Location Based Transmedia Storytelling: Enhancing the Tourism Experience

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Joseph Campbell once said in an interview to Bill Moyers to follow our bliss and the universe will open doors for us where there were only walls. This was certainly the case with this research.

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Abstract

Our society is built upon stories. It is through them that we communicate and make sense of our environment. In today's multi-screen world, storytelling has become increasingly complex, with storytellers having at their disposal a multitude of channels to engage with a more active, connected and multitasker audience.

Transmedia storytelling is blossoming in entertainment and marketing, however its role in tourism remains to be studied.

This research aims to understand the impact of the use of location based transmedia storytelling techniques in tourism, particularly the advantages, disadvantages and to identify the best practices.

It uses a mixed methods collection where several case studies are comprehensively examined and a pilot experience – TravelPlot Porto – is designed and implemented.

This exploratory investigation contributes to an emerging theoretical understanding of location based transmedia storytelling.

The findings reveal location based transmedia storytelling can solve, at some degree, the specific tourists needs. It can be used in the future of tourism communication and marketing strategies since it directly increases the engagement and visibility of destinations.

Key words: transmedia storytelling, tourism, location-based games

Resumo

A nossa sociedade está construída na base de histórias, sendo que é através delas, que comunicamos e compreendemos o sentido de tudo o que nos rodeia. Actualmente o processo de contar histórias é cada vez mais complexo, pois os contadores de histórias tem à sua disposição um leque cada vez maior de plataformas, para engajar as audiências cada vez mais activas, connectadas e multi-funcionais.

O *transmedia storytelling* está presente no entretenimento e marketing, todavia o seu contributo no turismo continua por estudar.

Esta pesquisa tem como objectivo compreender e avaliar o impacto da utilização das técnicas *location based transmedia storytelling* no turismo, particularmente as suas vantagens e desvantagens bem como a identificação das melhores práticas.

O modelo de investigação utilizado incorpora o análise de casos de estudo e o desenho e implementação do piloto – TravelPlot Porto.

Esta pesquisa exploratória contribui, para o desenvolvimento teórico da área de investigação emergente de *location based transmedia storytelling*.

As conclusões revelam que os projectos *location based transmedia storytelling* podem satisfazer, em parte, as necessidades específicas dos turistas, podendo ser utilizados nas futuras estratégias de comunicação e de marketing no turismo, já que aqueles projectos aumentam directamente o *engagement* e a visibilidade dos destinos turísticos.

Palavras-chave: *transmedia storytelling*, turismo, jogos baseados em localização

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1. Introduction

Our society has witnessed an unparalleled transformation in these last two decades. Technology has become an integral part of our daily lives changing our behaviors, including our consuming habits. Like never before, consumers have at their disposal a vast number of choices, information and platforms. However, in the midst of these tectonic shifts, our human nature of storytellers, gamers and communicators remains unchanged.

Transmedia storytelling is considered to be by many at the core of future communications and the standard of the XXI century communications. The entertainment and marketing industry have been consistently producing transmedia storytelling projects, which have achieved very interesting results in terms of engagement, promotion and expansion of the product life cycle.

Transmedia storytelling and tourism seem to be a perfect fit with destinations filled with stories, locations and historical characters, forming a rich universe for stories. Even though the tourism industry has long recognized the importance of storytelling, transmedia storytelling techniques have just recently begun to be used and its results remain to be studied. What are the platforms most suitable for such a specific target audience such as tourists? What are the platforms most effective amongst the myriad at our disposal? How can we tailor a transmedia storytelling project to tourists limited time and particularly needs? How willing will they be to interact with the story? Can transmedia storytelling projects fulfill the new tourist consumer habits and bring notoriety to tourism brands in general and to destinations in particular?

This investigation aims to understand the impact of the use of transmedia storytelling techniques applied to tourism, particularly its advantages and disadvantages and to identify the best practices. It uses a mixed research design where qualitative and quantitative data from the pilot – TravelPlot Porto – and other related projects are analyzed.

1.1 Organization of the thesis

This research is introduced and mapped out in Chapter 1.

In Chapter 2, the key elements in transmedia storytelling, games and tourism are characterized. These fields are the cornerstones of this investigation.

Chapter 3, reviews in detail related work in the areas of storytelling, games and location based transmedia storytelling.

In Chapter 4, the research design is described, namely the data collection methods and an overall analysis of related work is performed.

Chapter 5 provides the design of the location based transmedia storytelling pilot experience – TravelPlot Porto and in Chapter 6 its results are analysed.

In Chapter 7, a framework for a location based transmedia storytelling engagement pyramid is sketched out. In this chapter, the advantages, disadvantages and best practices for location based transmedia storytelling applied to tourism are also described.

Chapter 8 concludes with the final considerations, the limitations encountered by this research and future work.

1.2 Publications

The main results of this research have or are in the process of being published in journals and conference proceedings, contributing to the fields of transmedia storytelling, location-based games and tourism:

Ferreira, S., Alves, A. & Quico, C. (2012). Location based transmedia storytelling: The TravelPlot Porto Experience Design. *Journal of Tourism and Development [Revista Turismo & Desenvolvimento]*, 17/18(4), 95-99, 2182-1453.

This was the first short paper published in the beginning stages of this investigation. It focused on the design and development of the pilot TravelPlot Porto.

