, confirming the existence of the problems regarding information in tourist transportation presented previously. Furthermore, the big effort required by the current services proves the need for improvements in the area, which should save physical, cognitive and affective effort from the passengers. In addition, it was also possible affirm the consistence of the literature reviewed about m-Tourism and e-Tourism, being both important for the general knowledge acquired throughout the study. The current state-of-the-art also provided a good learning by contextualising what has been done in the market, which allowed a more open and wide way of thinking throughout the practical part of the investigation.

Regarding the use of human-centred design as methodology, the characteristics and guidelines provided during the literature review were fundamental to the execution of the research. The mental models (designer's mental model, user's mental model and system image) enhanced the importance of include the user in the process and motivated a deeper understanding of the processes involving methods and tools within the area. After clarifying what the necessary steps to be taken are, risks and expected outputs, the literature review was used as a manual to the development of the researches, being consulted many times during the execution.

In conclusion, the literature review made throughout this study was crucial for the results presented in this study. The use of human-centred design as a methodology to map the current travel experience is considered a success and the development of Persona-based scenarios is considered important to accelerate the next steps to be taken from this study, still following human-centred design methodologies.

In the next section the limitations of this study are presented.

## **6.2. Limitations of the study**

The findings of this study must be interpreted with caution. Although during the direct observation any kind of people who could be interpreted as a tourist were taken into account, the participants involved in two of the user research methods, focus groups interviews and board game workshops, were limited. The participants were composed by 29 international exchange students of KU Leuven living in Belgium for less than 12 months and aged between 19 and 30 years old. Thus, the results of this study might be biased by:

- The average age of the group, that does not include adults older than 30 years old and seniors. As a consequence, important insights of this target group might be missed;
- The familiarity with the system, since all participants were already living in Belgium and thus might be more familiar with the train system than usual tourists;

- The common environment, since the majority of participants was composed by residents of Leuven and thus might have faced similar learning processes during their experiences, due the particular characteristics of the city's station;
- The small sample, which allowed the study to track the tourists' behaviour but is not enough to be generalized. It is still necessary a larger work with a large diversity of participants in order to validate the results with different user groups.

Apart from that, the current state-of-the-art of the mobile applications in tourism's context proposed in the second chapter requires the construction of an analysis matrix more robust, with indicators built on a more detailed review of the current literature available in the area.

Moreover, it might be a limitation on the fact that the application of the user research was carried out by only one person, while the literature suggests the use of interdisciplinary teams in order to provide different perspectives of the problem based on the knowledge background of each member of the team.

### **6.3. Future work**

This study provided high-level information regarding the habits, needs and desires of tourists using trains in Belgium. More than that, it also provided developed Personas and context-scenarios based on these Personas. Thus, it may be interesting for future studies:

- To take the next steps of the product development based on human-centred design methodologies, such as the development of a prototype followed by user experience testing, as well as usability testing, in order to validate the interpretations presented in this study;
- To apply the same methodologies of this study in different groups, such as adults older than 30 years old and seniors, in order to identify main differences and validate common behaviours;
- To apply the same methodologies of this study into other public transportation systems, such as tourist buses, ferries and heritage trains, in order to elicit main differences between different modes of transport;

- To apply the same methodologies of this study in other countries, in order to outline possible cultural differences among the train systems in different countries;
- To validate the results of this study through quantitative methods and tools, which may provide easier analysis of the data since the huge amount of data provided by qualitative methods turns this process nonviable.

With the results of this investigation is expected to have contributed to a better understanding of how human-centred design methodologies can elicit users' habits, needs and desires. It is considered that this study gives an important contribution to the theme, not only for the academic area, but also for the market since the combination of methodologies approached in this study can be applied by professionals seeking to better understand the users who they plan to design for.

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# Appendix A

## Goals of the direct observation

The main goal of this observation plan is to understand how tourists obtain the necessary information to travel by train.

In order to achieve this, it is important to **understand and identify**:

- How tourists gather information for their trips;
- How tourists find their way to the station;
- How tourists find their way to the platform;
- What are the doubts they have while waiting the train;
- What tourists do while waiting the train;
- Where tourists prefer to wait the train;
- How tourists find the right train;
- How tourists choose a carriage;
- How tourists choose a seat;
- How tourists keep track of their location during the train ride;
- What tourists do during the train ride;
- How tourists decide to leave the train;
- What are the physical resources (papers, signs, timetables...) they use;
- What are the technological resources (Railtime TV, smartphone, tablet, computer...) they use;
- What are the human resources (other passengers, ticket inspectors, security...) they use;
- What are the difficulties faced by a tourist during a train ride;
- What are the main differences between commuters and tourists.

# Appendix B

## Observation #01

In *Brussels Central and Bruges* on 7th of February of 2015 from 07:30 to 20:20.

Note of the observer: during this observation most of the data was lost due problems with the notebook. The observations below were re-written based on very clear memories of the observer. The observations without very clear memories were not re-written.

1. (ON THE TRAIN) Two tourists took the “wrong” train to Ghent, from Leuven. They took one that would stop at many stations. However, the ticket inspector realized it while checking their tickets. She advised them to change the train in Brussels North. They asked which train they should take, and she started to try to get this information on her machine. The Internet signal was weak for a moment but after some minutes became stronger and she could inform the platform they were going to get off and the platform they should go next to take the second train. The couple was afraid of not having enough time to change the trains, but the ticket inspector reassured them that the time was enough. The couple prepared their bags and waited close to the door.
2. (AT THE STATION) Two girls got into the Brussel-Centraal station running with their suitcases and handbags. They were asking very nervous where was their platform 6, even with the signs in front of them. After being help for someone, they ran downstairs to the platform. Getting there they asked to another person if that one was the platform 6. Once more, they were in front of the sign, but still couldn't see. After knowing they were in the right place, they started to relax while the train didn't arrive, but still standing up. There were more than 5 minutes left until the train arrived. After that they went immediately to the train.
3. (AT THE PLATFORM) A couple speaking Spanish went down to the platform 3-4 and started to look at the Railtime TV. They were trying to find Bruges, but couldn't find it. After seeing some people talking about Bruges and staying at the same platform (3), they trusted them and stayed in there. However, to avoid the crowd they walked away some meters (no Railtime TV close by). They stayed standing up.
4. (AT THE PLATFORM) A group of 2 guys and 3 girls speaking Spanish were in front of Railtime TV in platform 3-4 trying to find the time and the train to Bruges. They couldn't find, so they started to discuss it between them. Two of the girls were nervous, complaining that the information wasn't available. The other 3 checked more carefully the TV and then confirmed with other people at the platform if they were in the right place. Until the train arrives the girls were still nervous and uncertain. All of them waited close to the Railtime TV and standing up.
5. (ON THE TRAIN) Two Spanish girls presented an online ticket on their tablets to the ticket inspector, that didn't accept. They started a discussion, where the girls argued that the rules printed on the ticket are in French or Dutch, and they don't speak any of these languages. On the other hand, the ticket inspector argued that because they are foreign isn't means they can skip the rules, affirming that he is just doing his job. The girls told the ticket inspector that at the Information Desk they affirmed that the ticket could be presented the on a tablet. The ticket inspector took my ticket and showed the girls that “if he can print, why you cannot? everybody printed!”. The girls showed him on the tablet the email of confirmation of purchase, that is in English but do not mention any information about printing the ticket. The ticket inspector, after some while, accepted the tickets on the tablet and advised them to print it for the ride back to Brussels, affirming that it wouldn't be accepted next time. After the ticket inspector left, the girls discussed about the very uncomfortable situation. The one with the tablet on hands asked her partner if she still remembered that the lady of the Information Desk said them that it would be okay present the tickets on tablets.
6. (AT THE STATION) Two guys speaking English were standing up at their platform, close to the Railtime TV. But when the train arrived there was no external electronic panel. They got in doubt and one of them ran a few meters to ask the ticket inspector if it was the right train. After he ran back and informed his partner that they were right. They got into the train as quick as possible.
7. (AT THE PLATFORM) Three international students (boys), from different countries, were standing up together at the platform, close to the Railtime TV. Still in doubt about their train, they asked an old guy close to them. They started to chat. The old guy gave to them some tips about cities worth to visit around,

and also reassured them that they were in the right place. The old guy got into his train, and the guys stayed at the platform. When their train arrived they were still uncertain, but when the train stopped they could see the name of the city they were going at the external electronic panel of the train. After that they went immediately to the train.

8. (ON THE TRAIN) A couple were analysing a map of Bruges while they were moving to there. They seemed to be discussing a walking route to follow when get there.
9. (ON THE TRAIN) In front of a couple analysing a map of Bruges there was a guy - alone - very focused reading a big book while not arriving to the destination.
10. (AT THE STATION) The girls were discussing in front of the machine which option would be cheaper. They were almost finishing a transaction when one of them claimed that other option would be cheaper. In doubt, they took a smartphone and started to calculate. The girl was right and they finally bought the ticket.
11. (ON THE TRAIN) When the train stopped for a while in Ghent, a group started to look for all directions in order to understand what would be happening. They looked at the people around, but didn't communicate with them. After some while the train started to ride again and they relaxed.
12. (AT THE STATION) The group got closer to the big electronic panel of the station and started to look for their destination. They found it (Brussel - Eupen), but agreed to two of them go to the Ticket Office in order to confirm it. While two of them went to the line of the Ticket Office, part of the rest kept looking at the panel. They ignored the printed timetables right beside them. When they came back from the Ticket Office confirming that they were right, all of them took a seat and waited. About 10 minutes before the time settled in the panel, they moved to the right platform and waited there standing up.

#### **Observation #02**

In Brussels National Airport on 24th of February of 2015 from 06:40 to 15:20.

Note of the observer: It was a cold day. It was easy to feel the difference between the airport and station's heating system. The airport was fine, the train station was a bit cold, and at the platform it was very cold.

1. Two ladies went to the ticket office to get to know the time of their train. After the sellers had informed them, they went to the panels of the platforms and started to look at it for minutes. They were still uncertain. They had a look in other panels once more before went down to the platform.
2. A guy with big luggage came to the Ticket Office to buy a ticket and ask which platform he should go. After got the information he went to the platform via escalator, which was quite difficult because of the luggage. He didn't realise the elevator.
3. A guy went to the Ticket Office and ordered a ticket to Leuven. He left the office and started to walk around the hall, looking at the panels very uncertain ("Leuven" appears as subtitle). He came back to the Ticket Office and asked the seller which platform he should go. After got the information he went to the platform easily and calm.
4. A guy went to the Ticket Office and asked for information about certain destination. After being informed about the time, he also wondered to the seller if by taxi he could arrive earlier, or even by bus. The seller showed him a paper with the itinerary he would need to follow. He decided to buy the ticket, asked the platform and left the Ticket Office directly to the platform.
5. A guy was looking at the timetables on the wall. Then he went to the Ticket Office, bought a ticket and went to the Railtime to check the platform, where he went afterwards.
6. A guy went to the Ticket Office and tried to buy a ticket with VISA credit card. As it wasn't works, he had to use another one, successfully. He went to the platform and waited the train. At the platform, when the train was arriving, he saw the first carriage empty and walked beside the train (still in movement) to reach that carriage. He got into there.
7. A guy ordered a ticket to Ghent and looked at the Railtime. He seemed to be very uncertain about all that info. Nevertheless, he left the Ticket Office to the main hall and looked to the panel of two different platforms. Then he went to another Railtime (beside the platform). Still uncertain he went back to the

Ticket Office and asked the seller for the right platform. After got the information he walked straight to the platform informed, but still paying attention to the panels.

8. (AT THE PLATFORM) At the platform a couple walked till the first Railtime and waited for their train there.
9. (AT THE PLATFORM) A guy went to the platform several minutes before his train. He pushed his smartphone and started to interact with it. After some minutes he took his gloves and wore it. It was very cold at the platform and was possible see him feeling it. His train arrived on time more than 10 minutes later.
10. (AT THE PLATFORM) Others six different groups were seen waiting their trains at the platform, even though the trains would arrive at least 10 minutes later.
11. (AT THE PLATFORM) A lady came downstairs through the escalator and asked the inspector if it was her train. He answered yes and she got into immediately. After some minutes she left partially the train looking for the same inspector (seemed to be uncertain), but he was a little bit far away to be reached. She gave up and got into the train again.
12. (AT THE PLATFORM) At the platform a guy stayed closed to the panel, checking carefully all the stations the train would go through.
13. (AT THE PLATFORM) A woman came downstairs to the platform and asked an inspector if that was her train. The inspector denied, and then she sat down for some minutes. Apparently feeling cold she took the elevator and went upstairs.
14. (AT THE PLATFORM) Two guys were waiting their train right in front the Railtime, which constantly they were checking. They had 4 big luggage. When the train arrived, the carriage in front of them was full, but they got into anyway. There were 2 minutes left for the train's departure.
15. (AT THE PLATFORM) A girl was sitting down at the platform with an itinerary's paper. After some while she decided to go upstairs again through the escalator.
16. Three girls were in front of the escalator for their platform (3). An employee (cleaning service) passed through and they enjoyed to asking if that was the right platform. The employee looked at the Railtime and confirmed they were right. Then the three girls went to the platform (3). But after some while they came back and changed to another platform (1 and 2).
17. A guy was walking around very uncertain, looking for his platform with tickets on hands. After some while he went by escalator to one of the platforms. Afterwards he came back to the hall again and changed to the other platform.
18. A girl was walking around very uncertain, looking for her platform with tickets on hands. After some while she went by escalator to one of the platforms. Afterwards she came back to the hall and changed to the other platform.
19. A guy was trying to find his train at the panels. Only 2 of the 3 panels showed information at that time, and no one of this were his train. Then he pushed his smartphone and started to use it. During this time the third panel showed "Brussel Brugge", but as he was interacting with the smartphone he didn't see it. It took a while, and when he saw the panel he went to the platform through the escalator, running.
20. When the panel "Brussel Brugge" appeared, three different groups ran straight to the platform afraid to lose it.
21. (AT THE PLATFORM) Two (apparently not together) tourists left the train and ran in opposite directions. They were looking to the exit in order to reach the airport as soon as possible.
22. (AT THE PLATFORM) A lady went downstairs running and asking if the train stopped there (Rotterdam Central, platform 1) was the one going to Brussel-Noord. After being helped she got into the right one (platform 2), but left few seconds later looking for an inspector. She then asked if would be necessary validate the ticket somewhere. Without any precise answer she got back into the train.
23. Two Japanese were in front of the Railtime looking for their train with a map on hands. They were discussing each other, but after some while they decided to go to the Ticket Office and ask for help to the sellers. After the Ticket Office they went straight to the platform, but seemed to be still uncertain, confuse.
24. A guy checked the timetables on the wall. After he went straight ahead to the platform through the elevator. He seemed to be an experienced traveller on that spot.
25. Seven different travellers with tickets on hands came back from the hall to the Ticket Office looking for their platform. All of them went straight to the platform indicated by the sellers.

26. A couple bought tickets at the Ticket Office and stood in front of the Railtime. After the guy lead her girlfriend to the right platform. She seemed to be uncertain and confuse about how he got to know which one was the right platform, but then he showed here the subtitles of the panel with all stations they would be going to pass over.
27. Three youngsters (2 girls, 1 guy) were trying to buy (together) tickets at the machine. After some failed tries they gave up and walked to the station, led by the boy. When the boy saw the Ticket Office he pointed the finger in its direction and showed the girls. They went there and bought the tickets with a seller.
28. Three people (2 girls, 1 guy) were with lots of luggage and a pram. They managed to go to the platform by escalator step-by-step. First the guy and 1 girl went down with some luggage while 1 girl stayed on the hall with the pram and more luggage. Then the guy came back upstairs by escalator and took the pram (and the baby) down by escalator. The girl went down too with the luggage. They didn't realise that an elevator could be used.
29. A man with a ticket was almost going to the platform. Then he gave up and came back to take one more look at the Railtime. He did it very quickly and then went down definitely.
30. Three different groups of travellers were going by escalator (Level 1 to Level 0) from the airport to the train station. In the Level 0 one group decided to move to the elevator, and then the other 2 groups decided to follow, reaching the Level -1 by elevator.
31. A very worried girl, with a ticket on hands, was looking at each panel in order to find her destination. In doubt she crossed the hall to the other side (it's useless since both sides show the same info). Not succeeding she asked a random guy for help. This guy looked at the Railtime and told her which platform she should go. She trusted him and went directly to there.
32. A girl with tickets on hands couldn't find her platform. Uncertain, she decided to go and ask in the Ticket Office, but when she arrived there, there was some people standing on the line. Then she decided to try to find some information in the other side of the hall. She started to walk through the hall to the other side, but gave up in the middle of the way. She came back to the Ticket Office and waited her turn. She asked help for the seller and after got the information went straight to the platform.
33. A couple bought a ticket and started to look at Railtime. After a few minutes the girl kept looking, but the guy decided to go back to the seller and ask for the platform. Then he came back and told her to follow him. They went straight to the platform.
34. A guy was looking at Railtime, but couldn't find his train. He asked help for an employee (cleaning service) that was relaxing in the chairs close to the Railtime TV. The employee pointed to the Railtime showing which one should be the right. Also pointed to the escalator where the guy should go down to the platform. The guy followed the instructions.
35. A guy was checking his smartphone close to the Ticket Office. After seemed to confirm the information, he bought the ticket and went upstairs back to the airport.
36. A guy bought a ticket in the Ticket Office and left to the hall. He was very uncertain about where to go. He was standing in front of one platform checking his ticket. He asked help for a random man passing through and after listening to him he went downstairs by escalator to the platform indicated by the man.
37. (AT THE PLATFORM) Two people, separately, were standing at the platform. They took the chance that an inspector was around there to confirm the information about their trains. The inspector lead them to the Railtime and started to indicate each one of them where they should go and which train would be.
38. (AT THE PLATFORM) A boy came downstairs by escalator and his train was still in the platform. He was trying to confirm that was his train meanwhile the doors closed. An inspector at the platform asked him where he would like to go and told him to hurry up to its train. Nevertheless the inspector at the train didn't allow him to get in. He stayed at the platform walking around very impatient, even with the next train just 1 hour later. He also took a paper of the itinerary, which he observed for a while. Then he pushed his smartphone and headphones and tried to relax listening music. However, she was still impatient.
39. (AT THE PLATFORM) (ON THE TRAIN) Five different groups of travellers got into the train in the closest door from where they were waiting in the platform. All of them had chosen a 4-seat free space, sitting down alone (or with their groups) with their bags close by.
40. Three guys were discussing while buying tickets in the automatic machine. After that they started to look for their platform. One of them seemed to be the leader, since it was in the frontline being followed by the rest.
41. A Japanese couple didn't know where they should go. They discussed each other for minutes. The girl went

to the Ticket Office asking for help. After 5 minutes they bought the tickets and started to try to find the platform. Without success they were found running from one side to other. The girl, very nervous, ran to the Ticket Office again asking once more time for help. After got the info she ran to meet her partner and then went by escalator to the platform.

42. A guy needed to go to a place with several connections. The seller could help him after reach a colleague by phone. The seller printed a document and started to explain the itinerary for the guy. All the process took more or less 10 minutes, since they were testing possible alternatives for the same route.
43. A guy came back from the platform directly to the Ticket Office with a ticket on hands. The Ticket Office informed him the train he could take and then he started to look at Railtime. After find his train on the screen he went to the platform.
44. Two guys were discussing while standing in front of the entrance of the platform, in the hall. They were uncertain about the platform they should go, but after get to a common sense they went downstairs by escalator.
45. A girl asked an employee (cleaning service) where to go to take her train. He immediately answered and she went straight to the platform indicated by him.
46. A girl couldn't find her destination looking the panels. So she went to the timetables' wall, and then moved straight to the platform.
47. (ON THE TRAIN) On the train, a couple chose a 4-seat free space to sit down. They left the bags on top and sat in front each other. They immediately used the table in front of them to open the maps of the upcoming destination.
48. (AT THE PLATFORM) At the platform a lot of people were waiting the train comes. When the train arrived it had just a few carriages, and stopped far from the place where this people were standing. The passengers had to move fast towards the platform to catch the train. Most of passengers chose the door according to how many people were trying to get in. If the closest one were already with some people, they moved to the next... and so on. This behaviour was observed many times.
49. (ON THE TRAIN) As the carriage was empty, a traveller put her luggage in front of her in a 4-seat space. Her friend did the same, sitting in 4-seat space available beside. They were carrying guide resources with them.
50. (ON THE TRAIN) Two adults left their luggage on top and sat down together in a 4-seat space. They were carrying guide resources with them.
51. (ON THE TRAIN) A couple sat down in a 4-seat space. The guy on the left, close to the corridor. The girl on the right, close to the window. They used the table and floor to leave the luggage.
52. (AT THE PLATFORM) At the platform, while waiting the train, some people smoke, others chat each other (when in groups), others wait sitting down, others use their mobile phone, others eat...
53. (AT THE PLATFORM) A family with 3 bags and one kid was wondering if they would have time to go upstairs to do something. They were uncertain about how much time they would have, and then they decided to stay. When the train arrived they got into immediately.
54. A girl was standing in front of the panel of the platform (1 and 2) with her smartphone on hands. She almost went down to the platform, but gave up and went to the centre of the hall to check the Railtime. She didn't realise that a Railtime were right beside her, close to the Platform 1 and 2. There was no need to walk to the centre of the hall. Anyway, she came back still uncertain, and then went downstairs to the platform 3.
55. Mother and daughter were with 3 big luggage. They had to go to platform 1 or 2 (same entrance), but they didn't see the signs above the panels, close to the escalator. Nevertheless, they saw the sign above the stairs, and then went down managing to carry all luggage downstairs.
56. Two guys, in different times, asked directions to the platform for 2 employees of the airport that were walking on the hall. They helped the guys that went to their platforms.
57. Three guys bought a ticket in the Ticket Office and got a paper with the itinerary of their trip. Then they went to the panel in front of the platform's escalator and started to look at it. They analyse once more the itinerary and saw their station as subtitle at the panel. They went downstairs by escalator.
58. A guy (probably business traveller) was very uncertain about his platform. He observed the panel, then the timetables (very shortly), then the panels again. Afterwards he went downstairs by escalator.
59. A couple were very uncertain about their platform. They observed the panel, discussed each other, observed the panels again and then went downstairs by escalator.

60. A couple bought tickets at the machine, but the guy went to the Ticket Office to ask which platform they should go, while the woman stayed in the hall.
61. Three different people bought ticket at the Ticket Office and stood looking uncertain at the Railtime.
62. Four different people bought tickets at the Ticket Office and left. When they realise that there are no platform writing on the ticket, they came back to the Ticket Office and asked for help.
63. One guy left the Ticket Office with a ticket and needed to ask a stranger for help about finding his platform.
64. Six different people were seen buying a ticket at the Ticket Office and immediately asking which platform they should go.
65. A girl was searching for information very disoriented. She seemed to don't know what to do. She looked at Railtime, but it was useless. She was walking in circles, very nervous, until leave the hall in direction to the airport.
66. (AT THE PLATFORM) While waiting the train a couple of tourists enjoyed the time to take pictures of the platform and selfies.
67. While waiting for the train, in the hall of the station, 2 tourists used their smartphones to play videogames. Others 7 just waited sitting down close to Railtime, still in the hall.

<p><b>Observation #03</b>  <i>In Brussels South and Brussels Central on 3rd of March of 2015 from 10:20 to 20:00.</i></p>
<p>Note of the observer: It was a cold day. It was easy to feel the difference of temperature between the waiting room (close to Thalys office), the waiting chairs in the hall, and the platform. The waiting room was warm, the hall was fine, and at the platform it was cold.</p>
<ol style="list-style-type: none"> <li>1. (AT THE PLATFORM) A lot of tourists (more than 20) were waiting the train Brussels-Airport/Amsterdam at the platform 21. The panel was displaying this train as the next one, but still wasn't there. Some people were discussing each other, others were checking the rails, others were just looking at the others to see if they were worried or if it was a common late... However, after more or less 5 minutes of delay the panel suddenly changed the information of destination. All people waiting there became lost. The platform became a mess, with people very worried and confused about what happened and what to do next. Then, a group of 4 people decided to went downstairs to the hall. They were the firsts to take some real action. Some people went to the Railtime at the platform to check if the train would be arriving in other station, while others keep discussing what would be happening. When the next train arrived (not the one expected), about 8 tourists asked the inspector if that would be the train to the Airport or Amsterdam. The inspector denied, pointing the finger to the panel that shows the destination of his train. One guy was with 2 luggage plus one special golf's luggage. He was very nervous and went down running on the escalator. The rest followed him afterwards. In the hall this guy went to the Info Kiosk, followed by 2 others tourists. The rest met an employee of NMBS in the hall, close to the Railtime, and asked for new information. I followed part of the people, and found them in another platform, waiting for the next train to the airport, which would take at least 30 minutes to arrive. I missed the guys planning to reach Amsterdam, since all them split over the station.</li> <li>2. One woman and one old lady were going to the platform 5 by escalator, when they realised that wasn't the right platform. After reach the platform they directly went down. They saw a sign indicating platform 4 in the opposite side, and then took this way, by stairs. They had 2 big luggage, so the woman needed to go up with her luggage, come down and take the luggage of the old lady. They didn't realise that walking a bit more in the same side of the platform 5's escalator they could take another escalator to platform 4. There were still 10 minutes to the train leaves, operated by DB Hahn to Germany.</li> <li>3. (AT THE PLATFORM)(ON THE TRAIN) A lot of tourists going to Frankfurt got confused about which carriage they should get in. The inspector was at the platform helping them, since which one had one number of carriage printed on the ticket.</li> <li>4. The Info Kiosk is explicit on the top "Domestic traffic". However, a lot of tourists goes there to ask about international routes. For many times I saw people running from there to the Thalys area (where most international trains depart).</li> <li>5. (AT THE PLATFORM) A group of 3 tourists were standing at the platform. Two of them were a bit confused,</li> </ol>

till one of them shows the panel with the subtitles displaying the station they would stop. The guy pointed the finger to the place where the station was being displayed.

6. (AT THE PLATFORM) Some tourists at the platform were checking all the time the rails and the Railtime, since their train didn't arrive on time. When the panel showed that the train would be late (+OH09), the tourists relaxed a bit more and stopped looking all time to the Railtime and rails.
7. (AT THE PLATFORM)(ON THE TRAIN) On the train to Amsterdam were 2 couples, separately, with prams. Both left the escalator and started walking besides the train looking for a better spot to get in with all their stuffs. Both got into the train in a carriage with accessibility space, where they could leave the pram with the baby and sit next. As there was no ramp, both couples needed to work together to carry the pram to the carriage.
8. (AT THE PLATFORM)(ON THE TRAIN) In most of the cases observed, the carriages that stops close to the escalator are the most chosen by the tourists.
9. (AT THE PLATFORM)(ON THE TRAIN) A lot of tourists were seen running to the platform through escalator and getting into the train in the first door available.
10. (AT THE PLATFORM)(ON THE TRAIN) A woman with a pram went to the platform of the train going to Luxembourg. She walked in direction to the inspector and asked help to get into with the pram. The inspector used a card to open an especial door where she could move the pram to the carriage in the same level (instead of go upstairs, as usually).
11. In the Info Kiosk, three guys, not together, were seem asking for the shuttle bus to Charleroi Airport.
12. A girl went to the Info Kiosk right in front the International Ticket Office. She asked where she could buy an international ticket. Somehow she didn't see that she was in front of the office.
13. An old woman was standing in front of the platform 11 waiting the panel turns on. When it did, she went to the platform. More 2 people close to her did the same.
14. (AT THE PLATFORM) A woman came upstairs running because the train was almost leaving. In the exact moment that she reached the platform and was going to get into the first door, the inspector whistle (common behaviour when they are ready to close the doors). The girl interpreted the whistle as a warning to not go inside. She looked to the inspector claiming to get in, and then the inspector got into the train. As the door in front of her was still open, she got into the train, seeming to do it because the inspector wouldn't see. She seemed to feel guilty and gave a step back, being part of the train. The inspector putted his head to out of the train to check if he could close all doors and saw her. He asked where she would like to go and she answered, then the inspector told her to get in.
15. A girl was checking her smartphone in front of the entrance of the platform 15-16. Very uncertain she went to the Railtime in the hall, but seemed still don't find her train. She came back and took a look again to the panels of platform 15-16. After, she moved to platform 17-18 and took a look. She followed the crowd going to the platform.
16. (AT THE PLATFORM) At the platform, when the train Paris Nord arrived, a guy started to run downstairs desperately. In the last minute, before the train departs, the guy came back running (still desperately) with a bag on hands that he probably forgot somewhere before reach the platform the first time. He got into the train in the last second.
17. During the observation time there I have seen many people using computers, smartphones and tablets while waiting in the waiting room or just in the chairs available over the station. Some of them working, others watching movies/series, others playing some game. Some also were seen listening music from their iPods and smartphones. A few of them surfing on the web.
18. During the observation time there I have seen many people also reading books, magazines and guide resources while waiting in the waiting room or just in the chairs available over the station.
19. In the Info Kiosk a guy asked about the platform to go Liège, and also where to buy tickets. He was right in front of the platform informing Liège as destination, but he just realise after the employee shows it. He went to the ticket office, that had a big waiting line. The machine tickets were available, but the guy preferred to wait on the line, even though the train would leave very soon. He seemed to be not afraid of lose his train, or he even didn't realise the time of departure.
20. A big group of Japanese came running to the Thalys Office area very uncertain about where they should go. They looked at some panels but kept uncertain. While the group stayed waiting behind the Railtime (even though they didn't see it), 2 of them went to the Office in order to get some information. One of them were with a smartphone on hands. After get the information they came back to the group and discussed for a few

seconds. Then they all moved very calmly to the waiting room. After some while they splitted, being some of them in the waiting room with all luggage while others walked around the station.

21. (AT THE PLATFORM) On the train to Paris Nord, four (not together) tourists presented their tickets in the 1st class carriage (zone B1 of the platform), that advised them to go to the 2nd class (zone B3 and B4 of the platform). Afraid, one of them started to run to reach the place as fast as possible. The others 3 did the same, "following" his attitude. There was still 7 minutes left, time enough to go there walking.
22. The Brussel-Zuid station has a "Working corner", composed of 3 stationary bicycle, for free. During the observation I saw around 10 tourists using it to kill the time.
23. Two old couple reached the Railtime close to Thalys Office and asked for information about their train. They had tickets on hands. After get the information they walked to the Railtime and stayed there, taking a look sometimes to the TV, waiting their train appear. For at least 15 minutes they stayed there, in the same place.
24. A guy came to the Thalys Office to ask about his train to Paris Nord, that was leaving in the same moment. The employee of Thalys used his walk-talk to communicate with, I guess, the employees at the platform, while the passenger run through the escalator to reach the train at the platform 5. It was too late, so the guy came back running and changed to the platform 3. It was useless since the train left from the platform 5. After he came back again, this time walking, and once more talked with the employee for some minutes.
25. (AT THE PLATFORM) When the train going to Koln (operated by DB Hahn) stopped in Brussels-Zuid, 2 tourists that already were in the train left to smoke a cigarette while others passengers get into the train. They stayed close by the inspector. When it was almost time to leave the platform, the inspector asked them to get into the train again. They did instantly, and a few minutes later the train left.
26. (AT THE PLATFORM) At the platform, a train going to Amsterdam was stopped. A girl came through the escalator very desperate of losing the train. She ran besides the train till reach the 2nd class, where she got in. Behind her 3 friends were coming and another alone guy. They were very calm, just walking to the same spot of her. The alone guy got into too, but the carriage got full. So the inspector ran with the 3 guys to the previous carriage and asked the inspector of its carriage to let them go. The inspector told them that was full, and they should go standing up close to the door (not in the corridor). The guys accepted, and then the inspector advised them once more that they would go standing up. After agreed, they got into, the doors closed and the train moved.
27. A lady was reading her ticket for minutes, right in front of the Railtime. She checked the trains being displayed there a lot of times, while also checking her itinerary. Then she took a map/guide and started to read, while checking the Railtime more times between the readings. After some while she started to walk around, but never too far from the Railtime and platforms 3-6 (close to Thalys office).
28. (AT THE PLATFORM) Many business travellers were waiting the train to Paris Nord at the platform for more than 10 minutes, even though the panel displayed Liège. Others were downstairs, at the entrance of the platform. When the panel displayed the destination Paris Nord they all moved to the platform too.
29. (AT THE PLATFORM) A guy read the panel saying "Bru-Aeroport Amsterdam C" and still decided to ask the inspector that was close by if that train would go to Amsterdam.
30. (ON THE TRAIN) On the international trains, such as Paris Nord, Amsterdam and Marseille, the use of laptops and tablets were observed many times. Furthermore, books and journals were also observed, but in less quantity.
31. (AT THE PLATFORM) A few meters further from the exit of the escalators (for those who come from the Thalys Office) there is a TV displaying the map of the platform (from A1 to A4 and B1 to B4) and where the train will stop. Its also shows which zone the 1st and 2nd class' carriages are located. However, most people didn't see it because they stay close to the exit of the escalator (zone A1/B1). When the train stopped, from the zone B1 (last carriage) to zone B4 (first carriage), most of them had to move, mainly the ones in the second class (zone B3-B4). They did it hurrying up worried to lose the train.
32. A lot of people were waiting in front of Thalys Office, where there are 2 Railtime. As soon as the train Paris Nord was announced on the Railtime, they all moved to the platform. However, the panel was still turned off and at 15 minutes last till the train arrives.
33. (ON THE TRAIN) On the train I observed many women keeping their hand bags on their legs, instead of on the top as the big luggage.
34. (AT THE PLATFORM) The train to Knokke around 18:00 was already full and stopped very far from where a lot of people were waiting at the platform. They had to run few meters to catch the train, that was already

full of people trying to get into.

35. (AT THE PLATFORM) A guy came downstairs to take the train, and in the same moment that he arrived to the platform the inspector whistle. The guy was going to get into the closest door, but after listening the whistle he walked till the door where the inspector was and got into. Afterwards, he walked the way back inside of the carriage to the same door where he was planning to get in.

#### Observation #04

In *Brussels National Airport* on *6th of March of 2015* from 12:00 to 18:00.

1. (AT THE PLATFORM)(ON THE TRAIN) Two couples lost their train to Brugge (Brussel Brugge). They had heavy luggages but still all of them went upstairs to the station to check alternatives. In the hall, one of them went to check the timetables, while the others kept looking at the Railtime. Afterwards they all went upstairs, to the airport. For the next train, around 1 hour later, they came back with some minutes in advance and waited at the platform 10, to take the same train. They went to the closest carriage and left some luggages on the top, others close to the legs in the space between then in the seats.
2. A good amount of people were seen getting into the station and reading the signs. They seemed to see "Platform 1-3" for both sides, but they don't realise that the right side also has an elevator. Even with heavy luggages they seemed to choose randomly and then take the escalators.
3. (AT THE PLATFORM) Two people were at the platform. One of them went upstairs, to the station, and bought 2 coffees. Then she went back downstairs to share it with her partner, while the train didn't come.
4. (AT THE PLATFORM) A family went to the platform and stood in front of the train Brussel Brugge, that already was there. The girl got into the train, while the parents stayed at the platform. She came back to understand why they didn't get into, and then they called her to come back to the platform. They were uncertain about the train, discussing each other and looking around. The girl went to the Railtime (at the platform), being followed by the father. Uncertain, the father asked a guy if the train was the one to Brugge. As soon as the guy confirmed they all went to the train.
5. (AT THE PLATFORM) The train to Amsterdam was 2 minutes late, so a lot of people started looking to the rails, seeming to be a bit worried. When the lights of the train were seen in the end of the tunnel, people relaxed and started to position themselves to choose a carriage.
6. (AT THE PLATFORM) While waiting the train, some people were seen with their smartphones: playing games, chatting, reading news.
7. (AT THE PLATFORM) One guy almost got into the train, but when he asked the inspector about the train he wanted to take, the inspector advised him to go to another platform.
8. (AT THE PLATFORM) One old guy was waiting his train at the platform playing crosswords in a newspaper.
9. (AT THE PLATFORM) While waiting, many youngsters take their smartphones for different activities and start to interact with it: chatting, games, listen to music, check notes...
10. (ON THE TRAIN) On the train, the use of laptops, tablets and smartphones is very common. However, most times I observed laptops on the table, it was only in one side (the passenger in front of it usually doesn't have enough space on the table).
11. (ON THE TRAIN) Most of people got into the train "Brussel Brugge" in the closest door from the escalator.
12. (ON THE TRAIN) Most of people going to "Amsterdam C" left their bags besides them, in an empty seat. Also was possible to see a good amount of bags on the topshelf of the carriage.
13. (ON THE TRAIN) Many people were seen choosing 2 or more free-seats to sit. So they can leave their bags besides them, or at least in front.
14. (ON THE TRAIN) A big group (more or less 6 people) left their bags on the topshelf and sat all together,

very close to them.

15. Most of people use the escalator, even when the elevator is available. They seemed to not realise the existence of the elevator.
16. (AT THE PLATFORM)(ON THE TRAIN) A guy got in the train but quickly came back to the station. Very close to the door of the train that he just left there were 2 posters on the wall, which he got closer and started to read, looking for some information about the validation of the ticket. As the posters were not about this, he asked the guy close by if it was necessary validate the ticket somewhere. The guy told him that it was not necessary because someone would do it inside of the train. The guy got back to the train and chose a seat.
17. (AT THE PLATFORM) A girl was walking over the platform making a call. Then, after some while, she asked a guy for help. She wanted to go to Antwerpen, but didn't find any train to there in the platform. All she knew is that the person in the other side of the call (probably a friend she was going to meet) told her to stay in the platform 1, that was showing in the panel another train. The guy lead her to the Railtime and showed the train to "Amsterdam C", that could work. Also showed her the train to Antwerpen, later than the one to Amsterdam. They walked away and started to chat about random stuffs until the train arrives. The guy informed her that was her train, but still she asked the inspector in order to confirm she was going to the right one.
18. (ON THE TRAIN) Four Chineses were travelling with huge luggages. After got into the train through the closest door, they started to discuss each other about how organize the luggage. The carriage didn't have any special space for it, except the topshelf. As the luggages seemed to be very heavy, they preferred to put on the empty seat in front of them.
19. (ON THE TRAIN) Many people use the topshelf to store their luggages (small ones), but the space in front or beside them in the free seats it's also very useful for luggages (big and small ones).
20. A guy left the arrival room of the airpot running and looking for signs to know where to go to take the train. He was almost going wrong, when he saw the sign for the train station. He tried to take the elevator, but was closing the door. So he went through escalators and took the elevator in the next floor. At the train station he didn't buy any ticket. Instead, he went straight to the platform 1. There, with a smartphone, he started to message a friend. As soon as the train arrived he got in.
21. (AT THE PLATFORM) Once more the problem with carriages stopping to far from where people are waiting were observed.
22. A guy waited his turn on the machine tickets right in front of the door for those who come from the airport. For some reason he couldn't buy a ticket, so he went afterwards to the Ticket Office, where he waited once more.
23. The machine tickets right in front of the doors for those who come from the airport are often crowded, while the ones before the doors and the ones close to the ticket office have less people.
24. On the train to Amsterdam, most of people chose seats and left their small bags n the seat beside them. Some people use the space for bikes and accessibility to leave their bags in the carriage, sitting very close to it.
25. A guy bought his ticket in the machine and started to look to Railtime. Then he called a friend and told him (spelling) the next trains available. After received an information from his friend, he confirmed the platform and went to there.
26. A guy was very confused looking to the machine tickets in front of the door, when a young guy showed him that behind of the wall he could go to the Ticket Office. He went there, bought a ticket and went to the platform.
27. A guy bought a ticket in the Ticket Office and left to the hall. Then he asked the first guy he saw for help about which platform he should go. The guy lead him to the Railtime and showed the right platform and time.

28. Two Spanish bought their tickets at the machine and checked their platform at the Railtime. They found their train and went straight to the platform.

#### **Observation #05**

In *Namur* on *6th of March of 2015* from 12:00 to 18:30.

1. The station is small and very easy to understand. There is a main hall where you can access both platforms and shops, including places to eat. In the centre of the hall there are seats positioned in front of big panels showing the next trains. Because of this, most people I observed stayed there, sitting and waiting for their trains. Close to the time of departure they moved to the platform and got the train.
2. Many people also enjoyed the waiting time to have a coffee and/or some food in the stores around the station. A couple were also seen taking pictures in the automatic cabins available there.
3. A tourist was seen comparing prices at the ticket machine. She ended up buying a GoPass1.
4. A group of tourists were seen following the signs for the tourism office. They left the station and got lost, since they couldn't find it. The place is in the left side of the station, outside, but it's not very easy to be seen.
5. There was from a group of tourists that had a ticket from Dinant to Brussels, but they get off the train in Namur for a short visit. So they didn't know if they could use the same ticket to keep going, or if they should buy new ones. They asked at the Ticket Office for more information and came back to discuss each other. They seemed to still be not sure about the tickets, but in the end they keep the trip with the same tickets.

#### **Observation #06**

In *Brussels South* on *9th of March of 2015* from 12:00 to 18:30.

1. Three guys were discussing what each one of them should do, and planning a meeting point afterwards. One went to buy some food, and 2 of them went to the International Ticket Office.
2. (AT THE PLATFORM)(ON THE TRAIN) A group of Japanese enjoyed the time at the platform to take pictures. When the train arrived they got into the closest door with less people. Inside they walked over the carriage looking for a place for all of them. As it was not possible, part of the group walked back the whole carriage and chose the first seats, while the other part chose the sits available in the end of the carriage. The guys left their bags on the topshelf, while the girls preferred to keep it with them, on their legs. The group in the beginning of the carriage were very focused on the panel announcements, and prepared to get off the train as soon as they saw the station there.
3. Some tourists were walking around the station looking for a cash machine, that they found later.
4. In the exit of Eurostar, at the station, most of people read the signs and followed it. However, some people preferred to ask for information in the Info Kiosk of Eurostar.
5. Three tourists (one of them using smartphone) were observing the panel with trains and discussing each other. They seemed to be in doubt, and then they decided to go straight. When they saw an Info Kiosk they enjoyed to ask some information for the employee over there. They showed the smartphone to the employee, that gave them the info needed. Afterwards, they follow the signs for a fast-food restaurant and bought some sandwiches there.
6. A tourist asked a stranger about where she should go to take the shuttle to Charleroi Airport. As the guy didn't know, he advised her to look for the Info Kiosk in the main hall of the station. She was going to there when she saw some cops, which she asked for information. They instructed here, that followed and found the buses.

7. Three girls were in front of one platform with their smartphones and tickets on hands. They seemed to be looking for information to confirm their gate. After some while they decided to get into the platform.
8. An employee of Belgian Rail were available to help people find their platform/train. He stayed in the middle of the train station, where a lot of people came to him to ask for help. For sometimes he even had a waiting line.
9. A guy with a ticket on hands showed his destination to the employee, that after check his train informed where to go.
10. A girl was standing with her smartphone in front of the big Railtime panels, in the hall of the station. She had expression of being lost. After some while she walked to the Railtime and tried to find it. Without success, she got closer of 2 other platform panels. Again, she couldn't find it. Then she decided to go to the Info Kiosk, but before she found the employee ready to help. She asked him for help and then she moved to the platform indicated by him.
11. (AT THE PLATFORM) A couple went to the platform 3-4 where it was a train to Paris-Nord scheduled. He asked a guy information about the train to the airport, because according to the Info Kiosk should be in the platform 4 (the same as the train to Paris-Nord). The guy told him to wait, but he informed that the train to the airport should leave earlier than the one to Paris-Nord. So, the guy lead him to the Railtime and showed him that it would leave from the platform 3, instead of 4. The couple appreciated the information and once again told the guy that was an Info Kiosk mistake.
12. (AT THE PLATFORM) A lady improvised a seat in a concrete sign, right after leave the escalators. But actually there was some seats available a few meters from where she was, but hidden because of the wall.
13. (AT THE PLATFORM)(ON THE TRAIN) Three people walked to the zone B3-B4 to get into the train, but actually they should be in the zone B1-B2, for the 2nd class. They walked back and got into there. A few seconds later another couple did exactly the same. Both groups passed by a TV informing the map of classes on the train and its position at the platform. Anyone saw it.
14. Many people stays in front of Thalys Office watching the Realtime, being ready to go to the platform when their train be announced at the panel.
15. (AT THE PLATFORM)(ON THE TRAIN) While the train didn't depart, a guy stayed outside smoking. When the inspector whistle the guy throw away the cigarette and get into the train.
16. Many people wait their trains in the seats available in the station. Some of them prefer to sit in front the Railtime, so they can keep tracking the new trains and all its information.
17. (AT THE PLATFORM)(ON THE TRAIN) The train to Koln arrived and a guy tried to get in the 1st class, in the 1st carriage. The inspector told him to go to the next carriage. He went there and, again, it was the 1st class. The other inspector sent him, again, to the next carriage. The 3rd carriage was, finally, the 2nd class, where he got into.
18. (ON THE TRAIN) Two girls were on the train with maps, planning the next sightseeing they would do.
19. (ON THE TRAIN) A couple was on the train to Genk, discussing about the airport. When a girl next to them heard it advised them that this train wouldn't go to the airport. They told her that they knew it, but they were just taking it to Brussel-Centraal, where they would finally change. The girl told them that they could do it from Brussel-Zuid too, but they told her that they were coming from Ghent, so it would be the same change in the next station or in this station.
20. (ON THE TRAIN) A family tried to get into Paris-Nord train showing tickets on the smartphone. The inspector was not sure about this procedure, but after some while he seemed to typed the code in the electronic device he had and let them get in.
21. (AT THE PLATFORM) A couple tried to get into the train to Paris-Nord, but the inspector didn't allow it. He called a Belgian Rail's inspector to explain them why they were not able to do it. I couldn't listen all the

conversation.

22. (AT THE PLATFORM) Two guys came to the platform after the whistle. One realised that he was late and ran, while the other didn't realise it and came walking slowly. Both were not allowed to get in by the inspector.
23. (AT THE PLATFORM) A guy came to take the train to Paris-Nord after the whistle. The guy went to the carriage with the inspector and asked him to let him go, since the train was still stopped. The inspector didn't allow it, and then the guy stayed in the platform very impatient. He asked an employee if the next train would depart from the same platform, that answered that probably yes. Then the guy made a phone call and waited at the platform.
24. (ON THE TRAIN) On the train to Paris-Nord a lot of people decided to get in the carriage closer to the Thalys Bar. A line were made, while other doors' carriages were almost empty.

#### **Observation #07**

In *Antwerp Central* on *11th of March of 2015* from 12:00 to 20:30.

1. (AT THE PLATFORM) A guy with a ticket on hands was at the platform very confuse, looking at Railtime. He stayed there some minutes, and then he saw a Belgian Rail employee passing by. He came to him and showed his ticket, asking about the platform he should go. The inspector confirmed that he was in the right platform and just needed to wait.
2. (AT THE PLATFORM) A guy with a ticket to Amsterdam tried to get into the Thalys train to Amsterdam. The inspector advised him that his ticket was for the common trains, not for Thalys. So the guy left and waited his train.
3. Many tourists were seen taking pictures of the station, before and after buy tickets.
4. Three tourists bought their tickets at the Ticket Office and took a look at the vertical panel in the main hall before move to the platform.
5. A mother carrying a pram came slowly downstairs to the main hall, making a big effort to control the pram. She seemed to didn't realise the elevator or escalators.
6. Many tourists were taking the way to leave the station when they saw a Info Tourism Office. Most of them got into and took some maps and advices.
7. A girl went to the platform but lost the train. Then she checked the Railtime and saw the next train to her destination in the other platform. She went back to the hall to change platforms, but before go down again she checked once more the information.
8. A couple were going to the platform 23-24. The girl were already in the escalator when the guy realised that was the wrong platform. He called her but there was nothing to do except finish the ride and come back. When she came back they went, together, to platform 21-22.
9. Three girls were coming down through escalator, with luggage, and before arrive to the hall they saw the sign to platform 21-22, in front of the escalator. They went there and realised it was stairs. So one of them look back and saw another sign indicating the same platform, but through escalator. She advised them and all 3 girls came back to take the way through escalators.
10. A mother used the escalators to go from the 1+ floor to the -2 floor. She could have used the elevator.
11. A Japanese couple came down running, through the escalator. When they had to choose between platform 21-22 and 23-24 they stopped. After see the Railtime they checked the trains and walked until the escalator's entrance to platform 23-24, where the guy stopped and started to look at the panel. The girl pushed him, hurrying up, and they went down to the platform. At the platform they saw their train, looked to the panel, checked the clock and then relaxed since there was almost 10 minutes left. The girl went to a

machine and bought a soda. The guy walked around looking for something to eat but didn't buy anything. They walked together until the last carriage, very far from the escalator they came down.

12. (AT THE PLATFORM) A group were waiting the train to the Airport, which was 10 minutes late. When the train arrived one of them asked to the inspector about the train, in order to confirm they were right.
13. (AT THE PLATFORM)(ON THE TRAIN) A couple were coming back through escalator when the inspector whistle. The lady ran and the inspector told her to get in. She got in, and the inspector too. But the guy was coming right next, and then the inspector didn't allow him to get in. The lady tried to go out, but he also didn't allow it. The guy at the platform went to Railtime and started to look for the next train.
14. Two girls were very uncertain about which train would be better to their destination. They looked at panels, then at some platforms and came back to the panels. After they checked the timetables and finally seemed to have decided. They bought some drinks and food at the machines and went to the platform.
15. At the Ticket Office two girls waited on the line. However, they were trying to buy International Tickets that should be done in the counter 1-6. They didn't see the sign alerting about it.
16. Some people were seen in the centre of the hall with laptops and smartphones in order to use the free Internet wireless of the station.
17. (ON THE TRAIN) Two people were running to take the train "Brussel Charleroi-Zud". At the entrance the girl asked the guy if he was sure about the train, and he hurried up her to get in. They got in and the doors closed. Then the girl made a effort to try to see the panels at the platform through the door's window. She was still uncertain about the train.
18. (AT THE PLATFORM)(ON THE TRAIN) A girl came with luggage to the platform and asked the inspector of the train to the Airport about her train. She showed him the tickets. The inspector told her to wait in the platform for her train. When the train moved the girl went to the Railtime and started check her ticket and the trains displayed there. She seemed to be very uncertain. She waited her train standing up. When the train arrived she had to walk a lot because the carriage of 2nd class was far away from the place she was standing.
19. (AT THE PLATFORM)(ON THE TRAIN) The train to the airport stopped at 21B, but most people were standing in platform 21A. They all ran until reach the train. Most of people got into the 1st carriage, even with 2 minutes left to the train depart. However, 2 guys ran until the last carriage.

#### **Observation #08**

In *Antwerp Central* on 14th of March of 2015 from 10:00 to 17:30.

1. A girl came to the Ticket Office with a smartphone on hands and asked if the trains were on strike, because according to the mobile app it was. The seller told her to not worry, that the system was showing this to her too, but that makes no sense since it's all working fine. So the girl ordered for a ticket and confirmed the next train to her destination with the seller.
2. Two girls, apparently less than 25 years old, were checking prices at the Ticket Office to Brussels. The seller informed it would cost 11€ each. The girls bought the tickets. They could get GoPass1 for a less expensive cost, but apparently they didn't know about it.
3. A girl was standing in front of the panels looking for a flight to the airport. As she couldn't find it (although it was there: "Bru-Luch Bru-Zuid") she asked help for a stranger that seemed to be a local. He walked with her to the timetables and showed her the icon of the airplane on the trains going through the airport. The next train to there would be leaving in 15 minutes, but she left the station. Afterwards I saw her at the platform waiting for the next train to the airport. Seemed to me that she had enough time so she preferred to stay in Antwerpen than stuck in the airport.
4. Three tourists left the station and were seen in front of the train station discussing for which street they should start walking to visit the city. They were wondering which one was the main street that could lead to

the city centre. They didn't have maps, what makes me think that they didn't see the Tourist Office inside of the station.

5. A girl found out which platform she should go looking at the panels, but she was in doubt about which way take to go there. The sign close to them had no numbers of platforms, but was showing "All platforms" in certain direction. She was not able to see it, and then a guy close to her indicated the way. In the next "room" she saw the number of the platform 23 and follow the signs.
6. (ON THE TRAIN) On the train from to Antwerpen three tourists stood up to get off the train in the station Antwerpen-Berchem. Then a guy told them to wait Antwerpen-Centraal if they want to go to visit the city closer to the centre.
7. (AT THE PLATFORM)(ON THE TRAIN) Two tourists were waiting their train to Brussels. When the train arrived they got in doubt because it was the one coming from Amsterdam, and its look differently from the ones they were seeing at the platform. They asked the inspector if it was the right train and then got in the closest door.
8. (ON THE TRAIN) Most tourists were seen leaving their small bags close to them, in empty seats when possible. If not possible, on their legs or on the table in front of them.
9. (ON THE TRAIN) 3 different groups of travellers were seen leaving the small bags on the topshelf of the train and sitting right behind it.
10. (AT THE PLATFORM) At the platform, many people enjoyed the waiting time to grab a coffee in a store located there, or some drinks/snacks at the machines.
11. Some people were seen standing in the middle of the station trying to connect to the internet, via Wi-Fi free available at the station, with their smartphones.
12. (AT THE PLATFORM) At the platform a train supposed to go to Amsterdam was showing "\*\*\*" instead of the number of the platform. Two tourists were discussing each other what this could mean.

# Appendix C

## Part I - Icebreakers

Relaxed questions in order to warm-up and get to know the participants.

- Have you been travelling around Belgium?
- How do you like it so far?
- Any further plans of trips?

## Part II – Main questions

Questions seeking to provide better understanding of the passengers' thoughts.

1. What is the biggest difficulty you face when using trains in Belgium?  
How significant is this problem? What causes the problem?
2. What information sources do you use to check trains when planning a trip?  
What about in an off-line environment? And on-line?
3. Buying a ticket, how do you choose it?  
What kinds of mistake have you had on it? What causes the problem? How could it be avoided?
4. How do you know which platform you have to go?  
And how you identify your train? How do you feel until the train arrives?
5. What are your considerations when choosing a carriage? And a seat?  
How different is your decision when you have big luggage?
6. How do you know when it is time to get off the train?  
How is your feeling until you arrive to the destination? *(If negative answers!)*  
How this could be avoided?
7. How hard is to make a connection, when necessary?  
Do you act differently when you need to do it? *(If negative answers!)* Why is it

hard? What has been causing difficulties in this respect?

8. When you arrive to the destination, what are usually the next steps you take?

9. What are the main differences between the trains in Belgium and in your own countries?

What is better about Belgian trains? What is better in their own countries?

### **Part III - Extra**

Additional questions in case of sessions with reserved participants, allowing the researcher to explore better the time and get extra insights.

- What do you like most about trains in Belgium?
- What don't you like most about trains in Belgium?
- Do you make use of any technological device during the trip? How it help you?
- Have you ever thought about a specific feature that would help you in a trip?

### **Part IV – Ending questions**

Questions aiming to terminate the conversation in a smooth way.

- Do you find it easier to travel by train in their own country? Why?
- What could the Belgian train company learn from the train company in their country? And the other way around?
- Do you have any other thoughts to share?
- Have we missed something?

# Appendix D

## Focus Group #01

On 1st of April of 2015 with 6 participants during approximately 60 minutes.

### Have you been travelling around Belgium? Where did you go?

Fg006: I went to Bruges, Brussels Antwerp

Fg005: Brussels, Bruges, Dinant, Namur, Antwerp

Fg004: Oostende, Liege, Brussels, Antwerp, Ghent

Fg002: Namur, Amsterdam, Brussels, Antwerp

Fg003: Bruges, Ghent, Antwerp, Brussels

Fg001: Bruges, Ghent, Antwerp, Hasselt, Oostende, Aalst, Blankenberge...

### How many of you have had connections, except Brussels, that I think it is a normal connection for everyone...

Fg005: Yes, we stopped in another station, but I don't remember each one.

Fg006: Liège?

Fg005: No, I don't reme... Yeah, maybe Liège.

Fg003: I have been to Antwerp, which many times the train stops in Mechelen, just for a couple of minutes and then we change the train.

### How complicated do you think it is?

Fg003: It's pretty easy. We just get into the next one, just next to you in couple of minutes. It's just pretty easy to find them.

Fg006: I had to change the train in the Wallonia part and I found it difficult because all the voices were just in French, so it was difficult to understand the platform where my other train was. Because in the Flanders they always say in English, but in the French part don't... It's not always so...

### So you found a language barrier?

Fg006: Yes.