Ferreira, S., Alves, A. & Quico, C. (2014). How mobile can factor into a location based transmedia storytelling overall strategy: The TravelPlot Porto case study. *Journal of Tourism and Development [Revista Turismo & Desenvolvimento]*, 21/22 (2), 141-149.

This paper analysed the behavior on TravelPlot Porto main platforms - the website and the mobile application. It also characterizes several case studies in tourism, which use storytelling, games and gamification.

Ferreira, S., Alves, A. & Quico, C. (2014). The role of social media: The TravelPlot Porto case study. *Journal of Tourism and Development [Revista Turismo & Desenvolvimento]*, 21/22 (2), 151-160.

This paper focused on social media as part of a marketing campaign. It described the audience behavior on TravelPlot Porto's social media channels – Facebook, Twitter and YouTube.

Ferreira, S., Alves, A. & Quico, C. (2014). Location based transmedia storytelling in Social Media – Peter's TravelPlot Porto Case Study. *e-Review of Tourism Research (eRTR) ENTER 2014 Conference on Information and Communication Technologies in Tourism: Volume 5 Research Notes.*

This short paper presented the main results on TravelPlot Porto story protagonist social media channels (Twitter, YouTube and Pinterest), namely the reach, exposure and engagement achieved.

Ferreira, S., Alves, A. & Quico, C. (To be published). Not Ever Absent: Storytelling in Art, Culture and Identity Formation. *Transmedia storytelling meets tourism: the TravelPlot Porto case study.* Inter-Disciplinary Press

In this e-book chapter, a bridge between the fields of transmedia storytelling and tourism is made resorting to TravelPlot Porto overall results. The choices made to tell the story of a particular city (Porto), in a particular context (tourism) to a particular audience (tourists) are described as well as the role of each platform and their main results.

Ferreira, S., Alves, A. & Quico, C. (2014). TravelPlot Porto – exploring transmedia storytelling's potential to promote Porto as a tourist destination. In A. M. Pereira, I. A.

Marques, M. M. Ribeiro, M. L. Botelho & P. Nunes (Eds.), *Porto as a Tourism Destination* (pp. 153-162). Porto: CEPESE.

In this book chapter, the qualitative data of TravelPlot Porto was analysed revealing the tourists' acceptance and their positive response to location based transmedia storytelling projects. It also discussed lessons learned and suggested some recommendations for future projects.

Ferreira, S., Alves, A. & Quico, C. (2014). IV Jornadas de Animação Turística – o papel das tecnologias no turismo cultural. *Revista Atlântica (Instituto Açoriano de Cultura)*, Volume LVIII 2013, 253-260.

This article summarizes an invited conference presentation on the role of technology in the cultural tourism.

1.3 Contributions and impact

This investigation presents a framework for measuring location based transmedia storytelling audience engagement and reveals destination's culture and traditions can be communicated through these projects. The overall results of this multidisciplinary research indicate that the use of multiple platforms to tell a story based on the destination's story worlds allowed destinations to reach different target audiences. Location based transmedia storytelling allow audiences to be part of the story destination and have various degrees of engagement according to the experience they wish to have.

This multi-disciplinary research was presented and discussed in conferences, exploring different fields like tourism, storytelling, digital media, social media and entrepreneurship.

The location based transmedia storytelling pilot created in this investigation - TravelPlot Porto - has been referenced as a best practice example for destinations by Digital Tourism Think Tank, which aims to provide best practices in digital marketing to the tourism industry (see Appendix 1).

Besides the previous industry reference, TravelPlot Porto was also referenced in academia. Two Master students, Emily Lopes Roberto (Roberto, E. L., personal communication, 2 May, 2013) and Daniel Fernandes (Fernandes, D., personal communication, 20 May, 2014) have chosen it as a case study to present on their assignment to the Innovation and Tourism Activities course from the Master in Tourism from the Faculty of Arts of the University of Porto and to the course Innovation in Tourism from the Master of Tourism Management and Planning of University of Aveiro, respectively.

2. State of the Art

2. State of the art

This chapter presents an overview on the three main fields from which this investigation draws upon: transmedia storytelling, games and tourism. It begins by introducing the essential features of transmedia storytelling such as the importance and origins of story, the audiences' role, its design and measuring tools.

It then examines games related topics, particularly location-based games, gamification and games in tourism. Finally, this chapter reviews tourism trends, specifically travellers' behavior, the importance of storytelling and experiences in tourism, and the role of technology in tourism as well as current travel guides.

2.1 Transmedia storytelling

2.1.1 The importance of stories. Humans instinctively organize their thoughts as stories. They think, remember and make sense of experiences though them. Stories have been part of the human culture for thousand of years, shared orally around campfires (Kelley, 2008) or painted in cave walls like the hunting scenes at Lascaux Caves with 17,000 years that depict different species of animals and human representation (UNESCO, 2015).

They are central to human existence and common to every known culture. Stories are borderless and one of the most powerful communication tools (Hester, 2010), defining the values and beliefs of societies (Haven, 2007a).

Humans have evolutionarily been hardwired to think in story structures. In order to interpret and evaluate the new inputs, our software - the mind, compares them to data already

stored previously in our hardware - the brain. The mind interprets and evaluates this new information and then creates meaning so we are able to decide (Haven, 2007a; Rutledge, 2011a). By experiencing the world as a set of stories, humans create a sense of context that guides and comforts them (Rushkoff, 2013). Researchers indicate narrative competence of humans as one of the competitive advantages, which have allowed for the survival of the species in its ability to imagine future sceneries and build scenarios (Du Plessis, 2011; Scolari, 2013).