Fg002: I think the first time is very confusing because first time I was actually just coming from Brussels to Leuven, and I already took the old train because it is very wrapped and a lot of times on the train table you only see the final destination. But it's not so clear where are the stops that the train is making and you can only check the stops in a completely different board which is like in a different place. And the trains goes, for example, every five minutes, and you check for that train and goes to that platform because that is the situation I had, and that the train already left so I need to check for the other train and to get to that platform... So it's a little bit confusing because everything is in different places I think.

### So do you think the language barrier is something that makes it difficult?

Fg002: Yeah, for sure. I mean, since we all speak English... So, maybe even understanding like French or Dutch is better, but I think for a lot of tourists who specially don't speak English if you have a different alphabet system like maybe Cyrillic or Hebrew or anything like that it's completely... diverge.

### And connections in Brussels, did you have any problem?

Fg001: It is always the train delays. Because if it's 5 minutes delay, which is typical, then I have missed my next train so... That's pretty much my only problem.

### And what do you do in this situation?

Fg001: I just wait for the next one, or if there is a possibility of going by bus then I will try that also.

### So what do you mean? You start to look for alternatives?

Fg001: Yeah.

### In which sense? Like, mobile, or timetables...?

Fg001: When I first came here and I didn't have mobile internet so I would always have to rely on the trains that takes a long time as Fg002 said... but now that I have my mobile it's so much easier and it's much faster, so I always rely my mobile now.

### Ok, but when you don't have Internet? Which sources do you rely?

Fg001: I just go back to the timetable.

Fg006: When I don't have mobile connection I'm used to rely to the information desk. I found it quite helpful, the only problem is that people are behind me pushing me because I am going to ask a lot of information and they are always in a hurry, so this stresses me out but there is nothi... It's not the train company fault, like... personal sensation. And apart from that it's perfect.

Fg005: First time I went here I asked for information because I had no connection, no... I was a bit bothered because I had no internet... The information were very clear at the desk.

Fg004: Normally I use those totems, some stations have it. But some stations don't, so I normally ask in the information desk or if it's nothing there I ask for someone else or something... But yeah, I also have this problem that people behind me always are in a hurry and get me stress out and you start to missing your English and everything start (...) and you cannot communicate properly, so...

Fg002: Yeah, sometimes the information desk they actually don't speak English, and I found that weird. Maybe not the information desk but more with you ask one worker already at the platform and I think the biggest problem of the information desk is that is always a deep line, so if you are kind in a hurry then it gets really... because some people they ask really a lot of questions and yes, something that like... one time I waited half an hour waiting for the information desk. So... I think it's better to just go and see at the timetable or something.

Fg003: Yeah, I didn't have any particular problems. But if there is no battery in my phone or something I usually ask strange people, or checking tables... that's it.

**So seems like you all always prefer to ask a person afterwards, except by you (Fg001) that prefer the timetable...**

All: Yes

#### **How do you like so far?**

Fg004: Travelling in Belgium is okay because the trains are pretty good, but I was travelling with my friend in the East and it's not that good because the trains are pretty old, normally the seats are broken, and we got night trains because was always long trips so we thought "okay, let's sleep in the train", but we couldn't. So I think that Belgium has a pretty good rail system.

Fg002: I think the trains are very comfortable, especially with the chargers beside, so you can go and charge your devices which is really nice. Sometimes it has the little tables, that is also kind a comfortable to travel.

Fg006: I do agree that the trains are comfortable and there are charges, but only 2 in one... like "train block", they are comfortable... but I find sometimes it's difficult understand which train I should get. For example, even I use the website of the rail system, sometimes and I put there for example "I want to got from here to here"... Sometimes it gives me all the path, and also the buses that I have to take. Why? I am just looking for the train. So it gives me some alternative routes, but I just want to know the easiest by train. Not the easiest considering all the vehicle, all the means that takes.

#### **And there is a reason to you to prefer only trains?**

Fg006: Yeah, because they are faster. And they are more comfortable as well. And then you don't have to move from a place to another.

#### **Have ever happened that you take a wrong train... not to a destination, but one that takes longer time by mistake (e.g. Brussels - Leuven can takes 20 minutes or 1 hour)?**

Fg003: To me in the first month I made this wrong decision, and I wasted one hour of my life. I saw some Belgium regions around Brussels and Leuven, so it was kind of tourist trip but... Seeing some little villages around my train... so I don't regret it but yeah, it happened once.

Fg002: I also took once and it was really really annoying because it was going in a really circle ways and everytime we would see the sign "Leuven" the bus would turn in a different direction and I was like "Come on... I'm gonna walk there faster". It's a little bit cheaper though but I think it's not much difference.

#### **Did you realise that you took a wrong train when it happened?**

Fg002: It was a bus, not a train. Because in the train station you can also take a bus. But I didn't know how long would take, I thought it would be the same... But it was very... around 1 hour.

#### **And did you find this bus looking for information, or you already knew about this bus?**

Fg002: Yeah, it was there on the table. It says that goes to Leuven and it was I think like 3 euro and regular ticket is 5 something, so I thought that would be a good deal because I don't really mind the bus, but then I didn't know that takes one hour. I thought it's gonna be around the same, or 10 minutes more. But then definitely go in circles...

#### **Do you regret?**

Fg002: It was okay. Actually it was kind of nice because as he said you can see a lot of small villages, so it was kind of interesting, but I wouldn't do it again.

Fg003: I realised that after 15 minutes... When starts to stop in every stop, not only in airport and then Brussels.

But it was okay. I didn't try bus yet...

#### **What is the biggest difficulty you face when using trains in Belgium?**

Fg001: It was dark when I was going home so I couldn't really see the signs so I would always get off a stop earlier before the one I supposed to get off. And that place seems like a farmers' town, so I had to wait 30 minutes for the next train just to get in a train that was supposed to take 2 minutes (to the next station). I just mean that if not a very populated stop and you miss your train, or get off too late or too early it have to wait a long time for the next one.

Fg002: I think actually there is... There are many things that are very confusing if you are not a regular traveller for taking Belgium trains. Because there are some trains that don't announce the name of the stop and for some windows you can't see the name of the stop. And the train stops only for 1 or 2 minutes so if you don't get off that's bad luck. And there are no clocks on the stations which is also weird, so you don't know what time is... You just can see in the table when your train arrives, but not the time that it's now... and then the timetable is not electronic or anything. It's only in Dutch or French, so it's very old school, just this cartoon board. And so for people who doesn't speak Dutch it's confusing, especially because its only in these two languages.

Fg006: The most difficult thing for me was to understand the stop stations that the train takes as you were saying before, they only put the destination, but not the stops where the train stops. That is the main one. And also is difficult to me understand either if I buy a ticket, for example, from Antwerp to Brussels whether I can stop in a stop that is in the middle of the route, then take the same train without paying another ticket because I already bought, like that way... the journey ticket. That is difficult to understand and I even asked some people but they didn't know it so... I don't know either. I also asked the person that checks the ticket in the train and he didn't know neither. He said "you can do it but it's a bit risky". So...

Fg003: So if the guy checks your ticket, can you use it again? To this direction?

Fg006: i asked him.

Fg003: I don't think so. I mean...

Fg006: I asked to the person that was checking my ticket and he said that there is no clear regulation on it so you can choose either to do or not do... "But if you do it it will be a bit risky, depending of the person you gonna find afterwards". That is a bit unclear. I did it!

#### **How do you feel doing it?**

Fg006: I was afraid. Even, yeah... I was afraid because I didn't know what was the right thing to do. They couldn't tell me. So I don't know if I was doing something that is acceptable or not.

Fg005: You just did.

Fg006: I did because there was no clear regulation so, yeah. But if there was a clear regulation for sure I wouldn't have done it. Yeah, and also the linguist barrier... In the French part was another difficulty.

Fg005: I rather ask to the person where I have to go, instead of looking for the timetable because I think that the timetable is a bit difficult to understand. So, for me, is the most difficult thing... Is quite clear taking a train in Belgium, so maybe the only difficulty I found is this.

Fg004: Actually I have difficulty in the stops and also with the changes. For example if I use the GoPass10, if I go from Leuven to Bruges I have to change in Brussels but I don't know... I have to...

Fg006: No, you don't have to put it again. To write again in your ticket. I am sure about that.

Fg004: Yeah, that's the thing I have most difficulties... To know if I should or...

Fg006: I asked him and he told me no... You just put the place you have started and the place you gonna finish.

#### **So you had the same doubt?**

Fg006: Yeah, yeah!

#### **Before you were mentioning about the ticket. Was that a GoPass?**

Fg006: No, no. Because I was going from a Belgium city to a city in Germany. But I wanted to stop in another city in Belgium.

#### **So I think you both agree that the rules for the tickets are confusing...**

Fg006, Fg004, Fg005: Yes.

Fg006: Was confusing even to the person, the person that checks it. When I asked him he said: "No, I don't know whatever you can decide". So that was confusing.

Fg003: I found it a bit annoying. In the main table they always put last stop, not Ghent. For example I want to go to Brussels but I don't know which one is that, because it says some strange French cities, and I don't know. So I always have to check it with my mobile, if it's the right train or not, so it's a bit annoying like... Ok, I can go to the line and check their the stops but in the main table there is not information about this. Only last stop.

I guess they can solve this problem. Putting also like... moving the line with the stops.

Everyone: Yeah...

Fg003: And other problem is the night trains... Not in night, but midnight is the last train so if you want to go to a concert in Ghent you have to come back before it ends if you want to be in Leuven at night. This is so annoying. They don't put any trains after midnight. Ok, I mean, they can put one train every hour... I am sure there are people using it, especially in the weekends. So this is a major problem for me. They are forcing me to go back to the last train...

#### **What information sources do you use to check trains when planning a trip?**

Fg004: It depends where I am going. For example, if someone is going to visit me, I have some friends that are living in France, Germany... So if someone is going to visit me I plan the trip, "so today we can do this this this, so get this train and get at this time...". But if I am going to travel by train to somewhere else and going to France or going to Germany, I check it for some time of trains... First for my organization and second for, like... price or something.

Fg006: I have something about the previous question. Another difficult I found was the price of the tickets. Because when I go check on the internet the times and the stops that the train makes I can never find the price of the ticket. For example, if I want to go, yeah, from a place that is not Brussels and I don't have the GoPass I don't know how much the ticket it's gonna be. Because on the website there is not the price, unless you want to buy the ticket some time.

I think they should put the price right next to the time. This is the train that goes from here to here, it passes from here, it goes from here, at this time, and it costs this much. Put they don't put it so you have to go to buy, and fill in all your personal data, and then you have to also put your credit card data... I will never do that, so I am always going to the train station, to the line, to ask the person of the information. And then you have to think whether you go or not, because you don't know the price before, unless you were going to fill all the data. So that's a big difficulty.

#### **Buying a ticket, how do you choose it?**

Fg002: I never really had a presence situation because all my travels was really kind a more relaxed... I didn't have a specific time when I have to arrive so specially because Belgium is very small I always just go to the train station and buy a ticket there, and just go. Because I know that there is gonna be a train in 20 minutes max, which ever time I go there. But I do agree that is so bad they don't have night trains. It's really bad. And I think it is also kind of hard to figure out at first how to buy a ticket: what is cheaper, if it's GoPass or if it's a weekend ticket, or if it's a regular ticket... A lot of people, for example, don't even know about the weekend ticket, so they end up spending 50% more money, and when I just arrived, also in my first day in Belgium, I was going from Brussels to Leuven and I had heard from everybody that like GoPass is the cheapest, and stuffs like that. And then I wanted to buy a GoPass and this woman came to me and told that is actually cheaper to buy a regular ticket to Leuven, because it's close, because its GoPass is like 6€ and that ticket was like 5,20€.

Fg006: It's exactly the same.

Fg002: Yeah?

Fg006: Yeah, to go to Brussels is exactly the same. So it's not convenient, it's just the same.

Fg002: Ahn, it depends if you buy a GoPass10, because I wanted to buy a GoPass1, which is...

Fg006: Oh oh, ok!

Fg003, Fg001, Fg005: Yeah.

Fg002: Exactly, there are many options and it's really hard to know which one is the best if you don't have some help or if you haven't been using it for a while.

Fg001: Yes.

Fg004: Actually this is frequent. Because now in our exchange program there are a lot of Brazillians in Europe, so when they come visit Belgium they ask what should I buy, how kind of ticket should I buy, normally... Always they ask this. Because there are several options and... yeah... "you can try them all" (\*laughs\*).

#### **How do you prefer buy it?**

Fg002: I like to go... I know that the Internet is more convenient, but you have to print it out, so that's not very convenient. But I think if you can only show it in your phone, that's pretty sharp. That's much more convenient than standing in a line. But the machines I still think that are not very good. Still most of people needs to go to the line, because in the machine you can't use certain type of cards. For example, I don't think you can use debit card, VISA or something like that.

Fg004: You cannot use notes.

Fg002: Yeah.

Fg005: You cannot?

Fg004: No.

Fg006: They only work if you have to go to another Belgium's city. If you have to go out of the border they don't work. You cannot buy your ticket in there, and that's very inconvenient because then you are forced to buy and stand in the line. And also I think that the Belgian rail system is bad when you take in consideration the connection between Belgium and other countries. If you take a train within Belgium that's ok, its work pretty fine.

But if you have to go to a city which is outside of Belgium then it's much more expensive and the train doesn't come very often as well.

**But in this situation that you have to go to another country, how you handle this?**

Fg006: I take a train very early, like 6:15 from Brussels, because there no others afterwards or if there is another is like 14:00, so it cannot be possible. And I bought the ticket from the Internet.

**So you went straight to the destination or you change in the last city in Belgium?**

Fg006: I didn't do it yet, but I will do in Easter. I bought the tickets online so I think we have to change. I was asking the information desk how much would cost to go, for example, from Leuven to Lille and she said me the price. And then she told me that if I would do from Leuven to the last stop close to Lille, still in Belgium, and then get off in there and buy another ticket from there to Lille that would be more convenient because in that train station I can buy a very cheap ticket to go to Lille. But I can buy only from that station. I think that is very bad because I don't want to go off. I want to buy that ticket, but I want to buy that ticket since the beginning, not in the last stop. I felt I was forced to get off in order to get a better deal, and I don't see the rational of this. It could be the same but from a new starting point.

**Have you ever tried to collect some information to try to get the cheapest option on the Website, or somewhere else, except by the Ticket Office where you can ask personally?**

Fg001: Yes, actually I always use the automated ticket machine so I know the cheapest. Ok, so the Weekend ticket it's this price, and then, if... how much is it for regular ticket... Well... I will just put in different options, go back, go another option, and then I will see each option is the cheapest and just buy there.

Fg003: When I was planning to go to Koln for carnival they told us that there was a special ticket for Aachen. So with discount price... But it was quite complicated. I mean, we could not find properly the information on Internet. It was so strange that it says GoPass Aachen and Aachen tickets, like different options and we said "Ok, we don't go". It was really complicated that I'm stay alright.

**So you gave up?**

Fg003: Yes, we just said "Ok, we don't have to go". Sometimes it's complicated, many options.

Fg006: It happened the same to me and I decided to go to Koln by bus because it was too complicated by train, and also too expensive, because if you have to go to another country is much more expensive.

Fg003: But have you seen this ticket for Aachen? This kind of special ticket for Aachen?

Fg006: Yeah, yeah. I have to ask something on this because on the Internet they say that they have special tickets from a Belgian city to a Belgian city close to the border, but the information on Internet is not always updated. I wanted to buy the 18€ ticket to Lille so I went to the information desk to buy and the lady told me that is not sold anymore. So I planned my journey according to that ticket and it was changed. Because the website was not updated.

**How do you know which platform you have to go?**

Fg003: Either by mobile or the table. I mean if I check it before at home I just go there directly and check it on these screens over there. If not I just go and check it in the normal entrance.

**At home by Internet? Computer?**

Fg003: Actually I prefer that. I do it. Because I like to plan my trips before, and see what time is it... and stuff. Yeah.

Fg005: I go to the desk and when I buy the ticket I also ask for the platform. It's the easier way to find the platform.

**So you prefer to go to the desk because you can get the info for the platform?**

Fg005: Yes, and I also can ask the person which is the cheapest way to get in another place. So I think it's the cheapest and easier way to move to another place.

**Do you think that you do this because the system that they currently have is complicated, or because it's like some behaviour that you always do, even in other countries?**

Fg005: First of all because I am lazy. And also because I think that the information in the internet is not so clear, as for example the price. And is a bit difficult to understand, yeah... Because there are trains, and also buses on Internet. So I would rather ask in the desk.

Fg004: Normally even if I already bought the ticket I use the internet website so I can see this platform, or this platform... If I am in a different station I have never been before I look for the map so I can see where are the platforms. Because happened that I got lost in Antwerp, inside of the station, and I lost my train, so I had to take another one.

**Have you any idea which instructions would you follow if you didn't have Internet?**

Fg004: I would ask in the desk.

**And if it was close?**

Fg004: Ask people somewhere.

Fg002: Once you get a ticket it doesn't really give you any additional information, it just says from which station to station it goes, but it doesn't show you like stops, or platforms, or anything. And if you want to check in the main, like, TV table it's also be mentioned and only gonna show you the end station. So you have to go all the way back to the table which is close to the entrance, and check there if there is your stops. So now that I know this, I wanna come to the station, first I go to this table with the stops, look the time, I see what is the next train that I should take, and what is the platform, and only then I buy my ticket because then I will already know which platform to go, and I don't have to go back to the table. Because it's usually quite far from the platforms.

**So you plan in your head all the steps?**

Fg002: Yeah, now that you mention (referring to Fg005), ask seems like a better option. Laugh. But yeah!

Fg001: For me is either mobile or timetable.

**And how you identify your train?**

Fg004: By number, like in the platform there is IC train.

**So do you check the number in front of the train? Or you just check the platform?**

Fg004: Just the platform, yeah, if it's wrong I don't get into the wrong without noticing.

**Someone has a different behaviour on that?**

I usually look for the conductor if this is the train to wherever.

**You always do it?**

Fg001: Most times. If I see the tiny timetable and some trains are kind a close of the each other in the same platform I would ask just in case. Maybe this is another one, or this is a different one. Probably 60% of the time, just because I know what happens often.

Fg003: I look at this small tv screen that says IC train, and yeah, that's it.

**You mean the panel that says the next train?**

Fg003: Yes, the small one.

**How do you feel until the train arrives?**

Fg004: If the station is not like closed and you wait the train like outside, I stay inside of the station until, I don't know, like 5 minutes before the train. But if it's like Leuven or the central station in Brussels I stay in the platform just waiting.

Fg003: During this time I prefer grabbing a coffee from Panos, it's nice to travel with a coffee. Specially in the morning.

**Have you ever any difficulty to know if there is any store inside of the platform, or you wish you would know how much time you have to grab a coffee, for example...?**

Everyone: No.

**What are your considerations when choosing a carriage?**

Fg001: I always go to the back. Just because people wants to go to the closest to the stairs... And If I have enough time and I am not sprinting I go to the last one.

**To find empty seats, an empty carriage?**

Fg001: Yes.

Fg003: It's the same for me. I rather stay in a comfortable place. Sometimes like having the whole seats, in some cases I prefer this. Also I like next to the window.

Fg002: I also look for where there are less people, and it's usually the beginning or the end of the train, and I just go there. But there is one thing that is a little bit confusing is that when the train has a very short distance they have 1st and 2nd class in the same compartment, it's just different seats, and so in the first time I had a problem that I was seating in a seat which was the 1st class, but in the same compartment, there is no division there. And then the conductor came and "Hum, you have to go. Your ticket is to the 2nd class". But it was 10 minutes. There were no people, but he still asks, so ok.

Fg004: Normally I get to the first door.

Fg005: Yeah!!

Fg006: Yeah...

Fg004: It's like I am here, and the door is here. And I get in this one and if there is not seat I go find another one. I prefer seating in the windows, yeah.

**What about if you have big luggage?**

Fg004: Oh, I seat in the first seat that I see available, and if there is any room where I can leave my luggage and keep watching.

Fg006: I experienced this when I was moving to Belgium and I really appreciate the train because there was enough space. I went to a carriage, I was sat at the last seat, the one close to the door, and there was enough place to people to come to pass, to go through, and for me, to the luggage be there. So I think it's okay. But it could be improved. Maybe you could put... In some trains, not in here, there are trains with this irons bars, so you take off 2 seats, you don't put seats in there, so you can put the luggage up to the iron bar.

Fg003: There is... I think there is no enough space up to. I mean, you can't put your big luggage in the up. So, maybe they can increase the size of the place. That can be an improvement, but I don't know if they can change it.

Fg002: I don't agree, I'm sorry. Because I think some luggage you can't leave. If the luggage is heavy you may not be able to leave there, so I think it's better leave down there.

Fg006: And also short people won't reach it.

Fg004: Short people, yes.

Fg003: Okay, that's correct.

Fg006: Yeah, I wouldn't consider that part of the train (Laugh).

**But do you prefer to keep the luggage with you?**

Everyone: Yes.

**Because some carriages have the shelf in the beginning, close to the door...**

Fg005: No, I feel safer if I can take my luggage with me.

**There is also some carriages where you have a kind of "accessibility room"... Have you ever looked for this carriage?**

Fg006: I didn't know about this.

Everyone: No.

**Do you think this would be something you would look for...**

Everyone except Fg001: Yes.

Fg005: No, you don't? (referring to Fg001)

Fg001: I mean, I just choose actually to stand in the hall with my luggage. That's for me is always okay.

**You mean standing in the hall where you have the doors?**

Fg001: Yes.

**And if it's a long trip, you do the same?**

Fg001: Yes, I just sit on the stairs and it's fine.

**When you arrive to the destination, what are usually the next steps you take?**

Fg006: Look for a toilet.

Fg003: You have it in the train, yeah?

Fg006: Yeah, but it's cleaner outside. And then I look for an exit.

Fg005: I look for tourist information, an information point, to get a map for free and then start my trip.

Fg004: The same. Or if I have to go somewhere that I already know how to get there, or to take a bus, or I go walking...

Fg002: I usually have my tourist information already, all plans, so I usually just look for the Wi-Fi and actually that's a thing. Because there is not Wi-Fi in Belgian stations because in Netherlands, for example, you can even have Wi-Fi in the train, and I think it's very important because a lot of people have 3G, but anyway, is good to have your maps, because actually this is the first steps it takes... Look how to get to some address that I am planning to go from the station and I use Google Maps for that, so...

Fg003: I usually look for a tourist information point, not only for the information, but also for maps. I mean not only maps, I am collecting them. Specially the maps prepared by Use-It company, for Young Travellers, they are perfect. I mean, probably you know them also... They got many tips and stuff. I first ask for these, and I grab it, and then I start my trip.

Fg006: Are they in stations?

Fg003: Yeah, they always get at the stations actually. Tourist information points, ask for it.

Fg005: Oh, I didn't find it.

Fg003: Not the boring ones...

Fg001: I take pictures inside the station. And I'm collecting maps, I collect pictures of train stations, that's all I do. And then I associate myself with the exit. That's it.

**And once in the exit, you try to find what?**

Fg001: Usually I would try to find a place, hotel or hostel, first. See if I can drop my luggage and start sightseeing.

**Same for everyone?**

Everyone: Yes.

**Have you ever left your luggage in the lockers of the station?**

Fg003: Not me. A friend yes. When he came to visit me in Belgium in december. We were in Brussels, he had a big luggage and he wanted to just drop the luggage so he used this lockers and it was also not really expensive. He drops it over there, kind a safe, in the station... you can go back and collect it before you go to Leuven, so yeah.

Fg005: I have never done it but I would like...

Fg003: It's an option. If you want to see Brussels before you go to...

**And was it to find?**

Fg003: Yeah, we found it very easily.

**How you found it?**

Fg003: Actually I don't remember very well, but I guess we asked someone about it, like where is the locker in the station, and he showed us the way and we went there. At first we couldn't open... how to use properly. Then we asked another guy who was just taking his luggage back so he helped us with that, and just told us that was 3€, and to press this blablabla... yeah.

**So you knew already that the station had lockers? It was an information collected before?**

Fg003: Yeah. Yeah.

**Do you know where you collected this information?**

Fg003: I can't really remember.

**What are the main differences between trains in Belgium and in your country?**

Fg004: We do have one from BH to Vitória, but it takes 12, 14 hours to take 500km. So it's pretty slow, and it's more like if you travel for first time by train, with your kids, and you wanna show like, the mountains between the countryside and seaside. But its pretty slow and know they are revitalizing the rail system and it's like more with air conditioner, that didn't have before. Yeah, that's all we have.

**Do you think there is something better than Belgium's trains?**

Fg004: No way.

Fg006: In southern Italy there is no rail system. Like there is, but we don't experience this in our everyday life. I have never taken a train in Sicily. By northern Italy there are many trains and something I like more is that they have WiFi inside. So this is a difference. And maybe there a bit more comfortable, but that's it.

Fg005: (about Italian trains) They are never on time, never. They are slow, they are old.

Fg006: No but the big trains are on time.

Fg005: Yeah, the big trains in northern Italy, but for example we live in Sicily and we have to get to other part of Italy, yeah, we have to drop in Messina, take another train and Reggio Calabria. It's very difficult. Well, we are young but if you think about an old person it's a bit, yeah... uncomfortable.

**So you both agree about the WiFi being the only thing better?**

Fg006: Yeah, and also seats are more comfortable in big trains in Italy, yeah, if you take the one for example from Rome to Milano, from Rome to Venice. Seats are very comfortable.

Fg005: Yeah, but they are also more expensive. Then the train you can take in Belgium that you usually take...

Fg006: But it's more (expensive in Italy) because there are more kilometers. So that's why is more expensive also. Because Belgium is very small so everything is close. So it's more expensive (in Italy) also because is a longer route.

Fg005: Not always, for example Rome and Naples it's not so long trip. A long journey.

**Have you ever changed a schedule because of the model of the train?**

Everyone: No.

Fg002: Well, in Ukraine trains are really different. Like, first of all you usually we take trains for long distances. I

don't think anybody would consider take a train for really short distances. So mostly in the compartment you gonna have like a sleeping couch and so you have to buy like bedding and yeah, and then they reuse it. So it's kind of really comfortable because you have this sleeping couch and even if you will just travel for like 2 hours you can kind of lay down or something, but also like the hygienes is really awful. I mean, it always smells kind of bad and like there are so many people in the same space, and at night they shut the light off so if you don't wanna go to sleep at night or 10pm, sorry... You have to, because the lights are off. A lot of people drink on the trains, this is also a kind of weird for you guys, probably. They just sit in the train, and immediately unpack some vodka, you know, and start drinking. And it's like ok. There are sometimes people passing close to you to sell beer and stuff, and yeah, there are a lot of people passing who sell stuffs like food, magazines, beer... And the trains are very very slow. Like it's also from my town to the capital is 400km and takes 10 hours, because the distances are much longer usually the trains are not like here every 5 or 20 minutes or something. But usually you have to plan it quite ahead, because there is only one or two trains during the day and it may be also very uncomfortable time, like 6:30 in the morning, or like 2:00 at night, or something like that. But it's the only option though. But it's really really cheap. Specially for students. For students you get a really good discount. So yeah, that's what they should do here. That's the only thing that make Ukraine's trains better is the students' discount. I don't understand why students' here don't have discount.

Fg006: They have the GoPass.

Fg002: Yeah, but like still I think students should get discount.

Fg006: Even more?

Fg002: Always.

Fg003: Now our government is trying to destroy all the railways and stuff, and Turkey is quite big to use trains. From one point to another, from West to East it takes like one day or something, by train. And they are also like old, same style in Ukraine actually. You can sleep and blablabla, and now even the government is trying to destroy the oldest main train station in Istanbul, which is perfect like Antwerp station. Imagine they are just trying to destroy that building and build a hotel, instead. So nowadays no one uses train in Turkey anymore. Like, 20 years ago yes, but nowadays they only use planes. They are like cheaper... Not cheaper but it's the same price, but sometimes even cheaper the planes. And they are better you know, faster and stuffs. I never used a train in between cities in Turkey, but in Italy I did from Torino to Milano, it was perfect with WiFi and stuff. Also in Ukraine I did from Lviv to some village, but they are good. But in Turkey I just did small trains in Istanbul. But they also destroyed this ones. They are renovating it, but I don't know where is going to be. So railways, they are dead at the moment in Turkey.

**About this experience in Ukraine and Italy, do you remind something that you think "Oh, why Belgium don't do the same"?**

Fg003: The WiFi, as I remember in Italy. And trains very like modern. In Ukraine it was like worse than Belgium. It wasn't the big train because I took a really small train from a city to a village, just for camping and stuff. And I saw some people drinking... We also drunk, to be honest. Laughs. We played guitar, it was funny. I mean to travel in a train and... Yeah... Apart from that, yeah. But I guess that rail system in Belgium is pretty nice.

Fg001: For me, since I live in California trains and bikes are almost non-existent, buses are a horror story. If you don't have a car you are pretty much done for it. So, hmm, my friend does take the one and only actual trains that are in California from Los Angeles to a smaller city in the valley but she said the only thing that's good is pretty much the WiFi. The seats are not comfortable, she showed me pictures. Weird people travel on... and so you can have people passing out on you, or vomiting on you, or...

**There is something you thought before that could have in the train, hall, or mobile app...?**

Fg006: The price close to the time in a mobile-app. Different types of prices, for students, or if you wanna go there for only one day, and... Just write... Just close by the time.

Fg004: Yeah, just explain the several kinds of classification, or in how its affects on price...

Fg002: Yeah, the same.

Fg001: I would just say an universal charger or more chargers in general.

Fg005, Fg006, Fg002: Yeah...

Fg005: I was thinking about chargers.

**In the carriage?**

Fg005: Yeah, there are just two chargers in each carriage.

Fg001: So, just more.

**Apart from choosing a carriage because of the charger, do you have any other preference?**

Fg003: Comfort. I mean, if it's empty like double seats it's more comfortable and...

Fg002: I actually take when there are empty 4-seats, with a little table in between. And then you can just put your stuff around and people don't really sit there, then you have a window and lots of space, the table, the charger, everything. But this are only the two spots on the train so... It's not so easy to take this spot.

**And the kind of people around, affects your decision?**

Everyone: No.

**You meet a very loud group of friends, or...**

Fg004: Normally my friends and I are the loud group. Laughs.

Fg002: Oh yeah, I remembered about something. In some trains the double seat is actually really small, like I would say that is kind of for 1 and a half person. And that's why like in this seat you see, and specially not all of the people are very thin, so lots of times you want to sit there, because sometimes the train is full, but it's kind of almost awkward because you know you gonna be sitting really really close to the other person. Have anyone noticed this?

Everyone: Yeah.

**Focus Group #02**

On 2nd of April of 2015 with 4 participants during approximately 80 minutes.

**Have you been travelling around Belgium? Where did you go?**

Fg010: Hasselt, Brussels, Antwerp, Liège, Maastricht.

Fg008: Bruges, Ghent, Aastl.

Fg009: Brussels, Bruges, Liège, Maastricht, Antwerp.

Fg007: Antwerp, Brussels, Zaventem, Dinant, Namur, Netherlands.

Fg010: Actually I did this trip to Maastricht, and it was not very easy. It takes time. I was coming from Germany and then I, you know, stayed in the station just to started at 7:00, you cannot go before this... And then I went to the station in between, I don't remember the name, and then you go to Liège, and then you come to here (Leuven). And also there were some delay on this trip, so I think my trip at that time wasn't that good. From Koln, to Aachen, to come in here I needed to get the train... It wasn't the best experience I ever had.

**Why?**

Fg010: It was delaying and shifting between... And also it was really expensive. Just... It was a very short distance and it was like for one way I think it costs 25€, something like that. For just like less than half hour trip.

Fg007: My experience... I think it's not very different from other countries, like France or Spain or Portugal, or even the UK, I think it's more or less the same. I think it's not very cheap, but it's not so expensive as well, comparing to Portugal, for example. My experience was not so bad. I think maybe information is not very clear. Maybe. I always have to ask someone to find a train. If it's not a... For example, if I want to go from Brussels to Leuven and it's not the last stop, it's another town but goes through Leuven it's not so easy to find it.

Fg008: I think that maps could help. A map where you have all the way of the train to see the stops between the first and the last one, it will be easier than stay on the board looking... it's not so visible.

**You mean like the metro?**

Fg008: Yes.

Fg010: I don't care about... I tried to care about the signs that are in the train stations and so on, but many times I don't know what are the stations in between, where I would like to go, or if there is something. If there is a train that is going to take shorter time than other one... So I just use a mobile app called Offi and this Offi just like giving me all the information that I want. Even sometimes the trains are being delayed so this Offii app gives me the delay so I know when I could go before. For example, sometimes the trains would delay like 20 minutes, so I know this before getting out from home. So through the app I think that such information is not available except in the train station. And I know that, so I go at the right time, calculating the delay stops.

**So you use an app that is not the official one from Belgian Rails?**

Fg010: Yeah, exactly.

**Do you have a reason?**

Fg010: This app I use for the whole Europe, actually. And it works pretty fine. So there is no need to change to another app. And yeah, I haven't use the NMBS app but I think that I open their website I felt that is not that an awesome experience to me. So the app is more friendly for me. So currently I use the app.

**You mean you navigate better in the app?**

Fg010: Yes, and I have various information. And I don't remember exactly what was the difference, but I have tried NMBS in the beginning but I found this app just giving me the information in a better way. So I still use it.

Fg009: I use the app of NMBS and for me works pretty fine. Because I have the platform from where the train

leaves and where it's gonna get. Even when I'm going to... No, it's another app. But sometimes I miss like... it's only restricted to Belgium. When I use the app from the Netherlands it shows the platforms from Belgium, but the Belgium app doesn't show the stations from other countries. This is the main problem, but when I'm restricted to Belgium I think it's enough because it shows all the stops, all the platforms, or all the timetable... and it's like the metro. You can see in the app. So for me works in Belgium, but when I go abroad it doesn't work anymore. I have to use the NS, from the Netherlands, to... I think it's more complete. (...) So when I go to Liège I use the Belgium app, but when I have to go to the Netherlands I check in another app, because it doesn't show.

**What is the biggest difficulty you face when using trains in Belgium?**

Fg010: Delays. Just like when you go... Sometimes, because you got used to a certain type. Delays, or whatever. Just you got used to. So one day I just, you know, approach the train at the right time, just like 5 minutes before the train leaves and then I found that the train would takes 15 to 20 minutes as delay. Next time I just like "Ok, I will be late in order to not wait that much time". And I go and I found the train just like, going... on the right time. Laughs. So I just keep this for many times. So... Yeah, because when you wake up in the early morning you would like to utilize your time, not just like waiting for the train or delays and such stuff. Yeah, this could be...

**And how significant is this problem?**

Fg010: It's significant. Because if I'm delayed I will be delayed for the work. I will go to the work late, and that's the same. Sometimes I just missed the train so it could, you know, really, let's say, ruin your career. You should go at certain time and you have a meeting at certain time but because of the delay of the train you come... later. Or you know, you couldn't catch the train because of whatever. And actually we can compare just like the trains here in Belgium, and the trains in Germany... Yeah, trains in Germany are more accurate in time. And the other thing is just like, I have done some... Yeah, we can continue. This is another topic.

Fg008: The most difficulty it was in between that when you arrived... You are leaving here at past some time get used and you learn how to deal with that, but if you are just a tourist for a weekend or something it's very uncomfortable because you don't know about the apps or something, and the first time that I caught the train I wanted to go to Aaslt and I took the wrong train. And then I just stopped in Ghent, then I had to talk with the revisor, the man, to.. I don't know that was in the wrong train, so I had to come back, but he was nice and understood my situation. It was my first time. But.

**So it's to know which train you have to get, and when get off the train?**

Fg008: Uhum... Yeah. There are sometimes that they speak clearly, at least this train that I caught today they don't speak English, they just speak Dutch or French. There are others that speaks English too, but why not everyone?

**So the language is barrier for you?**

Fg008: Yes, sometimes they have all languages, like English. But other times no.

Fg010: Yeah, sometimes there are some problems or accidents on the way and they just speak some Dutch or French that there is a problem or whatever and then you don't understand anything. Then you just, you know, find somebody: "What's the problem?". Then somebody will answer you and tell you that yeah, there is a problem and we gonna have to wait. But normally you know, you don't feel comfortable that you don't understand anything. Specially in emergency cases or delay cases.

Fg007: It can be a problem actually, because if there is a problem, and they speak in Dutch and, well, for me French is not an issue (you know, I'm bilingual), but... If I don't pay attention I can think that they are just telling that the next stop is... And I'm not paying attention because is not my stop. And there is actually... This actually happened to me. When I went to Rotterdam there was a... We had to change the train because some problem with the train where we were, and the first time they spoke in French, but I didn't pay attention, and they spoke in Dutch, but I can't understand a word... And just everybody went off the train. I was like: "What's happening?". Yeah, they should speak English, I think.

**Did you check it with someone?**

Fg007: Yes, because everybody went off the train so I was like... Maybe everyone has the same stop or no... I thought that would be strange so.

Fg010: Yeah, and happened one day the same thing. Why are you sitting in the train and you hear some blablabla and then you find that some people are moving, some people are staying. And you don't know what is happening. And then you realise that there is something, but you don't know. Then you ask somebody and you're afraid if somebody just like tell you, you know... any information. It was just like certain carriages of the train were going to certain place, and certain carriages would join another train to go to another place. But they will just like in the same train. I just know this information after asking three or four people. And then go to the other carriage, the first carriage. Then I can reach my place. If I just, you know, continue, without asking, because everybody... If I haven't taken the initiative I would like just stay and go to another place. So if they are going call for specific information that will affect get out of the train they should, you know, tell it at least in English because there are a

lot of foreigners.

Fg007: About the stop when you are in the train, actually they have those boards with the stops so you can go and just check how long, or how many stops, there are between your stop.

**The board you mean the timetable?**

Fg007: No, in the train.

Fg008: It depends on the carriage.

Fg007: Yeah, usually you have to change and to look for it in another carriage if it's not in yours. But they have those boards and they say how many stops there are between your stop and where you are.

**Have you ever experienced something like Fg010 and Fg007?**

Fg009: Yes, and in the first time I got into the train I was with my bag and the train stopped and someone announced something and everybody got off the train and... ok, I think it was an accident or something. And then I stayed there but there were people which I could ask, from the company. And the same day something like what just happened, but after the announcement some people stayed in the train and some people got off... but there were also people to explain that ok, this train is faster, is going to... I don't know, I don't remember... and the other train would stop more. So I didn't have trouble to find the solution because there were some people ask. They were helping and then it was okay for me. But another problem I also... Another difficulty is when I get from the airport and there are not trains after, I don't know, midnight, or in the morning. And I have to wait in the airport or station for more than 4 hours to get the first train in the next day, and I know in the Netherlands there are some trains in the night period. There are some, at least one or two, but.. there are some options. And here in Belgium I don't see many options, so ok, let's wait for... Because there are no possibilities so you have to wait.

**And you discovered this by mistake, that they...**

Fg009: Yeah, yeah. It was in the beginning also and I said "okay, let's go by train", but I got to the station and was everything close, they were cleaning the floor and I didn't realise that could be the possibility of not having train... I thought it could have... Okay, the frequency could be smaller, but maybe one train. Yeah, I just had to wait. And it was really bad. Wait in the station and yeah, I got the first train when it was 5 or 6 in the morning. It was a really bad experience.

**How did you know the next train?**

Fg009: Ahn, the panel was starting to announce the next, so ok, I just got the first one I saw. And then I learnt from this, and I try to plan...

**What information sources do you use to check trains when planning a trip?**

Fg007: The website of the Belgian Trains; In loco, of course I try to go to the board. I'm not talking about the digital boards, because the information displayed is just about the next trains in that hour. I meant the other boards, but they are not very clear. Because we have the same problem again: if it's a station in between we cannot know what time you can get a train to another place, a station in between. It's pretty much it. Well, I'm too lazy to have an app, but I should.

Fg008: I usually talk with people that live here and use the trains like to get here, there are two Leuven. One French and this one. And I... "Ohhh! I don't want to get to the wrong one". So they told me that I have to check the board because the line is the same, but it goes in opposite sides. And I "Ohhh, the line is the same? So I have more possibilities to catch the wrong one?". Because a friend of mine that, she is from Germany, but now she is here, it happened to her that she took the wrong Leuven and now she always pay attention and she alerted me to pay attention because the name is the same, but one its for Genk, and the other is to Luxembourg, so I... "Okay, I will pay attention". And talk to people can actually help, but if you don't are comfortable or you just arrived here, "Hey, so anonymous, can you help me please?"... This is not so easy.

Fg007: But the name is not the same. You meant Louvain-la-Neuve?

Fg008: Yes, but it's quite similar.

Fg007: Yeah, it's Louvain or Louvain-la-Neuve, but the other... Yeah

Fg010: Yeah, in the beginning I thought that Louvain it was the same thing of Leuven, yeah... but this is the French translation. But afterwards I knew that this is just another place, so...

Fg007: But they say Louvain as well.

Fg008: You don't catch from the beginning what is the difference and then... like, if it's just a translation or another city... it's completely different.

Fg007: Yeah, you are right. Because sometimes if you are in the French part they translate Leuven as Louvain, just Louvain. So it's similar. You have to pay attention if it's just Louvain or Louvain-la-Neuve.

Fg009: Normally I use the app. But sometimes I check the website because they give more options, of maybe a bus or a route with bus and another train. I think there are more options but normally if it's a small trip I just check the app, it's faster for me.

Fg008: Website. I don't use... There are people that use more apps. It's more the website. First I go to the people,

and then I check in the website, and then I'm sure.

**This people you ask, is at the train station?**

Fg008: No. At home. I'm planning to go to somewhere. "How I can, how is the best way to do it..."

Fg010: Yeah, actually I have 3 sources of information that I use: the first one is the Offi app, because you know, there is a reality between me and the app, it's a very good one. So I try to use it whatever. And then sometimes I find it's not that good options, so I go for the website... Not to the website, but to Google Maps, that also provides me... Doesn't provide anything related to trains by the way, Google Maps provide you just buses routes, but not trains at all. So, yeah... And then I go to the NMBS website. The last.

**And when you don't have Internet?**

Fg007: I go always to the information office in the train station. I don't have any problem to ask, so if it's in French or English, I just go there and ask. Even if I check before at home on the website, just to know more or less at what time I should be in the station, and to see which platform it is, going there, because sometimes they switch platforms, so... I always go to the office to be sure that is the same platform.

**Do you do the same?**

Fg008: No. I look to the "placars" and then I took the wrong one. Laughs. I'm not so careful but maybe it's a good advice just to don't make mess.

Fg010: Yeah, actually there is a proverb that if you don't know the way, you should ask. And then if I don't have any other resources or information, no Internet, whatever, so I go and ask at the reception or the people. And not only one, but like 2 or 3 to confirm. And sometimes I just got, you know, contradicting information. Somebody just tell me go like this, and go like that. So I need to, you know, confirm more and more. And this, yeah... Finally I think that I would reach my destination.

Fg007: Yeah, me too. I think it depends of your background. I'm used to confirm information over and over again, so...

Fg010: Yeah.

Fg007: I like to be really sure.

**And if you are late?**

Fg007: I ask people that are in the line if I can just ask a question very quickly to the office. And then I ask, anyway.

Fg008: Before I catch the train I ask "Leuven?". Yeah.

Fg007: Yeah!

**Buying a ticket, how do you choose it?**

Fg007: Well, I check online, but I buy always the ticket on the station. Because you have delays, sometimes it can be cancelled, or something else. Or during weekends they have those cheaper and sometimes it's difficult to select it online. Once I went with a friend and she made a mistake and on the train she had to buy another one, and paid like 7€ just for the mistake. Extra! So, no... I check at home and buy it there. To be sure that is the right one, to the right place. Like I said I don't trust me.

**And how do you choose the type of ticket?**

Fg007: I ask for the options. "I'm a student, it's a weekend, what are the options?" Usually I know already there is some options. Otherwise I would just buy the standard one, I don't know. But...

**Have ever happened to buy one more expensive by mistake?**

Fg007: No, but I know because just talking to people they told me about the GoPass and weekend tickets... Since I got here. So I already knew that.

Fg009: I have the GoPass10 in my wallet always, and when I have to go abroad I buy on the Internet. I always buy online. And one thing that I think it's bad in Belgium is that you have to print and sometimes I don't have time to print. But, so I buy... Normally I go to the Netherlands, and in the Netherlands website you can download another app then you can have your ticket, import to your app and just show it to the guy and it's okay. But if I buy from the website in Belgium I have to print. Normally I just do it online and I have a GoPass in my wallet just in case. I never buy in the station because normally there are lines or, maybe you are late and you just get there and "ok, I don't have time to get it". Might have people on the line. And also sometimes the machine... Ok, I just have a card and the machine doesn't accept card... Or you need to have coins and you don't have coins. So it depends. So I rather buy at home and just get to the station and go directly to the train.

**So the type of ticket you buy is always the same, a GoPass?**

Fg009: Yeah, I have a GoPass to make this routes in Belgium. If I have another route to take I normally buy online.

**Which kind of ticket you buy?**

Fg009: Normally the site there is an option to insert the age. I just put the age and I buy this like standard for the age that they gave the option.

**Have ever happened that you bought a ticket and afterwards you get to know that you could have bought a cheaper one?**

Fg009: No. I know that... I discovered that I could have taken another route, but wouldn't be much cheaper... like 40 cents cheaper, but it would take a longer time. Never happened.

Fg010: I have this rails abonnement with 10 trips, also because I'm older than 25. So I use this one with 76€, so I have it in my wallet all the time. I just like, when I go to a place, I just like... write this down. And also I have this monthly abonnement. Because I go to Hasselt and I come nearly... not every day, but 3 or 4 days a week, so it's a cheaper and easier option. Yeah, this... And sometimes I also buy the standard ticket from the train station.

**You never buy online?**

Fg010: No, for trains in here, no. But normally for booking, any other things, flights, or any trains outside Belgium I buy online.

**Do you know why you don't buy online for trains here?**

Fg010: I think this one with 10 trips gives you the feasibility and the option that you can just, like, do whatever you want and I think when you buy at the station or at the machine and you choose the type of ticket you would like.... It's easier if there is no line. You put your destination and you get your ticket.

**Do you think if it was easier buy online you would be more intended to buy it?**

Fg010: Yeah, yeah, I would actually. For example, when you go to the train station I think I have never seen a sign telling "download our app". So yeah, I am not going to search if there is an app for NMBS or whatever. I would stick for what I have. About could have get one cheaper, yeah... This happened to me many times. Specially with this 10 trips. I don't know about the weekend ticket, so I was going to Brussels and I just write down... And then I realised after that, yeah, I can just have a weekend ticket and also for then normal/standard price is even cheaper to take a train than with this 10 trips. Then someone told me "Ohh you can use this...". Nobody from this controllers have told me that, advised me, to use another type of ticket. They just find that I was going from Leuven to Brussels, which costs me around 7,60€... and nobody told me that you can have alternative option. I think that after I had finished two 10-trips I knew such information. So I think they should had provided me some feedback.

Fg008: I use the GoPass10. But first time the weekend ticket.

**And you buy this in the station?**

Fg008: Yes. The GoPass10 is cheaper than buy online the tickets.

Fg007: I only travel on weekends usually, that's why I use weekend ticket. But I don't buy online because I don't have a printer at home, so I don't have how to print. And I don't know if you can have a electronic ticket like when you buy a flight. I would prefer the office.

**Do you think that if you don't need to print would be a better idea?**

Fg007: Oh yeah, I would buy it online. Definitely.

Fg008: Uhum, yeah!

**How do you know which platform you have to go?**

Fg007: First I have to understand which train I have to take. And then I just check on the board of the platform. Otherwise I do what I always do, I go to the information office and ask.

Fg009: I just check, normally the app gives, and I know if I get in the station and the number is circled it's because its changed the number, and it's okay for me. I have never had any problem getting in the wrong platform. For me it was always very clear.

**Always the app gave to you the info?**

Fg009: Yes. Aham.

**And how you got to know that this circled meant that the platform changed?**

Fg009: I don't know. Once I was early and I was looking "Why is that number circled?", and then I just figured out. I was just waiting for the train and I had nothing to do, and I discovered "Okay, I think it's different from what is in the paper". Yeah, that was it. Accidentally I discovered.

Normally when I get to the station I always check... Ok, I check in the app, I go... But when I go to the station I just check the board if it is really the platform... But, yeah, it's kind of automatic... I just get there, and ok. Because you are walking and you just pass by the screen, and see. And I just go.

Fg008: Yeah, I see the screens. The most difficulty is the first part: which train? Then it's easier, you just get in.

Fg010: Sometimes you have two trains going to the same destination, at the same time. And they are in different platforms. So, I realise that... You know... There is no information in the train station that is telling you which one is faster. Or each one would reach your destination in that specific time. But through the app I know which one is faster to my destination. So I just like, get into that one. I don't think that all people know such information. They just, like the same time, and they are going to the same destination. And I find it a bit strange, Why? You can just like, have even 5 minutes shift between each other. This would be more logical. But two trains, at the same time, going to the same destination... strange.

#### **How do you identify your train?**

Fg010: I identify through the app. The app is telling me even which platform I should take. But sometimes I also keep in eye, because the app is not perfect. Sometimes it has some you know, pitfalls. So when I go I just check... "Oh, this IC going which platform... with this circle, this rectangle...". I think it's rectangle.

Fg009: Yes, yes...

#### **You mean you check the panel?**

Fg010: Yeah, I just go there, just like one screen telling the stuff. So I just like watch to confirm, you know. And one day I have experienced one thing that is really strange. I got to the train station and I found that bomb alert. "What's bomb alert? What's going on?"... Laugh. And everybody is just like, staying like this. And everything just like in Dutch. And nobody knows what's up... No trains are moving, and whatever. And then I asked one guy and tell me that is bomb alert. Then I... "What we should do? Should we run or what?". Laugh. It's bomb alert. What does that mean, you know? When you just put something like this is really strange, you know. Yeah, so someone is going to explode the place... So why all these people are sitting in here? So it was strange, then I just moved around and they I talked with some people: "We don't know"... Then I go to official people and the ticket office and ask what is the problem, what we should do... Should I wait, should I go, or whatever. "We don't have any information. Just a bomb alert". Ok, this is a strange thing and even if I ask people: "Have you ever seen this before?", and they told me "No, we haven't. It's the first time". So it was just first experience, I walked around and then "Yeah, I have to go. I'm not going to face any bombs today. Let's just get back home, man". Yeah, and I just came back home. Even I have my monthly thing, and I should go without being anything. There should be some reimbursement or refunding, according to such stuff.

Fg007: I'm always looking at the board. So, I look the time, if it's like 1 minute and the train is there I suppose is mine and then I go in. I never had a problem.

#### **What are your considerations when choosing a carriage? And a seat?**

Fg007: Usually I have to... I just check if it's 2nd class and then I try to sit where there is less people. Not so crowded. And I try to have a seat just for myself, but I don't mind if someone come. If I'm alone I sit in one group of 2-seats. If I'm with other people I try to look for a seat where we can be together, all together usually. But I suppose everybody does that.

Fg009: I like the less people. Because everybody gets to the station and just they get together, trying to go to the crowd. And when the train is coming I try to follow the number 2 (2nd class), and getting in and try to find a place where are 2-seats and then just stay.

#### **So you don't choose a specific carriage except by the class?**

Fg009: Yeah, I just to be 2nd class for me it's not a problem.

Fg008: Just get in. Most of the travels I usually neither go sit. I get in and I stay there. And then I get out. I don't enter in the actually carriage. I stay between the carriages.

#### **Close to the doors?**

Fg008: Yeah.

Fg007: If you have one hour? A trip of one hour... you stay?

Fg008: The longest trip that I have done I sat on the stairs and then when the train stop I get out.

Fg007: It's forbidden. I'm sorry. Laugh.

Fg008: Laugh.

#### **And why you do that?**

Fg008: I don't know. It's because usually there are a lot of people, or there are people standing up between the seats, and you can't pass, you can't move. It's always like you have a bag, and "Oh, sorry, sorry, please... Excuse me". It's... I don't like to pass with the people, so when I get in I stay there and I don't move more. It's very crowded.

Fg010: I just get out from the stairs and then I see... It depends of my mood. If I am just like in a hurry and don't consider much stuff, so I just see the first doors that I have and get in. In the beginning when I just come in here, in Belgium, I was trying to speak with people. So when I just get in I just try to find some nice people, I think it's

not a very decent way, according to what I know afterwards... But just like I go to the train and just check if there is some nice people around and start talking. Some people welcome that, and some others don't. They don't feel like talking or something like that. And then afterwards, just like after 2 or 3 months doing the same thing... It's good to not stay in my computer all the time, or in my phone... I like to talk with some human beings. So just like this, after 3 months I found that you know, it's not my thing anymore. So I just get in the train and find the most... carriage with not much people, not much noise, and just like keep the force.

#### **And when you have big luggage, this change?**

Fg007: Yes. Usually I choose the next door, and 4-seats so I can put my luggage in the middle. Otherwise I just stay next to the door as well. So it's easier to get out.

Fg009: Yeah, me too. I stay in that place between. Normally there are more space to put your luggage. I think some of the trains have signs where you can leave your luggage and I think it's better stay next to the door so when it's time to get off the train is easier if you stay close to the door.

#### **You look for this signs?**

Fg009: No, not necessarily. But if there is I normally stay there, there also seats so you can just sit there and take care of your luggage.

Fg008: I stay in the same. It's always easier.

Fg010: I have done this once. That's completely change. If I have a big luggage then I need a big space and they I need also to concentrate with my luggage, not you know... any other thing. So I just try to find some place where I have some space and then even not putting my luggage in proper places but you know, I just reserve a seat for my luggage also.

#### **How do you know when it is time to get off the train?**

Fg010: Intuition perspective. I just stay in the train and when I hear something... Or when my app says around this time I need to get off... So sometimes I sleep and I just put an alarm before with the time that you reach the place. So it's just like, ok, 5 minutes before this time and then I put the alarm and then I wake up. And when is like these, if I haven't heard this is the place, like from the speakers, I just ask somebody from aside: "Is this the place I should get out?"

Fg008: Usually I'm late for everything so I just count the stops and then I can't sleep because I have to count the stops, and then I have short notice, and then they tell "Next stop: blablabla", or something "Blablabla" that we don't understand and a "Keyword"...

Fg010: Yeah, exactly!

Fg008: But they sometimes says like not the once that you are, but the next one, and sometimes can be confusing. Because if you are in one station and they are talking about the other I wonder like... "It's now?"... You know, "Not yet. They are talking about the other, and not this one". So... it's a bit tricky. So I count all the stations.

Fg010: Same experience in here except of counting the stations. I think this is a very hard way. Getting to the train and then start counting. yes... What if you miss one? What would happen? I don't think that... What you study?

Everyone: Laughs.

Fg010: If you are studying statistics, yeah... Even yeah... They have more easier ways.

Fg009: Yeah, I normally do the same. I check the time before and I put my cellphone to, like 5 minutes before... Because normally I'm reading something, so I'm not paying attention to the stop. I just check the time before, set the alarm and I know when the train starts to stop so "Ok, I think it's here. It's almost time". So I start to take my things and be ready to leave.

Fg007: I try to find that specific board on the train and look for how many stations, and if they are like few stations I might count the stations as well. I mean if there three stations between it's easy. One, two, three. Otherwise it's like 1 hour and you have 10 stations I don't count the stations, I just look on the board and from time to time, when there is a stop I try to look which station I am.

#### **And how do you feel doing this process?**

Fg007: Sometimes I'm kind of worried missing my station but since I cannot sleep in transports usually I'm fine.

Fg009: Yeah, I'm ok. Normally I'm... Sometimes I sleep but every time the train stops I wake up and I can see... Yeah, I have time to run away of the train. But ok, normally the alarm thing works very well and then I don't have any problem. I don't worry. The alarm rings, I know it's time and I don't have any worries about missing my stop.

Fg008: I see, like, the outside of the train. I'm always looking. Sometimes it's just bored, but I keep looking. And when stop you can see the board that tells where you are... And where are much I do the same, but I see the previous and then I start to counting.

Fg007: Yeah, it's easy.

Fg010: Yeah, it's easy. Yeah... I feel good man. Yeah, when I... Sometimes when it's your first time getting this train to such a destination you feel a bit worried. Just like which... Because you don't understand the language, you don't know which station you should reach, and even your phone... This is the worst case... When your phone

is dead.

Everyone: Laughs.

Fg010: So...

Fg007: And then you start to count.

Fg010: Not counting. You start just like asking all the time. Don't count, you know. I never count... Just like start asking: "Which station is that? When we would reach that destination?". Sometimes it works, sometimes, yeah... I think I have missed my destination once... And I just, you know, get in the next station, getting out, and exchanging, and getting in again to my destination.

#### **And how you think this could be avoided?**

Fg007: If you had this board on every carriage, the big board...