Stories impact the subconscious by tapping into three major pathways - habits, beliefs and emotions –, which affects the decision-making process (Hester, 2010).

Human emotional and intellectual response to narratives is higher than just a statement of facts, reports or market trends (Denny, 2010; Kelly, 2008).

In 1995, neurologist Antonio Damasio changed Descartes 300 year old paradigm "I think, therefore I am" to "I have emotions, therefore I am rational" (Du Plessis, 2011, p. 4) interlinking rationality and emotions. But the recognition of emotions can be tracked back to 1872, to Darwin's book *The Expression of the Emotions in Man and Animals* (Darwin, 1998).

In 1944, Massachusetts's college students took part in a study where after viewing a short film, they were questioned on what they saw. In reality, the movie showed a large triangle, a small triangle and a circle moving across a two-dimensional surface, at different speeds. There was also a rectangle, which partially opened on one side. Most of the students were incapable to register inanimate shapes and invented stories to explain the movements. This study showed the importance of organizing events into a story (Heider, & Simmel 1944; Rose, 2012).

Stories are defined by informational elements such as character, intent, actions, struggles and details. The story character provides a viewpoint to the audience; his intent reveals his goal and motive; the actions constitute the events undertaken by the character to

achieve his goals; the struggles are born from the obstacles surpassed by the character to reach his goal and the settings and actions contribute to the story creation and its evaluation (Haven, 2007a).

In 1992, Giacomo Rizzolatti and his research team made a groundbreaking discovery while investigating how the brain organizes motor behaviors. They observed the monkeys' premotor neurons light up when they reached for a nut but also when they saw other monkeys reaching for a nut. Later on, they noticed one of the monkeys was staring at a one of Dr. Rizzolatti's grad students eating an ice cream. The electronic monitor showed activity even though the monkey didn't move physically. Its brain was mentally imitating the gesture it was seeing. This would be later known has mirror neurons at work (Lindstrom, 2009). Mirror neurons allow us to feel what others experience almost as if it were happening to us. We don't just mirror other people. We also mirror fictional characters.

Immersion is accomplished by participating in stories physically, by imagining participation (Gottschall, 2012) or even by creating or sharing content. The higher the participation, the deeper the meaning and motivation can be (Rutledge, 2011a). The purpose of any story is to create enough curiosity to move a process forward (Hester, 2010).

Princeton researchers studied the reaction of the brain when a story is being told. The results indicated there is a neural coupling when a story is being recounted. Storytelling is not a passive process (Nahai, 2012). Audiences feel the gaps by integrating the information present in the story, with their own knowledge (Cron, 2012; Lindstrom, 2009).

In 2009, Joshua Glenn and Rob Walker (2012) created an experiment called *Significant Objects Project* where the goal was to answer the following hypothesis: "Stories are such a powerful driver of emotional value that their effect on any given object's subjective value can actually be measured objectively" (p. Introduction). This experiment had three stages. The first stage was the purchase of one hundred insignificant objects, which cost

a little more than $1,25 per object at thrift stores, yard sales, and flea markets. The second stage was the recruitment of quality writers to write a very short story related to the object. The last stage was to list each project for auction on eBay, using the story created as the item description. The results showed an increase of more than 2700%. The objects ($128.74) were sold for $3,612.51. A second experience occurred between the late 2009 and the beginning of 2010. An additional 100 objects were bought and a new set of 100 stories was written. The total cost of the objects was $134.89 and the value of the sale totaled $3,992.93. These results were even more impressive than the first experiment's results with a 2860% increase. Both experiments show stories add value to the products, even when people know the story is manufactured (Glenn & Walker, 2012).

2.1.2 Origins. Transmedia storytelling is in the process of establishing "its own specific methods and methodology of analysis" (Gambarato, 2013). Depending on the definition, transmedia storytelling can be linked to large narratives such as the Greeks stories on *Odysseus* built on preexisting myths (Jenkins, 2006).

In Japan, audiences have long been passionate and obsessed by fictional universes (Otaku). Transmedia storytelling is in their media mix culture according to anthropologist Mimi Ito. Amongst Japanese transmedia projects examples are *Kikaider* (1975), *Pokémon* (1998) and *Yu-Gi-Oh!* (1998) (Jenkins, 2006; Rose, 2012).

In the United States, several stories crossed different platforms such as *The Lone Ranger* or *Sherlock Holmes*. *The Lone Ranger* originated in stage plays, it was a radio show in the 1930s, a television series in the 1950s and later it was on novels and movies. *Sherlock Holmes*, on the other hand, began as a series of serialized stories in the late 1800s and moved into novels, radio, television and cinema. Between 1939 and 1946, fourteen films had been

produced (Dowd, Niederman, Fry, & Steiff, 2013).

   2.1.3 Towards a definition. *Trans* is a Latin noun or prefix, meaning across, beyond or on the opposite side (Brown, 2011). Transmedia means across media (Jenkins, 2011). There is currently no consensus on a transmedia storytelling definition (Gambarato, 2013) even though the following definitions share many elements. Henry Jenkins first coined the term "transmedia storytelling" in 1993, in an article on *Technological Review* indicating that "in the ideal form of transmedia storytelling, each medium does what it does best" and the entry of each platform "needs to be self-contained enough to enable autonomous consumption" (Jenkins, 2003). In 2011, he defined transmedia storytelling as "a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes it own unique contribution to the unfolding of the story" (Jenkins, 2011).