Fg008: They have the digital board but don't tell the information the information we want to tell.

Fg010: Sometimes it doesn't work. Doesn't say the right information. Just like telling you something and the train is going in another way. Seems that the driver hasn't changed the thing.

Everyone: Yes.

Fg010: They don't care. They think that everybody gets in the train knows the train very well and know where he is going... So it's...

Fg008: Yeah but when you just take the train once it's not...

Fg010: It's not a big deal, yeah?

Everyone: Yeah.

Fg009: In the Netherlands there is a small tv that shows the stops passing, and there is also the time, also there is the current time... So it's just passing all the time and you know where you are because the stations you have passed they are faded and you can see where you are. And it's just... Ok, you can check and make sure if it's okay.

Fg007: Yeah, I think this is the best way... To have a small TV in every carriage.

#### **How hard is to make a connection, when necessary?**

Fg010: It depends. It's a first time experience you don't know which direction is that, especially if there is some construction works or, you know, some stairs are closed then you need to go to another stairs... Just like, have you ever been to Ghent station? If you go there you will find some constructions and there are more than 12 lines, and then you know... Just like, you don't know. Should I get out from here, or I go to another one? Or this way, or that way? And getting out to the city is it from that way, or this way? So, for the first time usage I think it's really difficult. But afterwards, after asking or you know, figuring out your way, it becomes easier. But first time is not that easy.

Fg008: I never did that.

#### **Maybe because she is from Brussels...**

Fg008: Yeah, every train passed there. Where I am.

Fg009: I think that the main problem depends of the station. For example, in Antwerp there are a lot of floors and you just don't know which floor. But most of the stations they are... They kind of have a logical sequence of station: one, two, three, four, five... It's kind of...

Fg008: In Antwerp you also have the numbers like 1, 2, 3...

Fg009: Yeah, but in the first time I was in Antwerp I didn't know in which floor it should be, because normally it's only one. And there was 3, I was like "Okay, I don't know what to do".

Fg010: Yeah, I faced the problem in Antwerp to know which line or platform I should take. It's something telling 23: "Where is this 23? Am I far away from 23?" And then you get down, yeah... I think that to reach the place you could take your train it take some time and even you need to ask some people. I faced this myself.

Fg009: Yeah, I think that Antwerp station is the most difficult I have ever heard. But normally it's okay, I'm gonna get off in platform 5 and I have to go to platform 7, I know it's close. I kind of have this feeling. Yeah, I think it depends of the station. And the time you have to make the connection. 10 minutes is enough to see the signs and go to the right platform.

Fg007: I use always the same process. I go to the Information Office and ask.

#### **Even when you get in some station and you... in between the connections?**

Fg007: Yeah, if I'm not sure, if I don't know the station, yeah. I look for the information office because it's easier to go there and ask for the right place, than to... Once I was... It was not here in Belgium but I was around for half hour and then I said: "No...". Now I know, I go to the information office and it's solved.

#### **When you arrive to the destination, what are usually the next steps you take?**

Fg008: Follow the crowd.

Fg007: Yeah.

Fg008: To get out. But usually I don't get out in the main central part, I never... When I get in or get off, like... I get out here and I don't saw the main part of the information station. I don't saw that. I just came out and then...

"Hum, okay, people..."... to get there. And there are some maps I am really, really fan of maps, that you can see and sometimes you are here and then you can check where you have to go... which direction. But usually I took the wrong one because I think that is for North and then that is South. But okay, then I check the next map and I saw that "Ok, it was from the other side". And I turn around.

Fg009: Yeah, normally I follow people because I admit that they are going to the central hall and there I can find a map, or something. Many stations have a map of where you are. So I try to find this central place, where they sell tickets and I try to find this place.

**You mean a map of the city or of the station?**

Fg009: Yeah, the city, the city. It shows the station and around the station. So now you know where you... Which direction to get.

Fg007: I follow the crowd just to get off the platform and then if it's a new town I might download an app, like the city walk tour. Usually it works pretty well. Or I just look for a map and try to go somewhere.

**And this app you download when you arrive?**

Fg007: No, at home. Yeah, I like to plan everything to be sure of everything. Yeah.

Fg010: I just get out from the station. See the nearest stairs or the nearest exit. I just get out, follow the crowd, or if there is no crowd I just like, would like to have an exit from the railway. I just move seeing the numbers. If the numbers are increasing so I think that the side which has higher or larger numbers, this means not the centre. This is my intuition, yeah? And if it's less numbers, like 8, 7... So I think this side is just nearest the centre. And then I got out (of the station) and then I found such a place. And if I don't know where to go I just ask. If not I open... Like get an exit from the railway, open Google Maps, check my destination and then see what I am going to do. Just walking, or having another bus, or... Yeah so, I rely on technology. So I use Google Maps all the time.

Fg008: In Brussels-Nord there are many exits. I think there are more than other stations, and I followed the crowd but to the wrong exit. And I get out in the red light district. And I was: "Oh my god, where am I?", and I didn't want to turn around because it would be like a dangerous street, that you don't feel so comfortable... And if you panic I think it's worse, so I just keep walking, walking... and then I find the central exit. And I get out there. I don't know how I did that, but I just took the wrong exit. (...) Yeah, sometimes can go wrong.

**And there is any train system that you ride and you think that Belgium could copy or improve?**

Fg007: According to her experience in the Netherlands the panels with all the information, this little TVs in each carriage, it would be perfect.

Fg009: I think that, yeah, I experienced the Netherlands and UK. I think that the Netherlands is really... Yeah, there are a lot of options like the small TV, there are also some cabins that there are signs, so people who wants to read or just a quiet place there are specific places where you can stay... There is Wi-Fi in the train.

Fg007: Yeah, I was going to say that. And in Belgium in can never get Wi-Fi in the train. Even in Portugal you have Wi-Fi.

Fg008: Yes... Even. Laughs.

Fg009: And also there are more options in the night time, so...

Fg008: Yes.

Fg009: Comparing I think that the period is... okay, 5 minutes delay. But in the Netherlands is always on time. Comparing I think it's a good model of train system. I would suggest.

Fg008: I don't travel in Netherlands, I don't know. But I don't have anything.

**Do you agree with what they said?**

Fg008: Yes, the carriage. But the most important, I think that everyone needs it's the night period. That it's... If you need to take a flight, or if you stay later... I mean, it's a big country. Not big country. But Brussels is the capital of Europe. I mean, there are many people that come here at night and the life don't stop just because it's night.

Fg010: Yeah, like in the Netherlands is a good option, and Germany. This screens telling you whatever information, this could be a good idea. The Wi-Fi thing. Everywhere, even in buses have Wi-Fi, and even... Also, the point that she mentioned like a certain place for people to sleep or have a quiet place. This is a good option but it's not completely isolated so you can just sit in this place and you find some people... Not in the quiet area, but there are really loud. So you cannot sleep, so... Just like having such a feature of separated places, great places... and Wi-Fi. That's it.

**And do you think that a suggestion of carriage not silent, but for people who wants to do, as you told, like...**

Fg010: Yeah, this could be a good idea. Yeah, yeah. People who would like to party on the train. I think that the train has classes, 1st and 2nd, and could be also 2nd class party or 2nd class calm. This could be a good base. Because some people... I think some people would like... You know, if they are tourists or something, do like... To go... If they are in the mood, you would like to go to party place, or talking in the train...

Fg008: And don't waste time.

Fg007: Don't say some people. Say "I would like to..."... Laugh.

Fg010: Yeah, should be something like that, you know... But not just like taking the train as a matter of transportation, not... You know a matter of getting some enjoyment. I think that we are losing a lot. I think trains can provide much experience.

Fg008: And special here in Belgium, the Belgian people, the ones that live here. They are the country that spend more time in travelling and transport, like train, they could improve the travels like doing what they can choose to do like... if they want party, or if they prefer read a book.

Fg007: I think the Wi-Fi is the most important. That's why I have a city walk, because it works offline. Otherwise... But the app, specific app for the train... if don't have Wi-Fi or connection... I mean, it doesn't work, so... And Wi-Fi, I mean, it's like you said, it's the capital of Europe, come on... Everybody has Wi-Fi on trains right now.

#### **Something else?**

Fg007: Coffee on the train. But good coffee. Real coffee.

#### **And in the station did you ever thought about if you have time to go grab a food?**

Fg010: Yeah. It depends of the station. Some stations have facilities, others doesn't have.

Fg007: But if you don't have time, if you are late or you are running, in the train would be nice have like a small bar, you know... if the essential. Tea, coffee, sandwich...

#### **Have we missed something?**

Fg009: Another thing that I remember about the Netherlands system is that you don't have to buy a ticket. You have a card and get into the station and just \*bip\*. And just pass. You have to do the check-in and the check-out, so you just charge your card. So you don't have to worry about buy your ticket every time you take the train. So it's just... You have the card, check-in, check-out, and then charges from the card.

Fg010: This is for bus, yeah?

Fg009: It's the same system, you can use in the train.

Fg010: Aham!

Fg007: Just for in the Netherlands?

Fg009: Yes, just in the Netherlands.

Fg008: But if you are a tourist and you go there just once...

Fg009: But you can get the card, I think it's very simple. You just get to the cabine and they give you. I don't remember exactly how I got it but I think it's not hard to get one card. If you are going to use it very frequently it's very simple to get. It's nice, so you don't have to worry about buying a ticket, you just charge. And the guy just takes the card, see if it's okay.

#### **Focus Group #03**

On 3rd of April of 2015 with 7 participants during approximately 60 minutes.

#### **Have you been travelling around Belgium?**

Fg011: Brussels, Ghent, Bruges, Antwerp.

Fg014: Ghent, Brussels, Charleroi.

Fg013: Bruges, Brussels.

Fg012: Brussels, Charleroi, Namur, Dinant, Antwerp, Ghent, Bruges, Liège.

Fg017: Brussels, Bruges, Ghent, Namur, Dinant, Antwerp.

Fg015: Brussels, Ghent, Antwerp.

Fg016: Brussels, Charleroi, Liège, Ghent, Antwerp, Bruges.

#### **How do you like so far?**

Fg012: It's a train. Nothing special...

Fg013: It has been interesting sometimes. I had a quite interesting experience with the bomb, very recently. You all know yah? And then both of us went to Brussels and there was a huge delay.

Fg014: Yeah, because there were people on the tracks. And I call that's what we read on the app: people on the tracks.

Fg013: But I think it's good to clarify that there were people on the tracks but still nobody were surprise and everybody was like: "Ah, the train is gonna be like...".

#### **So the app showed "People on the tracks" as the reason of the delay?**

Fg014: I don't know, but yeah, there were people on the track. A lot.

Fg013: Yeah but they weren't suicides.

#### **But how did you know about it?**

Fg014: Somebody told us later. I don't...

Fg013: From the app.

Fg014: Yeah, nobody were horrified. And the other thing was that nobody... It didn't say on the sign that the train is gonna be like...

Fg013: No no, I get the information from the app.

Fg014: Ok, but on the sign... On the actual stop there was nothing. The app was working.

Fg013: Yeah.

**So you had to check the app and then ask people about this?**

Fg014: Yeah, otherwise I wouldn't have known because I don't have the app.

Fg017: For me I like the trains because it's easy, it's quite cheap here, really super cheap comparing to other countries... There is like a lot of trains coming basically every hour so the connections are quite good and it's quite fast to travel all around Belgium. The only thing I, like personal problem, was last semester. There was a lot of strikes so it was kind a hard to avoid this strikes and sometimes made a lot problems to get to the airport or something like that.

**How did you manage to get to the airport during this time?**

Fg017: We had to take a carpooling. In sense we found a Blablacar. Because we were not going to the airport, but I know some people had problems getting there. But we were going to Brussels and even from here to get to Brussels was a problem. The taxi was expensive and there is not so many people coming or going to Brussels everyday. So we had really luck to be the first to contact the guy on Blablacar, otherwise we would be stuck in Leuven.

**How did you get to know the strikes?**

Fg017: It was like more general knowledge. This monday it's gonna have a huge strike, so no traffic, no buses, no trains... nothing. Basically all the transports were dead. Only option were the cars. And it was because... It was so huge and general knowledge. Also was in the website of the providers, De Lijn and the Belgian Rails.

**What is the biggest difficulty you face when using trains in Belgium?**

Fg016: I don't think there is a... There was for me any difficulty. The only thing that I complain is the delay of the trains. Maybe sometimes I was in Brussels, for instance, and the last train was cancelled. So I had to sleep in the city. Not actually sleep, but had to manage things to get the first train. I know that delay is a problem in all countries. Delay in the trains. But I still... We have to complain because it's not a good thing, especially when the delays is more than 30 minutes and then they cancelled it.

**And you got to know in the station?**

Fg016: Yeah, from the app. But there was nothing I could do. I just saw the minutes, the delay increasing... and then.

**And when you first arrived in Belgium, do you remember to face some difficulty?**

Fg016: No, no. I just arrived in Brussels and I got the train to Leuven. There was no big problem.

**How did you find the train to Leuven?**

Fg016: In the station in the airport. There was a guy and I asked for information. I didn't have the app yet, at the time, but they informed me and it was okay. Not difficult.

Fg015: My buddy told me to download the app and I did it before I came to Brussels so it was really easy. But I haven't face any problems in here. The biggest delay has been 10 minutes or something and everything had been going really well. The trains are so cheap comparing to Finland so... it's nice.

Fg017: I had several problems but it's not something really dramatical. First the trains sometimes are really overcrowded. Especially if you go through Brussels in the afternoon or on Sunday... it's like, sometimes is impossible even to get into the train because there are even people standing in the door. So this is the first thing. The second thing it's kind of hard to get some not regular information if you are not Dutch speaking or French speaking, because the conductors they don't... Some of them speak English, but the English is okay... on the really basic level. And if they have some troubles then it's kinda hard explain what is the problem. They cannot explain for you what is the problem. For example, we were travelling to... from Dinant back to Leuven. And my friend filled the GoPass wrong. And because he couldn't speak English very well he just said some basic explanations and then he charged her one more time for the same ride. But she didn't understand why. So she was kinda annoyed by this situation.

**She already know what happened?**

Fg017: Yeah, we know. Because there was a guy who... Some guy was travelling as well and because we were in the part of Wallonia and there is a problem if you speak Dutch, because they speak only French... and it was a guy

that speaks French and he was translating for us. So we had to use some man in the middle to translate what was going on. Because he explained him in French, and then he explained us in English.

#### **So what could she do to avoid this situation?**

Fg017: Well, the problem was that there were not clear instructions for her. Because she read really briefly how to fill the GoPass, because if you buy the ticket there are some information written in Dutch or in French, I'm not sure right now. But if you never fill it before it's always like.. "Hey, how should I fill in the GoPass?". And someone told you, you know. If you do it by yourself then you don't know. Then you might get screwed.

Fg012: For the GoPass it depends if you buy it in the machine...

Fg017: No no, it was like the 10 rides pass.

Fg012: Yeah, I know, but if you go to the train station and ask to the guy to sell you a GoPass he will explain you whether if it's a explanation are in Dutch. I think it's better to ask, because you have to full fill the conditions: be under 26 years-old and things like that.

Fg013: Yeah, some other problems that I might be, well... not correctly but maybe work on this. Last time when the two of us decided to get one of those cards that are only one destination, and its to Brussels, 10 journeys for really affordable price, once again one of the incredible benefits... One of the things is that we get again in counter and lot of bureaucracy. I mean, we have to be there, we have be at the stand, we have to fill in everything... Well, there is a huge cue of people waiting right after us. One of the things, the other problems or maybe my problems, such as not knowing what L or IC train. Taking one and taking from Brussels to Leuven one hour, instead of the 20 minutes train. Not really know what was going on. And of course, when look at the big signs. Of course when it's the stop itself it says which stations, which other stops the train is gonna stop. But if you see the major one it says the end destination, I think, and you cannot be sure if this is the one to Leuven. You have to check online, or one of those electronic screens that tells you this is the one. Otherwise you just kinda lost this time.

Fg014: Apart from the cue I wouldn't say anything bad about it. I mean, I'm used to using the app so that is much of the deal.

#### **About the cue you mean the Ticket Office?**

Fg014: Yeah, when you go to the cashier.

Fg011: Yeah, but you can always use the machine.

Fg013: Yeah, but

Fg014: Yeah, you could but not always.

Fg013: Not for this one.

Fg014: Yeah.

Fg013: For this one you have to fill in a big form which you cannot do online I think.

Fg014: You cannot.

Fg013: And you have to stay there.

Fg014: And it's in Dutch!

Fg013: And people are waiting...

Fg014: We actually had to use a friend of us to translate everything for us.

#### **Alone is not even a good idea in your opinion?**

Fg014: Probably the cashier is gonna help you.

Fg013: Yeah, they are helpful.

Fg014: But I mean, there is a huge cue... You wouldn't want to stand there.

#### **You feel that you are bothering people?**

Fg014: Oh yeah!!! Everybody is in a rush, so...

Fg013: Everybody is watching you!

#### **How you think this problem could be avoided?**

Fg013: Online. If everything can be digitalised you can register online to that. Would be much better. Regarding maybe the UK example.

Fg017: I agree with what he said that you only see the final destination, because some train stations you can only see the paper versions...

Fg013: Yeah, you have to go and check.

Fg017: You have to check, but when I was here for the first, very first time, I was in Brussels and I was in the train station and I was like I need to go to Leuven... And I was like... Only the big screen with departures and I was like, and there was no Leuven. Because for example in Czech Republic you always can see all the stops. It changes like its going through this, this, this and this. And here you can only see like three most important stops, for example. And I was here for the first time and I didn't know where to go, everyone speaks French and Dutch... and I was like...

**And what did you do this time?**

Fg017: Well, eventually there was a direct train to Leuven which was one for the one hour trains.

Fg013: Uhum... I took this one.

Fg017: Instead of I could take a IC train immediately and like in 15 minutes. I wouldn't go and travelling like one hour or something. But I was glad that eventually I was arrived in Leuven. Because I had lot of luggages.

**And when did you know that you could take one with 15 minutes?**

Fg017: I discovered it later when I was checking the trains online, in the website.

**What information sources do you use to check trains when planning a trip?**

Fg011: Oh, is the app. Mobile.

Fg012: The app. And the website sometimes.

Fg011: Is the most convenient way I think.

Fg014: (Do the same?) Yeah, definitely.

Fg017: I use the website.

Fg015: App.

Fg016: App.

**And the app you most use in advance, or when moving to the station?**

Fg012: In advance.

Fg016: It depends.

Fg014: I would say mostly on the go...

Fg011: Yeah, I just decide to go and check when the train is going to be there. I mean, how many time I have to be... In how many minutes I need to be there and, yeah. But almost never in advance.

Fg016: Depends. Some trips I plan before, and another ones I just get to a place and okay, I'm going somewhere else because this place is not cool, so it depends. I use the app all the time. Planning, before or during the day. Even in the station I use the app to change my program, my schedule.

**Do you use some panels? The Railtime TV, or the panels?**

Fg016: Yeah, I just check because in the app the platform is always okay. But the name, the number of the train is changing. But I first check in the app and when I arrive to the station I look to the panel and I just double check if the platform is that.

Fg015: I don't always have the Internet on my phone so I look everything in advance from the app then I take this screens outside, look for them. But, yeah.

Fg017: Well, I use in advance for the trip there. But when I'm there I'm using the app because I don't know why, if I'm going to Bruges I don't know how much hours I will spend there. Like 2 hours or six hours... So I don't plan the trip back. So I plan always in advance the trip there, to the place where I wanna go. But when I'm there and I wanna go back I'm just using the app.

**In an off-line environment, what would be your way to find the information?**

Fg017: Train station.

Fg012: Yeah.

Fg013: Funny thing is that I always ask, like, I cannot be bother to go and first look at which one can possibly can be the one, then go and check the other screen, or the one that is written and check it... I always go to the cashier and speak to him if they can speak English and let me know when is the faster, the sooner to the destination.

Fg012: The same.

Fg011: Yeah.

**Buying a ticket, how do you choose it?**

Fg012: The cheapest.

**But how you get to know the cheapest?**

Fg012: I don't know. I know its the GoPass and I discovered that we can have GoPass, but just one... and then you pay only 6€ and not 51€. So... Sounds good.

Fg016: Sometimes the GoPass is not the cheapest one. Because there is the weekend pass.

Fg011: Yeah.

Fg012: Ahhh, yeah? I didn't know this one.

Fg016: Yeah, because when you want to go Brussels for example, you can buy a weekend pass so you can use from Friday 7pm?

Fg017: Yeah.

Fg016: till Midnight of Sunday. So you can go and you can come back for the 6,30€. So it's cheaper, it costs 3€

and, yeah.

Fg011: Yeah.

Fg012: Oooh, ok, I didn't know.

Fg013: The thing is that all the information is on the website but still, I needed friends to let me know. Maybe again it's my thing for not checking, but still some people like you...

Quite: Too many options. Like, it's a bit difficult to know what to choose. Too many options.

Fg011: I don't know, someone tells me something and I like "Okay, let's go folks".

Fg017: I mean, someone told me that is possible to buy a train ticket in Carrefour to Brussels and its also 3€ during the week, so I don't know if it's true or not but someone told me that he actually did that. So, I don't know...

Fg016: Buy a ticket in Carrefour?

Fg017: In Carrefour, for train. It's like... So you have like limited time, it's like one hour, 90 minutes, and you have to use it right away. But still... I don't know if that is true or not! But normally when I am checking for prices I am always comparing prices with the GoPass, with the price that is online. Because sometimes GoPass is cheaper, but sometimes its not.

#### **Have ever happened to buy a ticket more expensive than the one you could have buy?**

Everyone: Yes.

#### **And how you got to know that was a mistake?**

Fg012: The girl and the boy in the train, the controlers, that said: "Oohh no, GoPass doesn't work to go to the airport so you have to pay another ticket".

Fg013: Really?

Fg012: Yeah, but she told me in French so it was okay.

And you had to pay another ticket in the train?

Fg012: Yeah, I think I had 12€ to pay.

Fg011: Yeah but it was 5,10€ for the GoPass we paid already singing in and then another 5 or 6€ additional price I think.

Fg013: I have a friend who was like "Are you crazy? This is to Brussels, it's so cheap. Why do you keep buying this this and this? You can just get this.". And I was like, "Okay".

#### **How many time later did you discovered this?**

Fg013: Quite a few I think. I think I have already paid quite a few journeys to Brussels, and then I got to understand that there is a special card which you can get.

#### **How could be avoided this problem?**

Fg016: Maybe from the machine. I always do that. I check if the GoPass or Weekend pass is the cheapest. So I just check at the machine.

#### **You compare prices at the machine?**

Fg016: Yes, yes.

Fg017: Yeah, but that's too long. You have to enter several stuff, you have different tickets, because there are so many options for tickets. I don't know, I would say that the easiest way would be like: Ok, somewhere you enter that you are student, you are travelling during the weekend during these days and what's the best price option for you. I dont' know, they can have discounts for groups or whatever... Something like filter or something. You enter some information about yourself and then you get information. Ok, this are the ticket options for you, and you can choose.

Fg016: Maybe using the ID card.

Fg017: Yeah.

Fg016: Would be a smart way to know who are you and what are you capable of... Maybe is an idea.

#### **Do you have any other idea?**

Fg011: No, because I think the info is over there. Just need you to get to the website or to the app and search and find it, and know the things you need to know. It's my fault that I don't know that's something can be less expensive.

Fg017: There are so many options with the tickets. You know, if you go to the website, because works like... First you choose a destination of the trip, and then you have options to buy a ticket. And it's a dropdown menu. It's like 20 items you can choose for the ticket. Weekend ticket, GoPass, I don't know... And yeah... It could be, at least be able to which discounts you can apply. Because in some countries you have discount as student. So you have to have your student pass for that and you have to show that you are a student. Here you only need to be under 26 and there is no additional discount because you are a student. So, that's a bit different.

#### **How do you know which platform you have to go?**

Fg011: Just look at the app.

Fg012: And when you make a mistake you ask someone. "Where is my train? Oh, is in the other side of the trains station." - "Ok!", and then you run. That's all.

Fg011: I think the app is very often updating faster than the screen which is at the platform.

Fg014: Oh, yeah.

Fg011: Which is really, really good thing.

**Have ever happen to be in the platform and then realise you are in the wrong one?**

Fg011, Fg012, Fg013, Fg015: Yes.

**How you knew you were wrong?**

Fg012: On the screen. Or sometimes they speak and say "Oh, the train changed and..."

Fg011: But then you need to know Dutch or French.

Fg013: It doesn't work for me.

Everyone: Laughs.

Fg012: So you look at the screen.

Fg013: I saw the screen. Then I realised it's the other way around. You have to be in the other side.

Fg015: For me it happened in Brussels Airport and the train left, so I took the next train. Because I was in a hurry, so I didn't check the platform correctly. I was buying a ticket with the cashier and he told me the right platform but I just went to the wrong one.

**Do you think it's easy to find the platform according to the signs?**

Everyone: Yes.

Fg011: There are always signs.

**You follow them? Or you just walk?**

Fg011: I see where the signs are going. You see that are 5, 6, 7 or the other side... And you just follow it.

Fg014: Well, not always. Some stations like for example Brussel-Schuman, its being renovated right now and it is a bit difficult to know where you should go. And there are only two options. One in two. But still I made a mistake.

**Why?**

Fg014: Well, the signs were a bit confusing, that's it. I wasn't alone, so other people did the same mistake.

Fg013: But I don't think that this is a major problem.

Fg014: No, it's not.

Fg013: It's pretty convenient most of the time.

**What are your considerations when choosing a carriage?**

Fg012: Second class.

Everyone: Yes.

Fg011: Nothing more.

Some of you choose like a specific carriage?

Fg011: The first one.

Fg013: Maybe good to know in terms of information, I don't know if this was my fault again, but the first I was in the 1st class. And I felt so good about it.

Everyone: Laughs.

Fg013: I didn't know it was 1st class, and I didn't know there I was supposed to be in another class.

Fg017: I always choose the most empty one. I see the train coming and I'm checking, "Ok, there is so many people in here, so let's move a bit".

**And the seat?**

Fg012: Yes, in the sense of the train (direction).

Fg013: Window seat.

The rest: I don't have it.

**Travelling with friends, change something?**

Fg017: I'm travelling most of the time with friends so basically I don't know if I travel alone here in Belgium so far. Maybe to the airport. But that's it.

**And when you have big luggage?**

Everyone: The same.

Fg015: It was so good that the carriage was empty so I just put all my suitcases in the lane.

Fg013: Do actually Belgium trains have compartments for luggage?

Fg011: I have no idea, never see one.

Fg013: Because now when I think about they have one over the seat (top-shelf), but I don't know if they have any in the corridors, like between compartments.

Fg011: In France they have between the carriages.

Fg015: In Finland too.

**Would you use this if they have?**

Fg011: Of course.

Fg013: Yes.

**Do you think it's a problem carrying luggage...**

Fg013: It can be a problem if it's too crowded.

Fg014: ...too crowded.

Fg013: Definitely. And if you have big bag.

**When it's not crowded is okay?**

Fg013: Yeah, you can always leave it on the lane.

**Have ever happened that you left the luggage in a empty space and the train got crowded?**

Everyone: No.

**How do you know when it is time to get off the train?**

Fg012: Look at the screens in the train.

Fg011: They always say.

Fg013: They always say as well.

Fg016: I always pay attention at the time, so I know how long it will take the trip, so I pay attention to my watch or put some alarms in the cellphone just to alert me.

Fg015: Sometimes there is not this screens, or they don't say anything so you just have to guess. Or you going counting how many times you had stop already.

**And how do you feel while waiting your station?**

Fg016: Not so relax, but not so worried. You just have to pay attention at the time.

**Have you ever missed a station?**

Fg013: No, but I ask people just to check that I am in the correct way, just to make sure.

**Do you think that there is some solution for this?**

Fg013: I guess in most of the time when you have a screen and what they said it's okay. If it's possible for screens to be available everywhere and from that to keep on saying over and over the station it's gonna be okay. I just don't know... Are the voices recorded most of the time? Or they say it? Because sometimes they say it on a microphone, sometimes it's recorded. If it's recorded, like in a metro, it's convenient.

Fg016: But what happened to me was the voice said the wrong station. We were arriving in Leuven and the voice said we were arriving in Antwerp. So I was a little bit confuse. I know there is no way to be Antwerp, but I don't know... For somewhere else, or someone, could be a problem.

Fg013: But it was a recorded?

Fg016: Yeah, it was someone speaking at the microphone. I don't know if its a recorded always or... But it happens that said the wrong name, a wrong station.

**But you knew that was wrong?**

Fg016: Yeah yeah, I knew because... I knew that was arriving in Leuven because I was checking the cellphone.

**So you were checking during the trip?**

Fg016: Yeah, sometimes. But not always. But it happens that we arrived in Leuven, so it was impossible to be another place.

**Do you also check the mobile during the trip?**

Everyone (except Fg016): No.

Fg015: Sometimes you cannot hear the recording when there are some much noise around you, and people are talking and speaking on the phone. So I don't always hear them.

**How hard is to make a connection, when necessary?**

Fg011: Actually it never happened to me. I mean, I always get a train that get me home as fast as possible. I mean, I avoid connections.

Fg013: I think the app is pretty convenient. I don't have it, so I usually check the website which means that I don't know what is going to happen if they have changed something in the meantime, so we have to consult somebody... But I have been confused sometimes. But once again I think that this might have been my fault.

**How did you manage?**

Fg013: Just spoke with some people. Yeah.

**So when you are confused you just ask people?**

Fg013: Yeah, yeah.

**It was easy to get information from them?**

Fg013: It was okay, it's not a problem.

Fg012: I did once, and I followed my friends. They told me "Ok, we will change the station", so we were watching at the screen which is the station.

**Do you know how they knew about the station?**

Fg012: I think by the app.

Fg016: I had some connections, but I have never had a problem. But what happened to me was a weird thing. Because I was in a train and happens that the train splits. Half of the train goes to somewhere and the other stays in the station. So I got confused and I had to ask what should I do. Because I didn't know that would be even possible to a train to split. Because in the app is not so clear this information. It happened to me one time. I asked the guy from NMSB and he told me "Ok, you must go to that part". But in the app there is no information to this. I even don't know how explain this in the app, which part of the train you must be.

Fg011: I think they only announce this on the station or in the train...

Fg016: Yeah, but was in Dutch. And I know if is part A and part B. I was confuse to ask the guy. I was in Liège and I was coming to here (Leuven) and in the middle of the trip I don't know the name of the city, but it's a strange city, station... the trains splits there. And I had to be in the other part of the train to reach my destination.

**And how you realise that the train would split?**

Fg016: Because everybody goes out the train and I was... weird thing. I was alone. And I put my head out of the window and I saw the train splits and I was confused. And I run out and asked the guy. Was strange for me. I didn't know about it.

**Where you checking the app this day?**

Fg016: Yes but in the app there was no information about this splitting.

**When you arrive to the destination, what are usually the next steps you take?**

Fg011: If you want to go sightseeing you just go to the info center and get a map for the city and go out. I look for the info center.

Fg014: I wouldn't do this, I would simply go out, that's it. I mean...

Fg011: Yeah, but if you know... if you go there for work you know that you don't need.

Fg014: If I go sightseeing I would check it in my phone, I mean... There are quite a few apps for tourism here in Belgium, so.

Fg013: I would check it online most probably, if I am going to do tourism. Maybe before... Where I should go, what can I do...

Fg012: I'm looking for the info center.

Fg011: You get your map and just go out. You make plans, which place to visit, if you have to take a tram or a bus to go to the center, for example in Ghent. When you arrive, if you don't want to walk like 25 minutes from the train station to the center you have to get the tram, or a bus, or...

Fg017: Yeah, basically two things: coffee and the information office. Basically the same, get a map, some tips to where to go, and... that's it.

**You look for a coffee in the station?**

Fg017: Yeah, yeah. Because I usually travel really early in the morning and then I need some kicker.

Fg015: I always look these things in advance and I have a clear vision of what I gonna do and where I will go, and which way I'm going... And I check the map for where I should walk and what's the thing in the city.

**This map you get before go to the trip?**

Fg015: I have downloaded this maps on my phone, so...

Fg016: Same of him (Fg017), but I change for beer, instead of coffee.

Fg011: The same problem like in the morning...

Fg016: No, just kidding. I use my cellphone, Google Maps or TripAdvisor for where I have to be. Google Maps helps me. Because I always trying to have Internet everywhere I go.

**Have you ever used trains here to travel out of Belgium?**

Fg017, Fg013, Fg016: Yes

**Did you have some extra problem? Like without 3G...**

Fg016: I use a Viking operator, so I buy roaming data, so I always have. Because it's a useful thing. Internet is always useful.

Fg011: But it would be good if the trains had Wi-Fi.

Fg014: Oh, yeah.

Fg011: Because, for example, the buses that goes from Brussels to Amsterdam most of them have Wi-Fi in there. And if you don't have enough 3G to connect see what's going on, it would be useful to have Wi-Fi.

Fg014: Yeah, and imagine being underground.

Fg011: For example, if you go to the airport Zaventem there is almost impossible to get connection with 3G.

**What are the main differences between the trains in Belgium and in your own countries?**

Fg011: I cannot think about good things in trains in Bulgaria. Normally we need to travel 10 hours to get to 400km, something like this. That cannot be good. If I can compare to France, there trains are a bit better. Because they have always this TGV, they are faster. But here in Belgium you don't need the fastest train. I mean, the distances are very short and you get from one point to the other for 2 hours maximum. In France they have this option when you buy your ticket... You have the option to go to a carriage that you can make noise, and you can listen to music... Or a carriage where you should be silent and everybody just don't talk: read a book or sleep. That's the main difference that I don't find here.

**You told me before you get in the first carriage. If you had different carriages, would you get in another one?**

Fg011: If you have this option there is always on your ticket in which carriage you should go. Then I look for my carriage and go there.

Fg014: I'm Bulgarian so I wouldn't compare it with my country, but I can compare it with Spain. I would prefer the Spanish system simply because they have a lot of high-speed trains. They invest a lot of money on this and its quite nice. But on the other hand, the information over here is a bit, you know, a bit easier to get if you don't speak the native language. People speak English, in Spain none speak English, I mean... I know Spanish but if you don't know Spanish you are fucked up.

Fg013: Another Bulgarian, but I never actually use the trains in Bulgaria. Maybe one when I was very very young, I hope there is some advancement.

Fg014: There is the same trains, I mean...

Fg013: I can compare it with Scotland. They speak a little bit of English...

Everyone: Laugh.

Fg013: Not the perfect kind. An advantage there is the Wi-Fi. Very good point that you guys made. Yeah, this is the great point. Price wise do, trains there are much more expensive. I'm not aware of any faster trains... And they have space for carriage, for your luggage. Space for your luggage and stuff, which is also a beneficial. They very often have people coming who come with food, if you want you can also get something like this. Beside from that I have never used an app so I don't know how convenient it is but I have never felt confused in anyway, because maybe the language.

Fg012: I'm from France but usually I don't take the train because it's very expensive, and only to make long distances sometimes I can take it because there are high speed trains. But they are much more expensive than Belgium. Here is not necessary, because everything is close. And you have the space to put your luggage, I think it's better. And the story of compartments I didn't know but...

**And the Wi-Fi?**

Fg011: I think they don't have.

Fg012: Yeah, they don't have.

**Would you like to have?**

Fg012: Yeah.

Fg011: Of course.

Fg017: Well, there are 2 types of trains in Czech Republic. The shitty ones that you pray to the train arrive in the destination. And like the IC trains, which are pretty closer to the Belgian ones. They are better than the regular IC trains, because you have your seat, and you have Wi-Fi and stuff. But the shitty trains are a disaster. So that's a point. It's cheap and it sometimes is like "Please, let's make it until the final destination". But If I should compare it to the Netherlands, like Belgium-Netherlands... Netherlands the complexity of trains are way more difficult, I

would say. Because when you get to Amsterdam you had to take train. First it's hard to get a ticket because there are no machine in English. Only in Dutch and French. The trains are more expensive. And you have to check-in and check-out when you are getting into train, and out of the train. I had no... Why would I do that? So that was... The thing I have seen in Netherlands.

**And there is something better in Netherlands?**

Fg017: Well, I don't know. It was really brief trip, and we actually also like bought the wrong ticket because we didn't know which one we should get. And the conductor told: "Oh, you got a wrong ticket". And there are like a terminal that you have to go through it, and you have to check-in, and the terminal let you in. But the problem was that we got stuck because we got the wrong ticket so we couldn't go out. So that was a problem and we had to found someone who could open us the terminal because otherwise we would be stuck in the station. Not the platform, but in the station, in general.

Fg015: I'm from Finland, we have much more expensive train tickets, and when you buy a ticket you buy a ticket to that exactly train, there is a place number in your ticket and you can buy tickets also from the train, so you don't have to have tickets when you are going to the train. But then you have... Don't have this place number. Early in the morning and late at night tickets are much more cheaper, I don't know if is similar... Probably not in here. And there is Wi-Fi, but they are really slow and doesn't work really well. They have tried to make it better but they said that it's impossible. I don't know if it's moving so fast, and something about it... And there is one carriage with the workers and people with animals, and children, and stuffs...

**You have different carriages for this?**

Fg015: Yeah, not every train. But most of them yes. For example, people with dogs and cats are in different carriages and there is... You can smell that they have been this animal's carriages like really long time. There is a lots of delays, because in winter there is sometimes snow on the tracks, so... But, yeah.

**And when you buy the ticket and you get your seat, can you choose one of this carriages?**

Fg015: Yeah, yeah. You can buy your ticket online and you can choose your place. And you have to pay some extra, for example, if you have a dog with you is 5€ per one trip, and if you have a bike it's like 5€... And when you are buying a ticket from the cashier, she normally shows you which place you wanna choose and it's free.

**Do you think it's useful? Would you like to choose your seat?**

Fg011: Would be nice, like this. You know that you have a seat and you don't have to stand up when its overcrowded because like this you avoid the over crowdness. I mean if you can choose your seat is a limited people who can buy ticket for this train.

Fg013: Yeah, I agree. In Scotland was the same. If you buy a ticket online you have a seat.

Fg014: Sorry, but talking about suburban trains like going to Brussels, I don't think that is feasible, I mean...

Fg013: Longer, longer distances.

Fg014: In this case yeah.

Fg017: But the thing is that you can cross Belgium in two hours. That's no point on that because it makes sense in Finland when you can have to travel like hours. If you want to go from one side of Czech Republic to other one is like 5 hours. So then it makes sense because you know you will sit. Because sometimes it's sucks if you have to, you know, stand for hours... It sucks. But here in Belgium I have never travelled more than really a hour, or hour and a half. So I don't see a point in this in here because...

Fg016: In Scotland and Finland you have to pay more to reserve a seat?

Fg015: No.

Fg013: No no, it's more expensive anyway.

Fg016: Alright.

Fg015: Same.

Fg016: I was in Netherlands too, and I had the problem with the check-in and check-out thing, because I didn't check-in, and I couldn't go out of the station because the door wasn't open. So I had to ask someone outside to help me with this thing. But I think it's a confusing thing. And there is no information about how to do this. And it's not a good thing. So, it's... In Belgium it's better.

**Do you make use of any technological device during the trip, except the smartphone?**

Everyone: No.

**Do you have in mind any resource that would make your trip much better, except the Wi-Fi?**

Fg017: Maybe more sockets.

Everyone: Yes.

**Do you choose a seat depending of this?**

Fg017: Sometimes, when I am running low in a battery then yes.

Fg011: Would be useful.

Fg017: Especially when I am travelling the whole day and I'm coming back and I'm like, ok, I'm like on 5% and I really know because I need to make some phone calls... I'm looking if there is something.

**But do you know where to find it?**

Fg017: Yeah, because some trains have them, some trains don't. And that's it. You have to be lucky because you don't know if there is... Like the newest trains they have them. But the older they don't have them.

Fg015: I haven't seen any.

Fg017: I have seen couple of them. I have used couple of them.

Fg015: In Finland we have it, but I haven't seen it in here.

Fg016: But it's not easy to find them.

**And you look for them usually?**

Fg016: Yeah, yeah.

Fg011: If needed.

**What do you like most about trains in Belgium?**

Fg011: That they are very cheap.

Fg014: Same thing.

Fg017: Price and everything is basically connected from Brussels. So if you are in Brussels you can travel everywhere like really fast. Like within 1 hour, more or less.

# Appendix E

<b>Board Games #01</b> On 14th of April of 2015 with 6 participants during approximately 90 minutes.		
Ga001/Ga004 = Pair01	Ga005/Ga006 = Pair02	Ga003/Ga002 = Pair03
<p><b>Pair01: *Took the card* I forgot where I parked my bike.</b>            (Ga006) Nothing to say about it. Laugh.</p> <p><b>If you have any questions about this, you can ask.</b>            (Ga001) Who stole my bike?            (Ga004) We can look at...            (Ga001) Do you have any question?            (Ga004) Where is my fucking bike? Can we ask something like that to the system? I mean...            (Ga001) Where is the parking space for bikes? Like, everywhere...            (Ga004) But Did I would have something with my brain to not remember where is the fucking place.            (Ga001) No, actually no.            (Ga004) I think there is nothing we can ask about this.            Yeah? You don't have anything to ask the system? Remember, he knows everything.            (Ga004) Where is my bike? Without signature... Where is my bike?            (Ga001) Where is my bike? No, I don't think so. We can ask about the code on the bike, if anyone, like, took it. But that could be...            (Ga004) Code? The number? Yeah yeah.            (Ga001) If we thought that is stolen then we would ask about the...            (Ga004) Something like that... Where is the police station? Or something like that. I would go directly. I didn't forget. Somebody stolen.            (Ga003) Yeah, I can imagine that situation.            (Ga004) Yes, yes.            (Ga001) We don't need to imagine. It happened to us.            (Ga003) I have a lot of questions to do.            (Ga004) But if I think that I forget, so it's not the same situation to us. So I think it's somewhere, it's somewhere. You don't want to ask anything?            (Ga001) No, if we forget where is the place... Maybe where is the first hospital for...            (Ga003) Mental hospital... Laugh.            (Ga001) ...mental hospital! No no...</p> <p><b>Would you have any question to make in their position?</b>            (Ga006) I don't know.            (Ga003) Have you seen someone cleaning the place that caught my bike?            (Ga006) I think this is kind of stupid question, you know?            (Ga004) I don't think so. It's really clever one.            (Ga001) It happens in Leuven, they clean the...            (Ga003) The people who clean the street of the building, if your bike is...            (Ga004) They took away your bikes.            (Ga003) ...just in front of the entrance of the building they take your bike.            (Ga006) Really?            (Ga003) And I don't know where is my bike now...</p> <p><b>Pair 02: *Took the card* The bike parking is full again.</b>            (Ga004) But you don't mind because you don't have a bike.            (Ga001) It's crazy because like we can park anywhere the bike. So we can just lock it to the lamp.            (Ga003) And then you cannot find it again.</p> <p><b>Would you like to ask a question to the system?</b>            (Ga006) There is another parking for the bike? To the station? No, no... Just close.</p> <p><b>Would you ask another question?</b>            (Ga001) I would ask why is full.</p>		

(Ga004) It's not big...

(Ga001) Nooo, because maybe there is some event and there is a lot of people...

(Ga006) And nobody invited me...

(Ga001) ...then I would like to join the event.

**Would you ask a different question?**

(Ga003) Just a reclaim to add more space for parking my bike.

(Ga006) \*Answer\* Yes, there is. You can find free space at the back of the station.

(Ga006) So is quite easy.

Ok, do you have any other question to the system?

(Ga006) No, I'm happy now because I'm going with my bike...

(Ga003) It would be safe?

**Do you think that was a useful question?**

(Ga003) It would be safe in the back of the station?

**Pair 03: \*Blank square\***

**If you want you can ask an open question?**

(Ga003) How is the weather today? How will be the weather today?

(Ga001) Should I ask something like how to make a perfect selfie with you?

(Ga003) Oh my god. Can I make a selfie with you?

(Ga001) Can I make a selfie with you? Can you make a better selfie than me?

(\*Random conversation\*)

(Ga006) We can do different question when is my turn... I can ask like few things. That's mean we gonna go...

(Ga003) Oh, it's answered. "Do you wanna me in your picture? ;)". I cannot go ahead now, because it's not related to any event.

No, but you could go.

(Ga003) I can go?

Yeah yeah, you can go. And if you want you can answer. Like you can keep the conversation until you solve your question. That is better if it was related with trains...

**Pair 01: \*Took the card\* Hurry! Hurry! Hurry!**

(Ga004) We have no explanation so...

**Do you have any questions?**

(Ga001) We can ask...

(Ga004) What is going on?

(Ga006) I should wake up earlier today.

(Ga001) How much time we have for next train?

(Ga004) Yeah, that's true. How much time is left?

(\*Random conversation\*)

**What did you ask?**

(Ga001) When is the next train going? But I didn't ask where, so when is the next train I guess. Just to get out of the place where is nothing happening, nobody is, nothing...

(Ga006) It's gonna start to laugh "But yeah, where are you going?"

Would you ask a different question?

(Ga006) Same of.

(Ga005) Can the train please wait us?

(Ga001) That would be awesome.

(Ga004) That would be awesome... Just to write...

(Ga001) But actually in Belgium is always late, so it always late for you.

(Ga003) Oh, also in Italy.

(Ga004) Yeah, that's... Yeah.

(Ga006) Yeah.

(Ga004) We are waiting for the answer...

Oh, there is an answer already: "Could you please tell me where are you going?"

(Ga004) And I wrote: "To the nicest town nearby"

(Daniel) To the nicest town... Laugh.

You are challenging the system.

(Ga004) Yeah, yeah, we have to try.

(Ga001) We should ask what it means... What is the name of this...

TraPIST?

(Ga001) Yeah. Is it gonna be the official name of the app?

This is the name of the project.

(Ga003) Oh... "You are a free spirit."

(Ga004) "I like that! You can take the train to Ghent!". Laugh.

(Ga001): He loves Ghent, actually.

(\*Random conversation\*)

Please, read loud.

(Ga001) Yeah... "You are a free spirit. I like that. You can take the train to Ghent at 4..."

(Ga004) It's... "Oh, you are a free spirit. I like that. Smile. You can take the train to Ghent at 4:03 at platform 2."

**Ok, do you have any further question for this topic?**

(Ga004) No, I think we can go to Ghent.

**Pair 02: \*Took the card\* It's colder than I thought. Should I go back to get a coat? Or shouldn't? Or I should?**

(Ga006): Ok, it's cold. I need a jacket. There is any shop around?

(Ga004) I don't know... Ask for the weather, no?

(Ga001) She is already cold.

(Ga004) Ah, she is already cold. Ok, maybe is getting in 10 minutes...

**What would you ask?**

(Ga004) What is the weather forecast, or something like that.

(Ga001) Yeah, maybe it would change like soon.

(Ga004) I mean, everytime I'm cold If I have to buy.... I could be like...

(Ga006): There is any shop around? Because I'm too far from my house and I don't want come back and get my jacket...

(Ga004) So let's buy it in some really expensive shop.

(Ga006): Let's buy something new. Let's do some shopping.

(Danielle): Is the weather turning better?

(Ga001): Yeah, that was our question.

(Ga004): But is Belgium, so probably not.

(Ga006): It's better to do some shopping, anyway.

(Ga003) Have someone another jacket more, and a coat more...

(Ga001): Is there anyone sharing? Maybe is there any "shop" around, for sharing the coat.

The answer: "Yes, there are. There is a Carrefour Express in the main hall. You can also find a pharmacy and a sandwich bar close by."

(Ga001): Sandwich house?

Yes, because she asked "There is any shop around?"

(Ga006): Yeah, because I said shop. Yeah.

(Ga001): Ohhh

(Ga006): She said (Ga005) if I do another question, am I going one step more?

No no, you already did one step for the question. But you can keep going to solve your question or...

(Ga006): No, no. It's alright. It's fine.

**Pair 03: \*Blank square\***

If you want you can ask an open question.

(Ga001): I would ask about the second... Like, it would be cool if we can ask if there is any, like, second storage. Because the people coming from like International background doesn't know if that its "spet". Yeah, but if you ask about shops... It's like, you know, you need to go to the shop.

(Ga004): Ok ok, yeah, second hand shop.

(Ga001): Yes, but (...) is really, like, is it second hand?

(Ga004): I don't know. Or something like that.

(Ga001): It's more like storage where you can actually...

**What would you ask instead?**

(Ga001) Would be cool if the app could answer me that there is for instance (...). I'm thinking about the question I would ask about the clothes. So it would be good if I ask: "Oh, is there any kind of (...) where I can get the clothes.

(Ga006): Clothes shop, yeah.

(Ga001): But not the shop. Because shop is like, you know, good things and magazines...  
(Ga006): Even restaurants.  
(Ga001): ...and so on. So I would ask about something that would answer me like "Oh, there is a (...). We have it in Belgium, because in Czech and so on we don't have it. So it would be cool to know that there is this kind of shops like (...).  
(Ga004): So how did you call it?  
(Ga001): I don't know...  
(Ga006): Clothes shop.  
(Ga001): It's not. It's like... (...) people are giving their old clothes there for free.  
(Ga003): Ahh, the charity.  
(Ga006): Ahh, you mean the charity. We have the charity. I lived in London, I know... No no, really, is a charity shop and they sell the things, the clothes...  
(Ga001): Yeah, but all Belgium do that. Like, for them is really normal because they have...  
(Ga006): Yeah, for us is really normal. You give to them like bags full of everything, things for home... And after you can go and buy for 1, 2£.  
(Ga001): Yeah, that's what I would ask if I missed my jacket.  
(Ga006): Yeah.  
(Ga003): Yeah, ok... For the previous question.  
(Ga001): Yeah, because I need it very fast and maybe I don't want to spend so much money... So, yeah.

**Pair 01: \*Took the card\* Aaargh! Change of platforms... Now?**

(Ga006): Change of platforms?  
(Ga004): Yes. We go to Ghent, right? Yeah yeah... So...  
(Ga006): You are going to Ghent?  
(Ga004): Yes, he told us.  
(Ga006): Oh, it's nice plan.  
(Ga001): Laugh. Now we have to follow it...  
(Ga004): I didn't have good luck with Ghent so far...  
(Ga001): We have the worse memories in that town.  
(Ga004): Yeah, but she said that she...  
(Ga001): Ask if it's gonna rain there because I'm not going...  
(\*Random conversation\*)  
(Ga001): What you gonna ask? About the platform... What platform?  
(Ga004): In what platform is it?  
(\*Random conversation\*)  
(Ga001): It's ridiculous because they announce always in French in Brussels, the change of platforms.  
(Ga004): It happened to me in Waterloo and I didn't know what was this.  
(Ga001): They never announce in English the change of platforms. It's always in French.  
(Ga003): That's true.  
(Ga001): We can just see the people moving and you are like "Oh, I should move too"...  
(\*Random conversation\*)

**What is the question?**

(Ga004): "On what platform does the train to Ghent arrive?". There is no question mark but they will get it, right?

**Do you think the question is useful?**

(Ga003): There is an elevator.  
(Ga001): Elevator?  
(Ga003): For going to the other platform.  
(Ga001): What?  
(Ga003): The elevator. For changing the platform.  
(Ga001): Yeah, discover it. Are you asking? Do you know where is the...  
(Ga004): But we don't know the number of it.  
(Ga003): Yeah, but you have to go... I suppose you have to go downstairs or upstairs...  
(Ga001): Actually in Leuven go upstairs. Because I had my rollers and I was really late and I changed the platform and I...  
(Ga004): So you already tried it? Like upstairs...  
(Ga001): Yes, is really cool.  
(\*Random conversation\*)  
(Ga003): The answer: "The next train to Ghent arrives on platform 2 in 10 minutes. This train will take you to Ghent in 40 minutes..."  
Oh!

"...If you wait 5 more minutes, you can catch the InterCity train. That way, you will arrive sooner in Ghent".  
(Ga001): But InterCity is expensive.  
(Ga004): I would like to ask now... Is this like reality? Because before it was 16:03, so was in 14 minutes, and now is in 40 minutes. If you know what I mean...  
(Ga003): No.  
(Ga004): Because the time is like already...  
(Ga001): Maybe is somewhere else.  
(Ga004): What did you do?  
(Ga001): I don't know. Wait...  
(Ga001): \*Question\* Can I use the same ticket as I have now for intercity?  
(Ga001): Because InterCity is a different price, no?  
(Ga004): InterCity (...) in Czech Republic only...  
(Ga001): But it has in Czech Republic  
(Ga004): I don't pay for trains, anything...  
(Ga001): Oh, ok.

Do you think you would ask the same?

(Ga003): Yes, about the ticket. The price of the ticket.  
(Ga001): Yes, because InterCity has a different price.  
(Ga004): Yeah.  
(Ga004): (\*Answer\*) "Yes, you can". Laugh. Yes, you can. "You can take all the trains that go to Ghent with your ticket".  
(Ga001): So the price is the same.  
(Ga004): Yes, and the platform didn't... It should change.  
(Ga001): Yeah, but it's just like...

**Pair 02: \*Took the card\* Such a long queue. This will take a hundred years.**

(Ga001): For what are you waiting, actually?  
(Ga006): I don't know. I'm waiting...  
It's a train connection.  
(Ga001): Ahh ok ok.  
(Ga006): Is gonna be long?  
(Ga004): Calm people in the queue.  
(Ga001): Maybe ask if there is any place without queues... Maybe ask if there is some place free.  
(Ga004): Some place where you can go.  
(Ga001): Yeah, or where you can buy the ticket.  
(Ga006): If there is any alternative...  
(Ga001): Way of buying the ticket.  
(Ga006): No... I mean, you know there is a different line in the underground, for example. Even in the train...  
(Ga001): Yeah.  
(Ga006): If there is any...  
(Ga001): Machine  
(Ga006): No...  
(Ga001): She doesn't mean that.  
(Ga003): Can I take another train?  
(Ga006): If there is any bus instead.  
(Ga006): \*Question\* "There is another bus instead?"

**Pair 03: \*Blank square\***

(\*Random conversation\*)

What would you have asked?

(Ga001): About the queue?  
Yes.  
(Ga001): If there is another machine, I guess.  
(Ga006): The queue can be for everything. The queue can be for to take the ticket, the queue can be to take the train, the queue can be to take...  
(Ga001): Why to take the train? You mean in front of the train? It happened to you?  
(Ga006): Yes, it's very very busy the underground in London. Even the train.  
(Ga001): But if it's underground it's not...  
(Ga006): No I mean it can be the train station in the underground.  
(Ga004): The solution would be to do what?

(Ga006): No, we are not talking about the solution. Just the queue can be for everything.  
(Ga004): Ok ok.

The answer: You can get to your destination and arrive only five minutes later than expected, but you have to change buses in Brussels. Is this ok for you or would you like to take a direct bus?

(Ga006): I prefer the direct bus. I don't like too much change.  
(Ga006): \*Question\* I prefer the direct bus but I also want to know how much is gonna be. Please.

(Ga006): I prefer the direct bus but I would like to know if there is any different price as well.  
(\*Random conversation\*)

Answer: Ok! The direct bus leaves at 16.16h in front of the station on platform 1. The ticket price is 1,50 euros if you buy the ticket before stepping on the bus at the ticket machine. If you buy the ticket on the bus, you will have to pay 2,50 euros

(Ga001): Hum, nice.  
(Ga004):

**Pair 03: \*Event square\* Grrrr. Grrrrr. Grrrr. Shhh. Stomach.**

(Ga001): Oh my god  
(Ga006): Oh my god. There is any restaurant around?  
(Ga003): Of course  
(Ga001): In train?  
(Ga006): Any nice Italian restaurant around?  
(Ga001): But you are on the train.  
You are on the train, yeah.  
(Ga004): Ask if there is any (...)  
(Ga001): Actually this happened to my friend. She had like a gallbladder attack in the middle of the train. It was horrible.  
(Ga004): A friend?  
(Ga001): Yes, it was a disaster.  
(Ga003): \*Question\* Is there a restaurant on this train?  
(Ga001): What are you asking?  
(Ga003): "Is there a restaurant on this train?"  
(Ga001): It should be weird if not.  
(Ga006): Because you are in the train now.  
(Ga003): Yeah.  
(Ga001): Yeah. "No, there is none". Ahaaa. That would be cruel.  
(Ga003): "I'm starving"  
(Ga001): Ahhh, it's like you are starving? I thought you need to...  
(Ga003): Laugh.  
(Ga001): To go to toilet. Laugh.  
(Ga004): Are you kidding me?  
(Ga001): I didn't realise he could be hungry. I was like "Why he's asking...". That's horrible.  
(Ga004): If that occur to me I would always think like that, you know.