   Jeff Gomez described it as "the vanguard process of conveying messages, themes or storylines to a mass audience through the artful and well-planned use of multiple-media platforms. It is a philosophy of communication and brand extension that broadens the life-cycle of creative content" (Gool, 2010a).

   Robert Pratten defined transmedia storytelling as "telling a story across multiple media and, if possible, with audience participation, interaction or collaboration with each product or experience satisfying in its own right and consumption of each additional media heightening the audience' understanding, enjoyment and affection for the storyworld" (Pratten, 2010a).

   In 2010, the Producers Guild of America (PGA) officially recognized the title of Transmedia Producer. For them, a transmedia narrative project "must consist of three (or

more) narrative storylines existing within the same fictional universe on any of the following platforms: film, television, short film, broadband, publishing, comics, animation, mobile, special venues, DVD/Blu-ray/CD-ROM, narrative commercial and marketing rollouts, and other technologies that may or may not currently exist. These narrative extensions are not the same as repurposing material from one platform to be cut or repurposed to different platforms" (PGA, 2010).

Henry Jenkins, in his 2011 blog post, ends by stating "there is no transmedia formula" because a set of decisions need to be made in order to "tell a particular story to a particular audience in a particular context depending on the particular resources available to particular producers" (Jenkins, 2011).

In a transmedia storytelling project, the story needs to be coherent and the continuity, canon, and consistency respected. The audience should understand the rules and know what it is expect of them (Dowd et al. 2013). For Davidson, a transmedia storytelling project has several characteristics such as being people-centered, fitting onto the audience lives and not the other way around. Storytellers need to pay close attention to the audience and work to create content that appeals to them. They should also be willing to adapt content and how it's delivered based on audience responses. Another characteristic is the mystery that seeks to entice the audience into getting more involved and follow an experience across several media, rewarding their active involvement with more information. Pro-active participation is the final characteristic because, beside the audience getting some information reward, they also feel their actions mattered (Davidson, 2010). For Renira Gambarato (2013), the analytical considerations present in a transmedia project are the premise and purpose, the narrative, the worldbuilding, the characters, the extensions, the media platforms and genres; the audience and market, the engagement, the structure and the aesthetics (Gambarato, 2013).

2.1.4 Changing audiences. Until the XIX century, American audiences were active audiences by controlling, judging and directing theater performances. Actors spoke their parts directly to the audience and not to other characters. This behavior was considered a mark of good acting. It was only after the Civil War this rhetorical style began to disappear and an invisible wall at the proscenium arch, which separates a stage from the auditorium was created - the fourth wall. From then on, actors remained behind the proscenium whilst audiences observed from their seats. This change in behavior from the American audiences and the live performance paved way for mass media which shifted live performances to recorded performance where the audiences where no longer integral to the process (Butsch, 2000).

In the beginning of the XX century, Nickelodeons - an indoor exhibition space dedicated to the moving pictures - were also able to achieve remarkable interactions between audiences, projectionists and managers. Musicians, an integral part of the movie going experience, were very proud of their improvisational skills. In fact, in 1910, when movie producers began distributing cue sheets for each movie, many musicians rejected these cue sheets and altered them according to the audiences and their own tastes. By 1930, almost all movies theaters were fitted with sound systems. This technical revolution silenced audiences who could no longer talk during the movie if they wanted to listen to the characters dialogue.

In 1927, the term passive listener was used in Radio Broadcast articles to describe the average radio listener who accepted whatever was broadcasted and didn't state what was on their mind. Despite this one-way communication, listeners would send letters and cards welcoming the people they listened on the radio to their homes. Television researchers would later on named this audience relationship as a parasocial interaction.

Mass media broadcasting prevented a direct connection between storyteller and audience. Ratings and box office revenues were the tools by which success was measured.

The invention of the Internet gave audiences back their instant feedback (Clark, 2009). It fostered a participatory culture, connecting people and putting their collective intelligence to work. It opened up new possibilities for storytelling with social media adding a new key dimension to it. Some audiences are becaming multitaskers, creators as well as consumers, not making the distinction between types of media or platforms, or even between online and offline worlds. These audiences seek innovative entertainment experiences (JWT, 2011a) and have a gaming perspective of the world. They are organized like networks (Walsh, 2009) and want a two-way communication, where they are heard and taken into consideration.

According to Latitude study (2013), today's audiences are looking for stories to impact their actual life, which will inspire them to discover more, make a purchase, better themselves, or take action. They are also looking for stories to be integrated across platforms, or be connected to the real world. Interactivity with characters, storyline, or other fans are also a desire from the new audience as well as immersion, being able to go deeper into the story. This study divided audiences into four archetypes - seekers, relaters, realists and players – according to the motivations for engaging with stories and the interest in second screen experiences. Seekers are the type of audiences who crave going deeper into the story in order to discover news worlds and learn. Relaters are all about sharing their favorite story and creating emotional connections with characters, in particular connections that are uplifting or inspiring. Realists on the other hand want stories, which can lead to personal growth and productivity. Players are all about interactivity, game elements, adventure or competition. They also want to be involved with creation of stories (Latitude, 2013).