Would you have asked the same question?  
(Ga004): Actually no.  
(Ga001): I have told a different theory about the card.  
(Ga004): She didn't get the question, actually.  
(Ga001): Yeah.  
(Ga004): She took in a different way.

What would you ask, instead?  
(Ga001) I would ask there is any...  
(Ga006): There is any toilet.  
Any what?  
(Ga001) Toilet.  
(Ga006): Because it can be... stomach pain.

What would you ask?

(Ga006): One of that two. Nah, probably the restaurant.  
 (Ga004): Me too. Everybody...  
 (Ga001): No. Not me. Because I experienced it in the train.  
 (Ga004): Ok.  
 (Ga003): Where can I stole food? Laugh.  
 (Ga006): Any biscuits around?  
 (Ga001): Biscuits... Laugh.  
 (\*Random conversation\*)  
 (Ga001): Is there any pizza delivery to the train?  
 (Ga004): But after that...  
 (Ga006): By the window  
 (Ga004): I told you about the village in Czech with the (...)  
 (Ga001): Can you imagine him like delivering a pizza in the train?  
 (Ga006): Delivery!  
 (Ga004): He would have to wait in the next station!  
 (Ga003) \*Answer\* "No, unfortunately this train does not have a restaurant on board..."  
 (Ga001): No? That's horrible.  
 (Ga003): "...You can buy something to eat at your destination"  
 (Ga004): "Thank you"  
 (Ga001): "Thank you for sharing"  
 (Ga004): I don't like it.  
 (Ga001): I don't like it, write it! Change your answer. Laugh.  
 (Ga003): "You clever"  
 (Ga004): He is writing "damn". Like "damned it", you know?

**Pair 01: \*Event square\* That guy's music is so loud**

(Ga006): Can you please stop that...  
 (Ga004): ...train and get him out!  
 (Ga006): Can you please go out from the train?  
 (Ga004): What should I ask in this situation?  
 (Ga001): That happened to us.  
 (Ga004): It happened many times, I remember.  
 (Ga001): In Wallonia.  
 (Ga004): In Wallonia.  
 (Ga001): And actually in Wallonia it was so cool. I loved, actually.  
 (Ga004): Because she is crazy!  
 (Ga001): They just did a party in the train. I just... "I want to join them"  
 (Ga004): There was the girl who hated it.  
 (Ga001): Yeah, russian girl.  
 (Ga004): Russian girl.  
 (Ga001): She said it's really...  
 (Ga004): Annoying.  
 (Ga001): She said it's rude.  
 (Ga004): She said that all the time.  
 (Ga001): It happened to us when we were coming from Wallonia, so bunch of Wallonies guys went to techno party and they made one in the train. It was so cool.  
 (Ga004): With the speakers, you know! But what can you ask...  
 (Ga006): And she said I actually enjoyed that.  
 (Ga004): Yes because you know, it's her type of music.  
 (Ga001): Yeah, it was so cool.  
 (Ga003): You study balcanic.  
 (Ga001): No it was electronic.  
 (Ga003): Ok, you started dancing, of course.  
 (Ga001): I wanna but...  
 (Ga004): No...  
 (Ga001): They would look at me like "What?"  
 (Ga006): I don't like when they do that mess in the train or in the bus. It's not nice because the other people can be, you know...  
 (Ga004): Can we set normal music so...  
 (Ga001): No, can be a music actually...  
 (Ga006): No, but... is not nice when you put to loud in a public place.  
 (Ga001): Yes, I guess so. I haven't any question...

(Ga004): What can we ask in such a situation? I thing that is one thing we...

(Ga001): What would happen to me if I punch him in the face?

(Ga004): It is like (psycho?) techniques of negotiating..

(Ga006): Is actually rude...

(Ga003): Is there any rule for... the music

(Ga004): What is the Belgian law against...

(Ga001): What is the Belgian law against...

(Ga004): ...violence on the train?

(Ga003): Is there any rule about volume on the train?

What is the question?

(Ga001): \*Question\* What is the Belgian law about violence on train?

(Ga003): About the violence or the volume?

(Ga001): Violence.

Your question was about the...

(Ga003): Is there any rule about volume of the music?

(Ga006): Ahh, that's a good question (pointing to the Pair 01). Laughing.

Yeah, you prefer violence?

(Ga003): I'm not so rude.

(Ga006): No, for me is quite rude because I know when the people... they put too much music, too loud music for a long distance is not nice. They can hurt yourself, I don't like that.

(Ga006) This happens a lot in Italy.

(\*Random conversation\*)

(Ga004): \*Answer\* Violence or threatening to use violence is not allowed on trains.

(Ga004): So I don't know what to do.

(Ga006): They said it's not allowed?

(Ga004): It's not allowed, yes.

(Ga003): It's not allowed the music on the train?

(Ga004): No, no.

(Ga001): To punch the guy.

(Ga003): Ahh, yes yes.

(Ga001): Why not? Laugh.

(Ga004): I don't know. How you do it?

(\*Random conversation\*)

**Pair 02: \*Event square\* Puuuf. This noisy teenagers in the back make me crazy.**

(Ga004): It was the same, yeah.

(Ga001): Teenagers or children?

(Ga006): Noisy teenagers. That is worse than children.

(Ga001): No, children are the worse. That's like...

(Ga006): No, trust me.

(Ga001): It's like punishment forever.

(Ga006): No, trust me. The children... No!

(Ga001): Having a baby there...

(Ga006): I can stay in a train full of children, but not with the train full of teenagers.

(Ga001): Come on, teenagers are just making jokes.

(Ga006): I'm God. They come back from school and they stuck.

(Ga003): No, let's go for Britney Spears.

(Ga006): No, you have to come in London...

**Do you have questions for this?**

(Daniel): May I change the...

(Ga006): There is any chance we can change the...?

Carriage, you mean?

(Ga006): Yes, carriage.

Yes, because it's different in different countries. Like in America they call it one way, but I think in British English is carriage.

(Ga006): Yes, is carriage.

(Ga003): Because I know vagon.

(Ga004): Vagone.

In portuguese is vagão.

(Ga003): In Italy is vagone. But... No, vagon.

And spanish is vagón.

(Ga003): Yeah, in Italy is vagone.

(Ga004): Yeah, in Italy is vagone...

(Ga003): Vagon... V-A-G-O-N-I.

(Ga006): \*Question\* Can we please change the carriage?

(\*Random conversation\*)

**Pair 03: \*Event square\* We are in the middle of nowhere and the train is stopped for a long time.**

(Ga006): \*Answer\* If you walk two carriages to the front of the train, you can find free seats in a calm carriage.

(Ga001): What is the card?

(Ga003): Sorry... "We are in the middle of nowhere and the train is stopped for a long time."

(Ga001): Ok.

(Ga004): Party train!

(Ga001) Party!!

(Ga003): Party!!!

(Ga004): Now we can use the teenagers.

(Ga006): How long is gonna be?

(\*Random conversation\*)

(Ga006): What are you asking?

(Ga003): \*Question\* Why haven't we moved for a long time?

**Someone would ask a different question?**

(Ga006): It doesn't make sense why. When we gonna move! I don't care why, I want to move.

(Ga004): No, same.

(\*Random conversation\*)

(Ga003): \*Answer\* There seems to be a problem with the previous train. We have to wait a little while until the problem is solved.

(Ga003): All, he answer for a question I've never asked. " We have to wait a little while until the problem is solved."

(\*Random conversation\*)

Is it solved your question?

(Ga003): Is different but it replies for both questions. I asked for why, and they want to ask at what time its starts again and he replies to both questions. So I can say... "Too kind".

(\*Random conversation\*)

Next move...

**Pair 01: \*Event square\* Oh no no no. I lost my train ticket / Railcard.**

(Ga003): That's your case, Ga004.

(Ga004): Shhh shhh shh. That's true. I was a bit...

(Ga003): I also lost my mobile phone and... I don't know where my student card!

(Ga004): That was by bus card.

(Ga003): What was the situation?

(Ga004): Oh, sorry... She said: "Oh no no no. I lost my train ticket / Railcard"

(Ga004): (...)

(Ga001): So where is the... How is? Conductor?

(Ga004): Yes.

(Ga001): So I can hide. Laugh.

(Ga004): What is the average (...) of bribes in Belgium?

(Ga001): That's horrible. No, ask the fine. What is the fine? But they are gonna refund you anyway. Can I get a refunding if I get a fine? What's gonna happen to me, actually? Are they gonna kill me?

(Ga004): What happens...

(Ga001): ...when I don't have a ticket.

(Ga004): ...happens if I'm caught without a tickets.

(Ga001): So what's happen if I have the bill that I bought the ticket, but I don't have a ticket. Is it valid?

(\*Random conversation\*)

**Would you ask different?**

(Ga006): No.

(Ga003): What did you ask?

(Ga004): Oh... "What happens if I'm caught without a tickets?"

(Ga006): Eh, hum!

(Ga003): How can I demonstrate that I have a ticket but I forget it?

(\*Random conversation\*)

(Ga001): It can buy us the ticket.

(Ga004): Where is this written?

(Ga001): The up.

(Ga004): ...I can buy you a ticket and send a text to show to the conductor. Would you like that?

What was the answer?

(Ga004): It answer... Because that was faster (...)

(Ga001): So it's enough that you show the bill of the ticket, actually. To the conductor.

(Ga001): No, but you have the bill of the ticket.

(Ga004): Aha, aha.

(Ga001): You are not reading it.

(Ga001): Yeah, just leave it. Just leave it.

Ok, so they ask what would happens... "You get a fine. But I can buy you a ticket and send a text to show to the conductor. Would you like that?". "What if I have a bill of the ticket but I lost the ticket?". "Then you can show the bill to the conductor."

(Ga001): Actually we get once the fine and we asked for refunding and they sent us the money back.

(Ga003): Really?

(Ga001): In like 3 weeks.

(Ga004): For months. No weeks, months!

Really?

(Ga001): Yeah, but it was a Christmas time, so it was even like... So they would do it in 2 weeks, actually. That's pretty cool. And we even lied, actually.

(Ga004): You lied.

(Ga001): Yeah, I lied, actually.

### **Pair 03 \*Blank square\***

(Ga003): Nothing.

(Ga001): So you are now in the station.

(Ga003): Yeah.

(Ga001): In a foreign country now.

(Ga003): Laugh. In nowhere.

### **Pair 01 \*Penalty square\***

(Ga001): Seriously?

(Ga004): I was here or there?

(Ga006): You was there. That's mean you stop one turn. Laugh.

(Ga001): That's horrible.

(Ga003): It's 7, oh no no... 6.

(Ga001): You tried.

### **Pair 02 \*Event square\* Full trash bin.**

(Ga004): Full trash bin?

(Ga001): You can ask an open question. What am I supposed to do now? I'm bored.

In the penalty no. In the penalty you are being punished. Laugh. No, you can ask :)

(\*Random conversation\*)

(Ga006): Ok, I tried to explain to her...

(Ga001): What is the game about... Laugh.

(Ga006): Yeah, exactly. We need to find solutions. Not to just ask... If they say full trash bin, of course they have to take of the old one and put the new. But we have to find solution. Not for the moment... You understand what I mean?

Yes, I understand what I mean.

(Ga006): So we have to find a good question.

Remember, you are not obligated to ask a question. You do just if you want.

(Ga006): No I'm trying to explain to here the reason why we are here.

(Ga001): Laugh.

(Ga004): Because we just started. Laugh.

(\*Random conversation\*)

(Ga001): But I don't think we (...) because Belgium doesn't have a trash. They have just the (...) bags. Ask what color of what bag is for what trash. Hum! Laugh. If there...

(Ga006): Why you didn'r recycle it...

(Ga001): No, because they do. But ridiculous one. Doesn't make any sense.

(Ga006): Yeah, really?

(Ga001): Like one plastic type goes to one bag, the other plastic goes to...

(Ga004): It's one day is for plastics, one day is for...

(Ga001): No, it's not. Like in Czech one bag is just for plastic things.

(Ga004): Yeah.

(Ga001): But here is for the type of plastics.

(Ga004): So they have like 8 or 6...

(Ga001): And the type of one plastic go with cans and the other type is not recycled.

(Ga003): It's not my problem because my flat... Someone else is paid for separate the...

(Ga001): Nooo, you are so spoiled. It's ridiculous.

(Ga003): There is another empty trash bin? The closer...

(Ga006): She (Ga005) said if there is another bin... No, this is stupid as well. Yeah, because we have to find solutions for that. For everyday. I don't know...

No... Every question is possible.

(Ga006): If you can... take the rubbish more frequently. You know?

(\*Random conversation\*)

(Ga006): How can I... I don't know.

(Ga003): You have to clean. Laugh.

(Ga006): I want to ask like if they can take off, maybe, the rubbish more often.

(Ga004): More often?

(Ga001): Yeah, they do it once per week, so...

(Ga006): Yeah, that's true. Is not enough, is it?

(Ga001): Cartoon like once per month.

(Ga004): Cartoon?

(\*Random conversation\*)

(Ga006): \*Question\* Can you take away the rubbish more often?

(Ga006): \*Answer\* I'll send a message to the cleaning team with your complaint

**Pair 03 \*Event square\* Hum, within the next 15 minutes there are 4 trains I could take.**

(Ga003): What is the first...

(Ga002) Which is the nearest...

(Ga006): Which one is this?

(Ga003): "within the next 15 minutes there are 4 trains I could take."

(Ga004): But where are you going? You don't know that.

(Ga006): You don't know where are you going too?

(Ga004): We go to Ghent.

(Ga006): Oh yeah, we don't have a destination.

(Ga003): No we haven't. Destination unknown.

(Ga004): Oh that's not good then.

(Ga001): We should ask if it is raining there, because I don't (...)

(Ga004): (...) Because when I was asking when is the next train it used the real time. It's not theory.

(Ga003): What is the first train... ahm... The first train who arrives to the destination. He will reply, what is your destination? Yeah, but he doesn't reply because he doesn't recognize... Yeah.

(Ga003): The first train... arrives at...

(\*Random conversation\*)

**Pair 02 \*Event square\* I have to be on the platform 3. This train goes somewhere else.**

(Ga006): How can I go to the platform 3?

(\*Random conversation\*)

(Ga001): \*Answer\* Turn left into the main hall and take the first elevator on your right. The platform is on the first floor

**Pair 03 \*Event square\* Jay, we are almost there. Ow! But we have come to a stop too early. I can already see the station.**

(Ga006): Ahn?

(Ga003): (reading again)

(Ga001): I can or I cannot?

(Ga003): I can.

(Ga004): So there is no problem then.  
(Ga001): There is no problem.  
(Ga006): So perfect, carry on.  
Yeah, there are also positive things here. It's not just problems.  
(Ga004): So is not like real life.  
(Ga003): If we can ask, we can go ahead.  
(Ga002): We can ask...where to find a coffee shop nearby.  
(Ga001): Or maybe you should ask what fun you can do there.  
(Ga004): What fun you can have there?  
(Ga003): Hey, hey... It's my turn.  
(Ga002): What can we ask... Is there...  
(Ga003): Is there a Panos?  
(Ga002): ...something where...  
(Ga003): Oh because now we have like more time to spend for ourselves.  
(Ga002): Wi-Fi.  
(Ga006): Yeah, is there any coffee shop around?  
(Ga003): Is there a funny place for spend our extra time?  
(Ga002): Or I place for Wi-Fi.  
(Ga002): \*Question\* Is there any place that provides Wi-Fi?  
What was the question?  
(Ga003): How we can spend the extra time we have because we arrived so early. So is there a coffee shop...  
(Ga002): ...any place that provides Wi-Fi?  
(Ga003): ...with Wi-Fi.

Would you ask a different question?

(Ga003) ...if you arrive earlier than expected.  
(Ga004): But If I have this (the tablet) I don't Wi-Fi.  
(Ga001): Yes.

**Pair 01 \*Event card\* Argh! The train's door is still open but the train's conductor don't let you in anymore.**

(Ga006): What they said?  
(Ga004): The train's door is still open but the conductor don't let you in anymore.  
(Ga001): I think this game wants to be me violent very often.  
(Ga004): In the real life you would discuss with him, right?  
(Ga001): I would like to kill him.  
(Ga003): How can you control? Self-control.  
(Ga001): And you are worse than me actually (referring to Ga004). Last time you...  
(Ga004): Where?  
(Ga001): You were really rude to the conductor.  
(Ga004): To the conductor?  
(Ga001): Yeah.  
(Ga004): No.  
(Ga001): She came and she asked "do you speak Dutch?". He was like.. "Me? I would why speak Dutch?". And then we get the fine, 60€. Like... Both of us!  
(Ga004): You know that my father is a conductor, right? My father is a conductor!  
(Ga001): And he was, "Yeah, call the police, I don't care. Just call the police". He kept fighting and (someone) was like "Ga004, calm down".  
(Ga004): I was afraid that you (Ga001) gonna be like, the balcan temperament, so I...  
(Ga003): Yeah, he is more diplomatic.  
(Ga001): Who?  
(Ga003): Him.  
(Ga004): Normally it's me.  
(Ga001): ....who is fighting.  
(Ga004): No, that's not true.  
(Ga001): Ok, so what are you gonna do to this guy?  
(Ga003): "What are the fuck you doing? Please let me in on the train"  
(Ga004): \*Answer\* Unfortunately, there is no Wi-Fi on the train or in the station. However, Starbucks will give you wife if you buy a coffee  
(Ga006): Yeah, this is the...  
(\*Random conversation about the mistake of "wife" instead of "Wi-Fi"\*)

Do you have a question for this card?

(Ga001): Do we have a question?  
 (Ga004): But... What can I... I don't get it. We are on the train.  
 (Ga001): No, we are out of the train. We want to get in...  
 (Ga004): We have changed for another train? We are changing right now. Because we were in a train. I don't understand. I think we like, went from this station to this station, we changing again. No?  
 (Ga001): But we chose the strange colour.  
 (Ga004): No it's the same colour.  
 (Ga001): We are out...  
 (Ga003): Yeah, you have to... In the station you have to change the platform.  
 So, question? Or next step?  
 (Ga004): So, can we just... Explain the situation. So we are now changing the train, actually?  
 Yes.  
 (Ga003): And you are trying to take the next train but...  
 (Ga004): Yeah, I got that. I get it.  
 (Ga003): ...the door is open and you are not allowed to enter.  
 (Ga004): Yeah, yeah. Hum... What can I ask so far? What is the worse offence in Dutch?  
 (\*Random conversation\*)  
 But the question doesn't need to be related with the card, anyway. You are...  
 (Ga004): I'm glad to hear that. Because I have something to ask now. Ahmm...  
 (\*Random conversation\*)  
 (Ga004): So, ok. \*Question\* When is the next train?  
 What is the question?  
 (Ga004): When is the next train?  
 Ok, someone has a different question?

**Pair 02 \*Event card\* Only 3 carriages? Normally there are 8. It will be cozy... NOT!**

Question?  
 (Ga006): \*Question\* There is airco? If there is airco, she said (Ga005).  
 (\*Random conversation\*)  
 \*Answer\* "All trains have airco"  
 (Ga003): What? What?  
 Their question is if there is airco...  
 And about your question was "The next train leaves in 20 minutes on the same platform".

**Pair 03 \*Event card\* Oh, not a single free parking spot.**

(Ga003): Oh, is there any parking for payment?  
 (Ga004): Why we need it? You have car?  
 (Ga002): I suppose yes.  
 (Ga004): But why would you go by bus and... no... You can skip. You have car.  
 Yeah, because if you take this car probably you rented a car in the train station or something.  
 (Ga004): Oh, ok ok.  
 What would you ask in this situation?  
 (Ga003): Is there any parking for payment?  
 (Ga004): You asked already?  
 (Ga003): I'm asking.  
 (Ga004): Yeah, the same.  
 (Ga006): What do you said?  
 (Ga003): Is there a parking for paying, not free.. But.. Because the free spot are finished. Can I pay for another spot?  
 (Ga004): Approved.  
 (\*Random conversation\*)  
 (Ga003): \*Answer\* A paid parking is available at 10 minutes walking distance.  
 (Ga003) Go.

**Pair 01 \*Event square\* Ladies and gentleman, ... the journey at the moment"**

(Ga006): So is not any problem.  
 (Ga003): Is my lucky day.  
 (Ga004): Can we have milk?  
 (\*Random conversation\*)  
 (Ga004): What is the procedure when there are cows on the track?

(Ga001): Procedures?  
 (Ga004): According to the book.  
 (Ga003): What is the question, sorry?  
 (Ga004): \*Question\* What is the expecting delay?  
 Someone would ask different question for this card?  
 (Ga003): It is so impressive he understand my English.  
 (\*Random conversation\*)

**Pair 02 \*Blank square\***  
 (\*Random conversation\*)  
 (Ga003): Anyway, \*Answer\* "The delay is 7 minutes right now".  
 (Ga001): Thank you.  
 (Ga003): Perfect for the milk.

**Board Games #01 – Train Information System (TIS) log file**

On 14th of April of 2015 with 6 participants during approximately 90 minutes.

"TraPIST 02" are the players

"TraPISTsys TraPIST" is the system

**TraPIST 02**

There is another bike's parking close?

**TraPISTsys TraPIST**

Yes there is! You can find free spaces at the back of the station

**TraPIST 02**

Can I make a selfie with you?

**TraPISTsys TraPIST**

You want me in your picture?

**TraPIST 02**

When is the next train going?

**TraPISTsys TraPIST**

Could you please tell me where you are going?

**TraPIST 02**

To the nicest town nearby

**TraPISTsys TraPIST**

Oooh you are a free spirit! I like that. You can take the train to Ghent at 16h03 on platform 2

**TraPIST 02**

There's any shop around?

**TraPISTsys TraPIST**

Yes there are. You have a Carrefour Express in the main hall. You can also find a pharmacy and a sandwich bar close by

**TraPIST 02**

Ok thank you

**TraPISTsys TraPIST**

You're welcome!

**TraPIST 02**

On what platform does the train to Ghent arrive

**TraPISTsys TraPIST**

The next train to Ghent arrives on platform 2 in 10 minutes. This train will take you to Ghent in 40 minutes. If you wait 5 more minutes, you can catch the InterCity train. That way, you will arrive sooner in Ghent

The InterCity train leaves from platform 4

**TraPIST 02**

Can I use the same ticket as I have now for intercity?

**TraPISTsys TraPIST**

Yes you can. You can take all the trains that go to Ghent with your ticket

**TraPIST 02**

There is another bus instead?

**TraPISTsys TraPIST**

You can get to your destination and arrive only five minutes later than expected, but you have to change buses in

Brussels. Is this ok for you or would you like to take a direct bus?

**TraPIST 02**

I prefer the direct bus but I also want to know how much is gonna be  
Please

**TraPISTsys TraPIST**

Ok! The direct bus leaves at 16.16h in front of the station on platform 1. The ticket price is 1,50 euros if you buy the ticket before stepping on the bus at the ticket machine. If you buy the ticket on the bus, you will have to pay 2,50 euros

**TraPIST 02**

Ok thanks

**TraPISTsys TraPIST**

My pleasure

**TraPIST 02**

Is there a restaurant on this train?

**TraPISTsys TraPIST**

No, unfortunately this train does not have a restaurant on board. You can buy something to eat at your destination

**TraPIST 02**

Damn

What is the Belgian law about violent attacks on train?

**TraPISTsys TraPIST**

Violence or threatening to use violence is not allowed on trains

**TraPIST 02**

Who are you?

**TraPISTsys TraPIST**

I am the Train Information System, of course

**TraPIST 02**

I'm coming to find you

Can we please change the carriage?

**TraPISTsys TraPIST**

If you want, you can. What seems to be the problem?

**TraPIST 02**

Because here is very noisy

**TraPISTsys TraPIST**

If you walk two carriages to the front of the train, you can find free seats in a calm carriage

**TraPIST 02**

Thanks

Why haven't we moved for a long time?

**TraPISTsys TraPIST**

There seems to be a problem with the previous train. We have to wait a little while until the problem is solved

**TraPIST 02**

Too kind

What happens if I'm caught without a tickets

**TraPISTsys TraPIST**

You get a fine. But I can buy you a ticket and send a text to show to the conductor. Would you like that?

**TraPIST 02**

What if I have a bill of the ticket but I lost the ticket?

**TraPISTsys TraPIST**

Then you can show the bill to the conductor.

**TraPIST 02**

Ok

Can you take away the rubbish more often?

**TraPISTsys TraPIST**

I'll send a message to the cleaning team with your complaint

**TraPIST 02**

Wg

What's the first train to arrive at destination?

**TraPISTsys TraPIST**

The next train on platform 6

**TraPIST 02**

Where are you now

**TraPISTsys TraPIST**

Excuse me?  
**TraPIST 02**  
 where are you now?  
 How can I go on the platform 3?  
**TraPISTsys TraPIST**  
 Turn left into the main hall and take the first elevator on your right. The platform is on the first floor  
**TraPIST 02**  
 Is there any place that provides WiFi?  
**TraPISTsys TraPIST**  
 Unfortunately, there is no wifi on the train or in the station. However, Starbucks will give you wife if you buy a coffee  
**TraPIST 02**  
 When is the wedding?  
**TraPISTsys TraPIST**  
 damn you autocorrect! I meant WIFI  
**TraPIST 02**  
 So if I buy coffee you gonna give me a wife right?  
 When is the next train?  
 3 carriages only. There is air conditionals?  
 Conditionair\*  
**TraPISTsys TraPIST**  
 The next train leaves in 20 minutes on the same platform. All trains have airco  
**TraPIST 02**  
 Is there a parking for paying?  
**TraPISTsys TraPIST**  
 A paid parking is available at 10 minutes walking distance  
**TraPIST 02**  
 WhAt is the expected delay?  
**TraPISTsys TraPIST**  
 The delay is 7 minutes right now  
**TraPIST 02**  
 Tks system  
 We are done.

<b>Board Games #02</b>		
On 15th of April of 2015 with 6 participants during approximately 60 minutes.		
Ga011/Ga008 = Pair 01	Ga009/Ga012 = Pair 02	Ga007/Ga010 = Pair 03
<p><b>Pair 01 *Blank square*</b></p> <p>Do you want to ask an open question?          (Ga011) I would like to ask a question. How long, or how far it is to reach the first station? Can I ask this question?          Yes. You and Ga008, it's your question.          *Question * How far is it to reach the destination?          (Ga008) Which destination? Laugh.          (*Random conversation*)          (Ga008) *Answer* Where are you going?          (Ga011): Yeah, should we answer?          Yes.          (Ga011): Ok, where am I going?          (Ga008) You should tell it that you are asking the question, so it should answer. Not say other questions.          (Ga012) Let's type "I ask the questions here".          (Ga008): "Somewhere" (Ga011 typed that). Laugh. That's not... Ga011 is gonna take long time. Just say Brussels, just say something.          (Ga011) Let's see, let's see. How far is intelligent.</p> <p><b>Would you ask a different question? He asked "How far is it to reach the destination?".</b>          (Ga012): When is the next train?          (Ga009): Yeah.</p>		

(Ga012): And the train after that. So if I lose...

**Pair 02 \*Event square\* Oh no! Rain!**

If you want you can ask a question related with the card, or you can ask an open question, or just skip your turn.

(Ga012): When the rain will stop?

(Ga009): This is not supposed to be related with the station, the train...

It's up to you. You are going to the station. Whatever is in your mind you can ask. There is no strict rules about this. Would you ask a different question?

(Ga008) I don't think so. I mean, it's just raining. I can go on and get my train.

(Ga010) I would ask if there is some delays because of the rain.

**Pair 03 \*Blank square\***

(Ga010) No, no questions for now.

(Ga007) Do you want to ask about the usability thing?

(Ga010) Oh yeah! But... Are you waiting the answer still or?

Yes, it's typing the answer. Let's just wait.

(Ga010) Oh! \*Answer\* It will stop in about 10 minutes. You can hide inside the station.

This solve your question? Or you want to ask another thing?

(Ga012) No (for asking another question).

(Ga009) Yeah but it is... How can anyone predict when the rain will stop?

Forecast.

(Ga011) Yes, there is...

You know that today will be sunny since yesterday.

(Ga009) Yeah, you don't know well. You can predict, you never know.

Predict, yeah.

(Ga008) Yeah, nobody said this guy is right. It's just saying something. Maybe he is completely wrong.

**What is your question?**

(Ga010) \*Question\* Is the station accessible for handicap people?

Ah, ok.

(Ga008) If no you are stuck there. You cannot move on.

(\*Random conversation\*)

**Pair 01 \*Event square\* Flat tire.**

(Ga008) Oh, that's a bad problem.