Frank Rose believes the concept of audience was replaced by the concept of participants (Rose, 2012). But, it's important to realize, in this participatory culture, "not

everyone wants to participate, and not everyone who participates does so on equal terms" (Jenkins, Ford, & Green, 2013, p. 298).

2.1.5 Designing for transmedia audiences. Consumers are changing how, when and where they connect to content. Some have become digital omnivores (ComScore, 2012), multitasking between screens or jumping from one screen to another with the objective to augment their experience (JWT, 2012). For the Millennials generation - born between 1977 and 1995 - the online and offline worlds should blend seamlessly (Fromm & Garton, 2013). According to the Center for Social Media study, they choose, converse, curate, create and collaborate in media (Clark, 2009). Consumers are in control of their own media experiences. In 2006, Time Magazine named *You* as TIME's Person of the Year "for seizing the reins of the global media, for founding and framing the new digital democracy, for working for nothing and beating the pros at their own game". For Time Magazine, 2006 was "a story about community and collaboration on a scale never seen before" (Grossman, 2006). Today's consumers have the tools to easily produce content, "it is as if when you bought a book, they threw in the printing press for free" (Jenkins et al., 2013, p.153).

Houle (2012) defined this culture has the always on culture, where people consume what they want according to their agendas, which has lead to two realities, the physical reality and the neurosphere reality (Houle, 2012). In June 2011, the United Nations recognized the importance of connectivity to people worldwide and declared Internet access a human right (United Nations, 2011).

Google has identified several key consumer behaviors in today's multi-screen world. It defined the society has "a nation of multi-screeners" (p. 2) that spends most of their time in front of a screen - 90% of all media interactions are screen based (computer, smartphone,

table and television). It also identified context as the driver for the device choice. The consumers have several devices and move seamlessly between them. This study revealed smartphones as the backbone of our media interactions, counting for 38% of our daily interactions, against the 24% on computers and 9% on tablets. It also described the most usual combinations of the 78% of consumers who multitask and do different activities at the same time. The most usual combinations are computers and smartphone (92%); followed by television and computer (92%); television and smartphone (90%); television and tablet (89%). There are 22% of consumers who use simultaneous screens to complement activities. The top device combination is television and tablet (40%); computer and smartphone (36%); television and smartphone (35%); television and computer (32%). This screen multitasking provides consumers a feeling of found time by allowing them to feel more efficient, combining accessibility and spur-of-the-moment usage and by using micro-moments to complete small tasks (Google, 2012a).

Technology changed the storytelling process. The oral multiple versions of stories were transformed into single versions by the printing press, cinema and television. Present technology such as computers, tablets, smartphones and other new devices have once again allowed for multiple versions, altering the story design and creating new storytelling processes (Barry, 2000). However, years of experimentation are required to establish conventions for the newest technologies. For example, after the invention of the printing press, it took 50 years to create conventions like legible typefaces, page numbering, paragraphing, title pages and chapter divisions, amongst others (Murray, 1997).

Transmedia storytelling crucial components are interaction and participation (Gambarato, 2013). It is a social experience where the audience participation plays an essential role (Pratten, 2010b). Transmedia entertainment can measure to some extent the audience

response; hear their voices and the narrative can respond to their wishes (Atkinson, 2010). The relationship between the story creator and the audience becomes a dynamic relationship (Dowd et al., 2013), a continuous dialogue (Giovagnoli, 2011) where audiences are given the opportunity for a conversation at anytime, anyplace (Dowd et al, 2013). Audience interaction has the final objective to have audiences tell the story to each other rather than be told (Kozlen, 2011).

Several actions can be designed to allow audience participation such as: posting, forwarding, sharing, publicly rating and publicly commenting on content; editing content created by others, submitting original content and generating authorized canonical content (Gomez, 2010a). One of the most difficult aspects of transmedia storytelling is to incorporate the audience feedback into the narrative (Dowd et al, 2013).

Peters suggested several points to keep audiences engaged. For example using social media in an effective way to break down the fourth wall, the wall that separates the audience from the characters. Never betraying the audience's trust and keep an updated schedule. Making the audience feel smart at all times and give them opportunities for user-generated content. Build pieces of the project with viral potential and maintain a low barrier-to-entry for new audiences.

Audiences should feel like they live in the same world as the story, letting them touch or affect the story. Storytellers should maintain the pacing, momentum and focus. Hidden content should be provided to the diggers but the essence of the story needs to be kept simple. The use of voyeurism to create a strong emotional connection with characters is also very effective. Lastly, storytellers need to let audiences focus on the level of experience they're willing to invest themselves in (Peters, 2010). According to Dinehart, the goal of transmedia storytelling is to break down the fourth wall, providing the ultimate immersive storytelling experience.

In a transmedia storytelling process the story needs to be a consistent unified experience across all platforms where each platform is used according to its best characteristics. Each element has to work on its own terms, but it should also add something to the larger experience. When bringing people together and giving them something to do, the end-point experience has to be considered.

The design of a transmedia project combines social networks, geolocations and game dynamics in virtual and real dimensions.

This matches the known behavioral pattern of interactive, participative storytelling and gaming audiences in a three-tier pyramid where 90% of the audience are passive onlookers, the base of the pyramid. The curators constitute 9% of the audience, watching and interacting sometimes with the project. On top of the pyramid is 1% of the audience, the true contributors of content (Reilhac, 2010).

Siobhan O'Flynn, Karine Halpern and Scott Walker stated in an interview, the five *E's* of experience design in a transmedia storytelling project. They start with finding a way to bring the audience into the project and across platforms (entice), presenting the audiences what they are required and expected to do in the project and what (enter), fostering engagement (engage), adding deeper experiences to avoid audiences to leave the project after finishing one of the layers (e-motion) and providing what is necessary for audiences to share the experience and entice others to join in (extent) (Weitbrecht, 2011).

A transmedia storytelling world is rich and detailed enough to allow the story growth in the different media and across time, being based in the real world or created (Dowd et al., 2013).

A transmedia intellectual property bible, transmedia bible or Intelectual Property (IP) bible is a reference guide (Dowd et al., 2013). Jeff Gomez described various chapters, which should constitute a transmedia bible (Gool, 2010a):

- Franchise logline where the attributes of the IP are defined;

- Universe overview with a summary of the story world, its historic context;

- Description of the protagonist, antagonist and supporting characters;

- Locations description and a hint at *distant mountains*, a term based on Tolkien's Lord of the Rings where Gandalf points to some mountains in the distance and tells the group in detail about the back story related to those mountains. By doing that, Gandalf peaks the audience curiosity allowing them to experience the richness of the world and making it feel more real. This mention also plants the seeds that may or not grow into new plot points;

- Definition and explanation parameters of the fantastical aspects of the world;

- Timeline of major events in the story world;

- In case of a brand, the archetypes, messages, and themes should be added.

Transmedia storytelling projects alongside building a more collaborative relationship with consumers can increase projects revenue. The results of an integrated transmedia storyline can include an intense loyalty, a long-term engagement, the audience desire to share their experience, an extended project life cycle (Gomez, 2010b).

2.1.6 Measuring audience engagement. Today's consumer journey is no longer a funnel, as John Ross of Shopper Sciences put's it. It resembles a flight map because consumers jump from platform to platform, read information on reviews, ratings and prices, anywhere, anytime (Google, 2012b). The traditional measures of broadcast media don't capture the interactive communication dimensions of response, which are important and differentiate today's audience behavior.

The concept of engagement is not new, being present in the media and advertising communities, particularly in the print media but there isn't "any kind of clarity or consensus as to what 'engagement' actually means" (Napoli, 2011, p.95-96). Advertising Research Foundation (2006) described twenty-five different definitions of engagement in a white paper titled *Engagement: Definitions and Anatomy* as shown in Table 1 (Napoli, 2011).

Table 1

Definitions of Audience Engagement

Definition	Source
A scale indicating the degree to which a consumer is likely to or has internalize(d) a communication	Advertising Research Foundation 2006
A measurement of involvement with a marketing communication	Advertising Research Foundation 2006
A prospective consumer's interaction with a marketing communication that can be proven to be predictive of sales effects	Advertising Research Foundation 2006
A brand idea/medium context experience selected and attended toby a category-involved consumer that leaves a positive brand impression	Advertising Research Foundation 2006
A measure of attention paid by a consumer to a piece of communication	Advertising Research Foundation 2006
The average time spent in a branded experience	Advertising Research Foundation 2006
A positive consumer attitude resulting from a communication	Advertising Research Foundation 2006
Emotional connection	Advertising Research Foundation 2006
A measure of concurrent response of advertising that can be proven to be a predictive of sales effects	Advertising Research Foundation 2006
How a consumer relates to a medium and the advertising in it	Advertising Research Foundation 2006
A measure of the degree to which each brand or title provides a conductive environment for an ad to achieve its objective	Advertising Research Foundation 2006
The net effect of attentiveness to a program and an ad that brings about a measurable impact	Advertising Research Foundation 2006

(table continues)

Definition	Source
Getting the right message in front of the right audience at the right time	Advertising Research Foundation 2006
Turning on a prospective consumer to a brand idea enhanced by the surrounding context	Advertising Research Foundation 2006
The amount of subconscious "feeling" going on when an advertisement is being processed	Heath 2007
Comprises the following dimensions: inspirational, trustworthy, life-enhancing, social involvement, personal timeout	Kilger and Romer 2007
Collective qualitative experiences with content	Malthouse and Calder 2007
A consumer's relationship with media content	Magazine Publishers of America 2006
The consequences of any marketing or communications effort (through any media touch point) that results in an increased level of "brand equity" for a brand	Passikoff and Weisler 2006
A measure of the contextual relevance in which a brand's messages are framed and presented based on its surrounding context	Wang 2006

Note. Reprinted from *Audience evolution: New technologies and the transformation of media audiences (*p. 97-98)*, by P. M. Napoli, 2011, Columbia University Press. Copyright 2011 by Columbia University Press.

Depending on the goals and priorities, engagement can mean different things. It is a complex concept and "comes in a variety of levels and intensities" (Napoli, 2011, p.83). Its importance is recognized but how to measure and use it is still in discussion (Napoli, 2011; Paine, 2011; Zichermann & Cunningham, 2011).

Gabe Zichermann and Christopher Cunningham (2011) proposed an engagement score composed by several metrics such as regency, frequency, duration, virality and ratings (Zichermann & Cunningham, 2011). While Brian Solis and Ashton Kutcher (2010) describe engagement as "the time spent with the brand, either individually, in a community environment, or through direct interaction" (p. 334), which could include metrics such as conversations, time, social graph/relationships, fans/followers, interaction, registrations, bookmarking, traffic, views, shares and immersion (Solis, 2010).