(Ga009) Your bike? Is that your bike?

Yes.

(Ga008) Yes, but I'm pretty close to the station, actually. So I just get the bike and... Yeah, I can ask if there is a park for the bikes.

Did you get an answer?

(Ga010) Yes, that is accessible and even they can provide some assistance if I need. (\*Answer\* "Yes it is. If you need assistance, I can call someone to help out as well")

So was the answer helpful?

(Ga010) Yes.

(Ga008) \*Question\* Is there a bike parking in the station?

(Ga010) Actually this was your question the other day.

(Ga008) Yes, it was, actually?

What question?

(Ga008) Because when I went to Utrecht I asked in the group if there was a place to put the bikes for a whole weekend and no was, actually.

**Would you ask a different question in this situation?**

(Ga007) If I can bring the bike inside the train?

(Ga009) Yeah, if I can take the bike with me. In England is very common.

Do you pay extra for this?

(Ga009) No, because people usually use those bikes that you can fold.

(Ga008) \*Answer\* "There is no parking in the station. You can leave your bike in the parking in front of the station". Ok.

**Pair 02 \*Event square\* My train arrives at 17:55. But the Baby Care Center close at 18:00 sharp today.**

(Ga012) Where I can buy condoms? So we don't have a child.

If you have a question you can use this (tablet).

(Ga012) Maybe about some delay?

(Ga011) If you need, you are not obligated, yeah?

(Ga009) Yeah but it's a good question. That happens.

(Ga010) You are very impatient today.

(Ga009) This station provides... ahm... Yeah, should the station hold... be responsible for those delays always happening? Because thinks like that happen to everybody.

Would you ask something?

(Ga008) No

(Ga010) No

(Ga009) But imagine if I have a meeting and I'm not on time. I'm might lose the job.

(\*Random conversation\*)

**Pair 03 \*Blank square\***

(Ga008) So nothing happens.

(Ga010) If you want you can ask a question (referring to his partner, Ga007).

(Ga007) I'm okay.

**Pair 01 \*Blank square\***

(\*Questions about the game\*)

You have a right for an open question if you want.

(Ga008) Not really.

(Ga011) Because adventure is still to come.

Her question was "Should the station be hold responsible for the delays, when we miss something really important?". \*Answer\* "If you are dissatisfied you can file a complaint with the train company".

(Ga009) Yeah, but if I already missed something, like, my child is already on the street waiting for me...

Yeah, you can keep asking here (tablet) until you solve your question.

(Ga009) Or if I just lost an important meeting and I lost my job because of the delay... That's important because they are always late.

Have happened this to you?

(Ga008) Not really.

Like miss something really important?

(Ga008) Yeah, if it was a delay but actually looks like in the event the train was planned to arrive at 17:55. I should know that the child care closes 5 minutes later. So I would take a train before, and if cannot, I should have organized before. If it was a delay, then ok.

(Ga009) But if you are working and you cannot go before?

(Ga008) Yeah but I don't discover this while going to the train station. I discover it when I plan to work and to give my child to the child care.

(Ga009) No, the delay you just discover the delay when you are...

(Ga008) No, if there is a delay then is different, of course.

**Pair 02 \*Blank square\***

(Ga012) She asked a lot of questions. The open question.

Do you have other open question for this situation?

(Ga012) It's okay.

**Pair 03 \*Blank square\***

(Ga008) You want to ask any question?

**Pair 01 \*Blank square\***

Any question for this train connection?

(Ga008) Not really. I just... enjoy my trip.

(Ga010) Really enjoyed (referring to the dolls on the table being in the same place).

**Pair 02 \*Blank square\***

The answer (for the second question "But what if I missed an important meeting again and for that I miss my

job?"): \*Answer\* "Whenever you have delays, you can notify the person you are about to meet. If you want, I could even help you with that".

(Ga009) Really?

(Ga008) What's that?

"Whenever you have delays, you can notify the person you are about to meet. If you want, I could even help you with that".

(Ga009) Ok, I'm satisfied.

(Ga011) Yeah, but this is...

Do you want to notify the person? Or this is okay for you?

(Ga009) Yeah, yeah.

#### **Pair 02 \*Event square\* Change of platforms. Now?**

(Ga012) Okay.

(Ga008) It is not that bad.

(Ga012) There is not much to do.

Do you want to ask something, to help you on the situation?

(Ga012) No, usually is just follow the people.

(Ga009) But you... My question is, are you already in the train? Or you are in the platform?

(Ga008) In the train.

You are in the station.

(Ga009) Ah!

The train is the orange one. Here you are still on the station.

(Ga009) So there is a board with the information with changes of platforms, right?

Yes, or the audio announcement. It's up to your imagination.

(Ga009) Ok.

(Ga010) Let's imagine that it is only in Dutch and we don't speak Dutch and...

So, no questions for this one?

(Ga009) Is it in English?

\*Question\* Is the information for changing platforms in English?

#### **Pair 03 \*Event square\* A quiet train. Love it!**

(Ga008) What?

A quiet train. Love it!

(Ga007) Hum.

Yeah, there is also positive cards here. There is not just turbulence.

(Ga008) Perfect.

(Ga007) Ah, so that's good.

Any questions for that?

(Ga008) Am I in the wrong class, maybe? In the 1st class part.

Would you have a different question?

(Ga009) What is the question?

The event card is this one: "A quiet train. Love it!"

(Ga009) No!!! No questions :)

(Ga008) By the way... \*Answer\* "Unfortunately, English announcements are only made for trains going to the airport. Could I help you with translations?"

(Ga009) Yes. If I am supposed to change platforms how I... How I know if it's in Dutch?

(Ga008) It's easy to know.

#### **Pair 01 \*Event square\* You are in the middle of nowhere and the train hasn't move for a long time.**

(Ga007) If you heard the announcement you can see on the screen, usually.

(Ga009) Yeah but is in Dutch. Oh oh yeah you can see...

(Ga007) Yeah, you just listen something... "I don't know what it is", so you...

(Ga009) Yeah, if you are not looking at it because you have this app that he (Ga011) follows and this app told him that is in the platform 2, so you are just waiting...

(Ga011) But now the app doesn't work. Because we are in the middle of nowhere and the train hasn't move for a long time. So...

Do you have a question for the system about that?

(Ga011) When you are going to fix such...

(Ga008) \*Question\* When is the train starting again?

Do you have any other question about this?

(Ga009) Well, I'm still holding to my previous question. If it is not in English, I'm just waiting in the middle of the platform, just because...

(Ga007) No but you are already in the train.

(Ga010) In this case.

(Ga009) No.

In the case of Ga011, yes.

(Ga009) Not in our case.

(Ga007) Ah, ok.

(Ga008) \*Answer\* "We are waiting for the Thalys to pass." Which is probably another train... "We will be on our way in about 3 minutes."

Is this an useful answer?

(Ga008) Yeah.

Would you have any other question about that?

(Ga011) I would just stay calm for 3 minutes.

For 3 minutes... And then?

(Ga011) And then I will become really angry.

And would you ask another question then?

(Ga011) No, I would just feel really bad about the trip.

**Pair 02 \*Event square\* Hurray! The train will be on time!**

(Ga009): Yey!

(Ga011) Thank you!

Questions?

**Pair 03 \*Blank square\***

**Pair 01 \*Event square\* So this is like to feel a sardine in a can**

(Ga011) Wow. We cannot get out. We cannot do anything. It's just like we are in prison in the train.

**Would you ask something about this?**

(Ga009) Yes! I would ask when it's really crowded if there is a limit of passengers and should passengers that want to go out to move next to the door and the other people... Like a rule.

If there is any rule about that?

(Ga009) Yeah.

**Anyone has another question?**

(Ga007) If there is another train, really close at the time. Then I can change.

(Ga010) But you are already in the train.

(Ga007) Yes, but in the next station.

(Ga012) I would ask if there is no spot available. And if it's going to be cheaper if you don't have any place to seat.

(Ga009) Yeah.

**Pair 02 \*Blank square\***

Any open question for the way?

**Pair 03 \*Event square\* Is it me or we are driving really slow?**

(Ga007) Hum... \*Question\* Is there some delay on the train?

(Ga009) A suicide on the track?

(Ga012) Maybe that's the reason.

(\*Random conversation\*)

Would you ask some different question?

(Ga011) No.

(Ga008) I would ask the same.

**Pair 01 \*Penalty square\***

(Ga008) Penalty. In my case, if I'm stuck means like the train is stopped.

The penalty square means that it's representative that you missed the train, or the connection, or the train was cancelled. So you can ask a question related to that.

(Ga008) Until what time there are trains to my destination?

Ok, the answer for the previous question was \*Answer\* Yes, the train is delayed for about 5 minutes.

(Ga008) \*Question\* Until what time are there trains to Brussels?

**Pair 02 \*Blank square\***

(Ga009) Nothing happening. Just reading my book... looking through the window.

**Pair 03 \*Penalty square\***

Do you have a question?

(Ga010) No, I don't have. I'm patient, really. I can wait.

(Ga011) You are good, hum? Perfect customer.

Pair 01 being punished for penalty

Pair 02 \*Second train station\*

You arrived to the second train station. Any question?

(Ga009) How long would take to...

**\*Answer\* The last train to Brussels leaves at 23.56h**

(Ga009) \*Question\* How long do I have to wait to my next train?

Pair 03 \*Being punished for penalty\*

Pair 01 \*Event square\* Crap, missed the train.

(Ga011) Yeah, shit.

(Ga008) So we missed the train. Yeah, I ask the same question before when I was here (penalty), so I don't need to ask it again.

Would someone ask a different question? He missed the train...

(Ga007) What was the question?

Until what time are there trains to Brussels?

(Ga008) Brussels is a destination, let's say.

(Ga007) No.

(Ga010) No.

(Ga012) No.

**Pair 02 \*Event square\* Poor tourist. Looks like he has no idea where he should go.**

(Ga009): Yeah.

(Ga008) Who?

Tourist

(Ga008) Ah.

Happens a lot.

(Ga009) Yes

(Ga007) Yes

(Ga012) Yes

(Ga009) That's why I insist, why the information is not disposing in English as well.

\*Answer\* Your train will arrive in 10 minutes on platform 6

This was the answer. Useful one?

(Ga009) Yeah

Do you have another one?

(Ga009) For that one (new card). Why the information is not available in English. Because there are a lot of tourists and Belgium is the center of Europe.

\*Question\* Why is not the information available in English for tourists?

**Pair 03 \*Blank square\***

Any open question?

**Pair 01 \*Hey! Those people opposite me are like incredibly loud\***

(Ga011) Yeah, I will ask a question, yeah? Is there a place, like, more calm than here?

(Ga009) You can just get up and look for it.

Yeah, but he can also ask for this.

(Ga011) Yeah, because there are some certain places when you go to some trains, you will find here no...

(Ga009) But it's like the 1st class, or what?  
 (Ga011) No no, in Holland. All trains. This is quiet place, and this is, you know, a party place.  
 (Ga009) Ahhh.  
 (Ga010) Is that determined before you buy your ticket or you can choose when you are already there?  
 (Ga011) No, when you are inside.  
 (Ga009) But this is a real thing? Like, vagon or carriage with the party place, like you said?  
 (Ga010) It's (...) to be party. But in France it's called to be party place, but actually is a place where you can stay there, listen to music, not very loud. And talk with people. And if you are in a quiet place you just be quiet.  
 (Ga009) I never seen that.  
 In Brazil, for example, we now have carriages just for women. To avoid...  
 (Ga011) Arrestment.  
 Yeah, arrestment.  
 Normally they are very full, so when the guys are passing through...  
 (Ga011) Yeah, they... Yeah!  
 So now guys cannot come in.  
 The answer. \*Answer\* Information is available in English for the trajectories most used by tourists (for instance to the airport). For all the other translations, I can help you out.  
 (Ga011) Yeah, so this is a political answer. That they will never shift to English. That's it.  
 That's an answer that if she has troubles, she can ask the system to translate for her.  
 (Ga009) Yeah, but is that system available on the station.  
 (Ga010) Or is it an app for your phone?  
 Yeah, this is the Train Information System. If you have Internet you can reach the system.  
 (Ga012) If we don't speak Dutch, how we are suppose to type in Dutch to ask you the question?  
 The system is in English, so the system... Ah, you mean transmit the information?  
 (Ga012) Yes.  
 You can ask this...  
 (Ga012) \*Question\* How am I suppose to ask it if I don't speak dutch?  
 (Ga009) And if I don't have Internet, that does mean that I cannot ask? Well, I can always go to the office, the information point. But if I'm in the train...  
 (Ga008) Is there any WiFi in the train? Should be next question.  
 (Ga009) Yeah. Why there is no WiFi in Belgium's trains?  
 (Ga008) Netherlands is full of WiFi in every train.  
 (Ga009) Yeah, even Portugal.  
 I never took one with WiFi. Just buses.  
 (Ga009) Yeah, buses. Even buses!  
 (Ga008) Buses with WiFi?  
 (Ga009) Yeah, in Portugal. You have WiFi.  
 (\*Random conversation\*)

**Pair 02 \*Event square\* Catching my connection train will be tight.**

Yeah, that doesn't make sense because you already did the connection, so you can take another card. This it's suppose to be when you are here (before last train station). So you can take another card.

(Ga009) Yeah.

**Pair 02 \*Event square\* It's so dark here, the lights are off.**

(Ga009) Can I turn it on?

(Ga011) But will you ask the system, can I turn on the lights? If you like just turn it.

(Ga008) Can you (system) turn on the lights?

(Ga011) You can turn them yourself, you know?

(Ga009) Because usually...

(Ga011) Yeah, it's just like, you push it. Like that, you know... if the light is off.

(Ga009) But maybe there is a reason. For example, on flights, on planes... they turn off the light for a reason. But, maybe there is a reason.

(Ga011) Yeah, maybe the people would like to sleep or something.

\*Answer\* Luckily, many people in Belgium speak English so somebody will be able to help you out. And we are speaking English, aren't we?

(Ga008) There is the smartest.

Do you want to ask your question before? About the carriage.

(Ga011) I think they will lead me to the place, if there is a place.

So you don't want to ask?

(Ga011) No.

And you want to ask something about the lights?

(Ga009) Not really.  
Someone would have a question for the lights?  
(Ga009) But I would like to insist in that one.  
You can insist.  
(Ga009) But if... the system in English will be in English. This is a future system, that could be on the station.  
That could be everywhere.  
(Ga009) Could be everywhere in Belgium?  
Yeah.  
(Ga009) So it's just that. I don't know how to ask it.  
(Ga009) \*Question\* I was talking about the information system on the train.

**Pair 03 \*Event square\* Such a rude conductor!**

(Ga008) You should talk with the conductor, actually.  
(Ga010) You can ask if you can file a complaint about it.  
(Ga007) Oh, yeah.  
(Ga008) Why?  
(Ga011) Yeah, but... They already tell you that you can file a complaint.  
(Ga010) You can.  
(Ga011) Yeah, yeah.  
(Ga010) But I want to know if the complaint is going to reach the boss... Because I don't like the service there. I'm a mad customer now.  
You want to know if you can complain about the conductor?  
(Ga010) Yeah.  
(Ga010) \*Question\* Can I file a complaint about the rude conductor?

**Pair 01 \*Blank square\***

(Ga010) Oh, it's asking me \*Answer\* "Do you want me to forward the complaint file?"  
Yeah, you can type yes.  
(Ga008) It's gonna make a photo of you and then... Laugh.  
Useful answer?  
(Ga010) Yes.  
Do you have another question about that?  
(Ga010) No, I'm good. I'm just waiting to see if it's respond to "Yes please".  
(Ga008) The conductor... The conductor gonna talk with you.  
(Ga012) (...) complaining forward... Laugh.  
(Ga010) Someone else want to ask something?  
(Ga008) No.  
We can move further.  
(Ga009) And what was the answer for my question?  
No, there is no answer.  
(Ga009) Because I didn't send.  
(Ga008) Ask why it didn't answer your question.  
(Ga009) Oh, ok. So... I think you asked the question, on my question.  
(Ga010) Really?  
No, I think it's because your question doesn't have like the question mark.  
(Ga009) No, because it's not a question. It was like a rhetorical question.  
You can come back to this one later. Keep in mind.

**Pair 02 \*Blank square\***

Open question? Any?  
  
(Ga011) I'm just thinking about just like reach the destination.  
(Ga008) The fun part is the trip, not the destination.  
(Ga011) Yeah, but it's a very long trip. It takes a hell of time.  
(Ga008) Yeah, that's why you should enjoy it.  
(Ga011) I think I would just relax in here for a day, or so.  
(Ga008) A day? Laugh.

Pair 03 \*Event square\* The train has stop at the station, but I can't see the name of the station anywhere.  
This happened to me.  
(Ga009) Yeah. With me too.  
(Ga007) Should I ask someone?

Do you want to ask something?

(Ga007) No, I would just ask on the train.

Would you ask something, for the train information?

(Ga009) Yeah, when that happens should there is some boards in every carriage, so we can check in every station we are at the moment.

**Pair 01 \*Event square\* Thief! Someone stole my laptop! It was here, just now.**

(Ga011) Ohhh! Ooooh! What I am going to do right now? Yeah, I am going to ask the system. Yeah, please, check my laptop.

(Ga007) Where is my laptop?

What would you ask in this situation?

(Ga012) Where I can inform a rob... a stealer.

(Ga008) If it is possible to have a police at the next station to stop the train.

(Ga009) Yeah, if I am still on the train I would ask if the police can come in, and no one can come out, just to find my laptop.

(Ga008) Yeah but it's gonna be a huge delay.

(Ga009) Well, they shouldn't rob my laptop.

(Ga011) \*Question\* My laptop has gone. Any help?

(Ga011) I think that such a thing I will not continue my trip. Yeah? Yeah, it's done. I will wait in here (last train station), and wait for my laptop. Or just like, relax a bit. So you can continue the journey without me.

(Ga008) \*Answer\* Did you check under your seat?

(Ga009) Laugh.

(Ga011) Laugh. Do you think I am crazy?

(Ga008) Laugh. Do you think I am stupid? Laugh.

(Ga011) Yes...

(Ga008) \*Question\* Yes I did.

**Pair 02 \*Event square\* Of course! The airco is broken in the first warm summer day.**

(Ga011) Ohh.

(Ga009) Can I open the window?

This is the question?

(Ga009) Yeah.

Let's just wait the answer for the stolen laptop.

(Ga008) I don't think it's gonna answer anymore.

(Ga011) It's not answering.

(Ga008) Is a coward.

It's answering.

(Ga008) Really?

Yeah, in the same moment you said that.

(Ga008) And it's saying I'm not a coward.

(Ga011) But typing? I would like to know the technology behind this. This is the most interesting thing.

\*Answer\* I can call Securail on arrival at your destination.

(Ga008) Perfect.

Do you want to ask something else?

(Ga011) Yeah, thanks!

(Ga009) \*Question\* Can I open the window?

What would you ask in this situation?

(Ga011) I would reach for another place. Or I will ask if can somebody fix this...

(Ga008) Is the AC just turned off or is broken? Because sometimes they just don't turn it on.

(Ga011) I would get out my clothes.

And if you don't have clothes anymore?

(Ga010) He can ask if it's legal to be nude... Laugh.

\*Answer\* Unfortunately, this train does not have windows you can open. Shall I ask the conductor to fix the airco problem?

(Ga008) Yeah.

(Ga009) Yeah.

(Ga012) And then he stops the train and only after that...

(Ga008) It takes one hour to fix it.

**Pair 03 \*Event square\* A power outlet... A power outlet. No outlets.**

(Ga009) That's bad.

Any question about this?

(Ga009) How am I suppose to work? Laugh.

**Pair 01 \*Event square\* What is beeping around without any announcement. Somebody switch off this beep.**

(Ga009) Bomb alert. Bomb alert.

(Ga011) Yeah, it's look like bomb alert.

(Ga008) It happens sometimes...

(\*Random conversation about a experience with bomb alert in the station\*)

(Ga010) I would ask if it's a fire alarm or something else?

(Ga011) This is a good question.

**Pair 02 \*Event square\* Hum, I forgot where I parked my bike.**

(Ga011) You have asked this question before, man.

(Ga009) Yeah.

(Ga011) I remember.

No, the question before was different.

(Ga008) How can you park your bike if you parked your bike here (1st train station) and now you are here (3rd train station)?

Maybe your bike is here (3rd station), and you are coming back from somewhere.

(Ga008) But this is the destination.

Yeah.

(Ga010) Maybe you have 2 bikes in 2 places. Because I have friends here in Belgium and they have 3 bikes in 3 different cities.

(Ga008) Really?

(Ga010) Yeah. A friend of mine lives here for 2 years and he has 3 bikes in 3 different cities, so... every time he looks there: ok, my other bike.

Do you want to ask something about the bike?

(Ga009) But what do you mean? Park in the parking lot or...?

You forget where you parked the bike.

(Ga007) Maybe it was stolen, I don't know.

**Pair 03 \*Blank square\***

**Pair 01 \*Penalty square\***

Do you have any question about the penalty?

(Ga008) Not really. I just want to get to the station and go home.

(Ga011) Yeah, that's a very...

(Ga008) Long trip.

(Ga010) You can ask why always me! Laugh.

(Ga008) Curious about the answer, actually.

**Pair 02 \*Event square\* Hurry! Hurry! Hurry!**

(Ga008) What?

This means that the place is closing, probably. You have to reach the place very fast.

(Ga012) I don't want to ask any question.

**Pair 03 \*Event square\* It's colder than I thought. Should I go back and take a coat? Or shouldn't? Or should I?**

(Ga009) Do I have time... to go back?

(Ga008) Yeah, he is in a hurry (Pair 02). He is not (Pair 03).

(Ga012) You can go back home. It's not that far. Laugh.

Do you want to ask a question?

(Ga010) \*Question\* Can I buy a coat nearby?

(Ga008) A coat where?

(Ga010) Nearby.

(Ga012) They are so expensive.

(Ga008) Can I borrow a coat?

(Ga009) Can I order a coat from Brazil?

(Ga007) For the winter in Belgium...

(Ga010) \*Answer\* The nearest shopping street is 15 minutes walking.

**Board Games #02 – Train Information System (TIS) log file**

On 15th of April of 2015 with 6 participants during approximately 60 minutes.

“TraPIST 02” are the players

“TraPISTsys TraPIST” is the system

**TraPIST 02**

How far is it to reach the destination?

**TraPISTsys TraPIST**

Where are you going?

**TraPIST 02**

Somewhere

When the rain will stop?

**TraPISTsys TraPIST**

It will stop in about 10 minutes. You can hide inside the station

**TraPIST 02**

Is the station accessible for handicap people?

**TraPISTsys TraPIST**

Yes it is. If you need assistance, I can call someone to help out as well

**TraPIST 02**

Is there a bike parking in the station?

**TraPISTsys TraPIST**

There is no parking in the station. You can leave your bike in the parking in front of the station

**TraPIST 02**

Should the station be hold responsible for the delays, when we miss Seth really important.

?

**TraPISTsys TraPIST**

If you are dissatisfied you can file a complaint with the train company

**TraPIST 02**

But what if I missed an important meeting again and for that I miss my job?

**TraPISTsys TraPIST**

Whenever you have delays, you can notify the person you are about to meet. If you want, I could even help you with that

**TraPIST 02**

Ok

Is the information for changing platforms in English?

**TraPISTsys TraPIST**

Unfortunately, English announcements are only made for trains going to the airport. Could I help you with translations?

**TraPIST 02**

When is the train starting again?

**TraPISTsys TraPIST**

We are waiting for the Thalys to pass. We will be on our way in about 3 minutes

**TraPIST 02**

Is there some delay on the train?

**TraPISTsys TraPIST**

Yes, the train is delayed for about 5 minutes

**TraPIST 02**

Until what time are there trains to Brussels?

**TraPISTsys TraPIST**

The last train to Brussels leaves at 23.56h

**TraPIST 02**

How long do I have to wait to my next train?

**TraPISTsys TraPIST**

Your train will arrive in 10 minutes on platform 6

**TraPIST 02**

Why is not the information available in English for tourists?

**TraPISTsys TraPIST**

Information is available in English for the trajectories most used by tourists (for instance to the airport). For all the other translations, I can help you out.

**TraPIST 02**

How am I suppose to ask it if I don't speak dutch?

**TraPISTsys TraPIST**

Luckily, many people in Belgium speak English so somebody will be able to help you out. And we are speaking English, aren't we?

**TraPIST 02**

I was talking about the information system on the train

Can I file a complaint about the rude conductor?

**TraPISTsys TraPIST**

Yes you can. Do you want me to forward the complaint file?

**TraPIST 02**

Yes, please!

my laptop has gone. Any help?

**TraPISTsys TraPIST**

Did you check under your seat?

**TraPIST 02**

Yes I did.

**TraPISTsys TraPIST**

I can call Securail on arrival at your destination

**TraPIST 02**

The

The

Thanks

Can I open the window?

**TraPISTsys TraPIST**

Unfortunately, this train does not have windows you can open. Shall I ask the conductor to fix the airco problem?

**TraPIST 02**

Yes, please

Can I buy a coat nearby?

**TraPISTsys TraPIST**

The nearest shopping street is 15 minutes walking.

## Appendix F

Tickets	Internet	Mobile	Ticket counter	Ticket Machine	Train
Standard Ticket	X	X	X	X	X
Weekend Ticket	X	X	X	X	X
Go Pass 1	X	X	X	X	X
Seniors Ticket	X	X	X	X	X
Diabolo surcharge	X	X	X	X	X
Charleroi Airport Ticket	X	-	X	X	-
Ticket Charleroi Airport RT	-	-	X	X	-
Ticket members of the press	X	X	X	X	X
Ticket military pers.	X	X	X	X	X
Ticket preferential reimbursement	X	X	X	X	X
Children Ticket	X	X	X	X	X
Large Families Ticket	X	X	X	X	X
Pets Ticket	X	-	X	X	X
Bike Card single journey	X	-	X	X	X
Bike Day ticket	-	-	X	X	X
Combined Ticket train with city transport TEC	-	-	X	X	-
Combined Ticket train with city transport STIB/MIVB	-	-	X	-	-

Tickets to the border	Internet	Mobile	Ticket counter	Ticket Machine	Train
Standard Ticket Aachen, Maastricht, Roosendaal	X	-	X	X	X
Weekend Ticket Aachen, Maastricht, Roosendaal	X	-	X	X	X
Go Pass 1 Aachen, Maastricht, Roosendaal	X	-	X	X	X
Seniors Ticket Aachen, Maastricht, Roosendaal	X	-	X	X	X
Children Ticket Aachen, Maastricht, Roosendaal	X	-	X	X	X
Pets Ticket Aachen, Maastricht, Roosendaal	X	-	X	-	X
Bike Card Aachen, Maastricht, Roosendaal	X	-	X	-	X

B-Excursions	Internet	Mobile	Ticket counter	Ticket Machine	Train
Zoo Antwerpen	X	-	X	X	-
Aquatopia	X	-	X	X	-
Planckendael on foot	X	-	X	X	-
Planckendael with shuttle bus	X	-	X	X	-
Plopsaland De Panne	X	-	X	X	-
Plopsa Coo	X	-	X	X	-
Plopsa Indoor Hasselt	X	-	X	X	-
Walibi	X	-	X	X	-
Aqualibi	X	-	X	X	-
Sea Life	X	-	X	X	-
Serpentarium	X	-	X	X	-
Toy museum	X	-	X	X	-
Other B-Excursions	-	-	X	X	-

Passes	Internet	Mobile	Ticket counter	Ticket Machine	Train
Go Pass 10	-	-	X	X	-
Rail Pass	-	-	X	X	-
Key Card	-	-	X	X	-
10 Journey Card	-	-	X	X	-
Jump Card	-	-	X	-	-

Railcards	Internet	Mobile	Ticket counter	Ticket Machine	Train
Network Railcard	-	-	X	-	-
Journey Railcard	-	-	X	-	-
Half-time Railcard	-	-	X	-	-
Campus	-	-	X	-	-
School Railcard	-	-	X	-	-
Validations	X	-	X	X	-

Payment method	Internet	Mobile site & iPhone/Android	Ticket counter	Ticket Machine	Train
Cash	-	-	X	X(max € 20)	X
Bancontact	X	-	X	X	-
Visa	X	X	X	X	X
MasterCard	X	X	X	X	X
American Express	X	X (iPhone/Android)	X	X	X
Homebanking	X	-	-	-	-
Aurora	-	-	X	-	-
Eco cheques	-	-	X	-	-