Avinash Kaushik built a framework which measures success through the conversation rate (conversation rate = # of audience comments (or replies) per post), amplification rate (depending on the platform for example # of retweets per tweet, # of shares per post on a blog, # of share clicks per post (or video)) and the applause rate (also depending on the platform it can be # of favorite clicks per post, # of likes, likes per post (or video)) (Kaushik, 2011).

Forrester's framework defined engagement as the level of involvement, interaction, intimacy, and influence that an individual has with a brand over time. There were four dimensions of audience engagement with content, each of which incorporates quantitative and qualitative data sources (Haven, 2007b; McGonigal, 2011).

In order to understand engagement with a transmedia world, Robert Pratten suggested besides measuring the audience's interaction, also measuring the contribution, the affection and affinity towards the transmedia world – "what they say and how they feel about it". As shown in Table 2, there are three stages of engagement to inform the content choices across five levels of increasing engagement (Pratten, 2010b).

Andrea Phillips argues transmedia has its version of the 80/20 rule of the engagement pyramid where 20% of the audience is responsible for 80% of the activity but the numbers always depend on the project. Usually the audience is divided into three sections: 80% passive viewers follow the project, 15% engaged audience members will participate in some project elements, and 5% are the superfans, the most engaged players (Phillips, 2012).

Sometimes a higher effort from the audience doesn't imply they are more engaged because some audience members might not be able to do certain elements but they will still advocate the project (Pratten, 2010b).

Table 2

Measuring Engagement

Stages of Engagement	Discovery		Experience	Exploration	
Level of Engagement	Attention	Evaluation	Affection	Advocacy	Contribution
Content Type	Teaser	Trailer	Target	Participation	Collaboration
Goal for your content	Find me. Fan comes to site and consumes low-involvement free "teaser content"	Try me. Fan increases engagement and consumers free "trailer content"	Love me. Fan spends money and decides that what I offer delivers on the promise, is entertaining and is worthwhile.	Talk about me. Fan tells friends.	Be me. Fan creates new content
How	Be relevant	Be credible	Be exceptional	Be spreadable	Be open
Measurement	Views, hits, time spent per view, number for content viewed (per channel & content (e.g. emails, blogs, videos, Twitter etc.)	Clicks, downloads, trials, registrations	Purchases, ratings, reviews, comments, blog posts, twitter follows, likes, community sign-ups, other memberships, subscriptions, repeat purchases	Referrals, retweets, forwards, shares, embeds, satisfaction polls & questionnaires Offline: focus groups, survey	Upload, remixes, stories written, collaborations, fan moderators for forum, events held, other UGC

Note. Reprint from *Audience Engagement & Content Strategy for Transmedia Storytellers*, (p. 7), by R. Pratten, 2010, Transmedia Storyteller. Copyright 2010 by Transmedia Storyteller.

2.1.7 Current measurement tools. Measuring tools have been rapidly evolving to meet the present company and project needs.

2.1.7.1 Conducttr. Conducttr is a tool made specifically for transmedia projects, which saves every interaction in a data log. Even though it doesn't have native metrics, all

interactions can be traced. Examples of metrics created according to each project can include: new registrations by time of day, busiest day of week, distribution of interactions, activity by channel (i.e. email, Twitter, Facebook, forum, SMS, calls, etc.), activity by character, response time, registrations and interactions by chapters.

Conducttr creates personalized, cross-platform, interactive experiences, being able to listen and react to audience-driven events like tweets, Facebook comments, YouTube views, emails, SMS, RFID, QR codes, mobile and web apps. This tool then dynamically publishes new content, unlocks exclusive content, sends personalized replies, awards achievements and coupons.

The benefits of Conducttr include: the fast implementation process; the increase of engagement by encouraging participation; higher word-of-mouth by charming and rewarding fans for participation; measuring life-time value of fan and consume; adapting and responding more quickly to audience participation and reducing costs of audience interaction (Transmedia Storyteller, 2013).

Conducttr started to be developed in 2010 but its first project was *Lowlifes*, in January 2011. In *Lowlifes*, Conducttr scheduled events (blog posts, tweets, video publishing and notification to subscribers) and interactive events (casual game and subscriptions) (Pratten, 2011).

This tool was also used in *The Roswell Experience*. Conducttr managed all sign-ups, publications and interactivity as well as keeping local retailers informed. This included interactive games, story publication to social media, personalized content, points-based leaderboards, local retailers notifications, marketing contact list and mobile app (Pratten, 2012).

2.1.7.2 Storycaster. Nuno Bernardo (2014), presented in his latest book, *Transmedia 2.0 – How to Create an Entertainment Brand using a Transmedia Approach to Storytelling,* the distribution platform, Storycaster.

In this story-centric platform, currently used by BeActive, the storyteller defines the distribution timeline, automatic push notifications and social media posts. He can also implement a fan base cycle, which ultimately facilitates the monetization of content by promoting companion project products.

This interactive platform has a low technological barrier and provides a unified approval workflow. It also sets engagement levels, measures audience engagement, identifies the core fans and is able to track user traffic on a platform-by-platform basis, providing an up-to-date analysis of the various elements performance.

Storycaster is currently in the process of being licensed (Bernardo, 2014).

2.1.7.3 Google Analytics. Presently Google Analytics can track mobile applications, cloud-connected point-of-sale systems, CRM systems, video game consoles, and even home appliances, like the refrigerator (Google Analytics Academy, 2013).

In April 2014, Google offered the ability to see all data sent to one Google Analytics property, in a single reporting view. The web and app data can appear in the same reporting view in order to translate the users interaction across several digital touch points like websites, mobile apps, web apps, and other digital devices. This brought a consistency to the dimensions and metrics names that no longer use different names in app views and in web views (Mihailovski, 2014).

Google Analytics has an audience section with the characteristics about the users, including information on the geographic location, the type of device they use to access the site, how often they visit and how much time elapses between visits.

The Engagement report has data on how much time users spend on the site in increments of seconds, and how many pages they view.

In the Mobile report, a breakdown of visitors by whether they visit using smartphones, tablets or desktop devices is available and at the Mobile Devices report there is information on the devices the visitors use, such as the mobile device name, brand, service provider, input selector, operating system, and other dimensions like screen resolution.

There is also an option to create Custom Dimensions to collect and analyze data that Google Analytics doesn't automatically track, for example demographic data (Google Analytics Academy, 2013).

2.1.7.4 Social media metrics. There is a myriad of metrics in social media. Below are described the available tools from some of the most popular social networks like Facebook, Pinterest, YouTube, Twitter and Google+.

Facebook provides to Page owners Facebook Insights with metrics about their content like usage and demographics as well as consumption and creation of content (Facebook, 2014).

Pinterest also offers metrics on how many people are pinning from the owner website, seeing their pins, and clicking on content. It also provides information on which pins get shared the most, who interacts with them, and what else people add alongside them (Pinterest, 2014).

YouTube gives several metrics on viewers - subscriber views, demographics (audience age and gender) and geography (countries) -, where they are finding the videos - playback locations and traffic sources-, what makes them come and go - absolute and relative retention- and how many videos each viewer consumes - views and views vs. unique cookies. In term of engagement, YouTube metrics include subscribers, views vs. subscribers, annotations, likes, dislikes, comments and sharing (YouTube, 2014).

Twitter has certified partners, which help businesses to engage with users, analyze tweets, curate and display valuable content, manage promoted ads, among others (Twitter, 2014a). The marketing platforms partners include companies that provide technology and expertise, enabling marketers to reach a multitude of marketing goals with Twitter Advertising (Twitter, 2014b).

Google + also resorts to third party management tools, which in 28th of May included: Adobe, Brand Networks, Dentsu Razorfish, dlvr.it, E-Guardian, Engagor, Engage121, Expion, Tribal Media House, Falcon Social, GaiaX, Hearsay Social, HootSuite, Involver, Milestone Internet Marketing, Salesforce Marketing Cloud, Sales Spider, Scup, Sendible, Simplify360, SOCIALDEALER, Social Report.com, Social iQ Networks, SocialFlow, Shoutlet, Spredfast, Sprinklr, Sprout Social, StreamSend, Thismoment, uberVU, User Local, Venuelabs, Viralheat, Vitrue, Votigo and Wildfire. By working with these social media management companies, Google+ has added the functionality in their management tools, like tools to post and comment on Google+ pages or create and manage circles (Google+, 2014).

2.1.8 Transmedia storytelling as a marketing trend. For Bonnie Buckner and Pamela Rutledge, co-founders of *A Think Lab*, stories are the center of every successful marketing campaign. They "provide an authentic human experience that taps into

psychological fundamentals, making them the most effective way to engage audiences" (Rutledge, 2011b). Product storytellers are the newest members of marketing teams. Brian David Johnson (2019) in his book *Screen Future* points out "the line between branding and storytelling is blurred hopelessly" (Johnson, 2010, p. 26).

Transmedia storytelling involves specific narratives for different channels and audiences. This marks an evolution of the integrated marketing model because each channel communicates different elements within an overall strategy with the brand community at the center (JWT, 2011a).

Drew Davidson pointed out marketing transmedia storytelling can help people get more involved and invested. They become vocal advocates for brands, which is essential for brands since consumers trust their peers more than they trust a direct message from the company (Davidson, 2010). Andrea Phillips carries on by adding "transmedia storytelling can provide more engagement and more potential points of sale for any given story, and when it's done well, each piece can effectively become a promotional tool pointing toward every other piece of the whole" (Phillips, 2012, p. 41).

There have been several transmedia campaigns since 2001, when BMW created *The Hire* campaign. This series of eight short-films was first released online and afterwards as a DVD collection (Campaign Brief, 2011). These shorts were followed by six comic books and an interactive game untitled, *The Hire Subplot* (Motor Trend, 2009) (Sammarco, 2002).

In 2005, Audi of America launched the campaign *The Art of the Heist*, an alternate reality game about a stolen Audi 2006 A3, using traditional media (television spots, print ads, billboards, radio), online elements and live events. An estimated half-million people became involved in the search for the missing car, a third of the microsite's visitors searched for more information on the A3. At the time, 2005 was one of Audi of America's best years in terms of sales.

In 2006, Coca-Cola launched the *Happiness Factory*, a commercial that revealed the world of the Happiness Factory. This spot was followed by a short about a factory running out of Coke and a mockumentary that went inside the factory to meet some of the workers. It was also released a game-based website, more commercials and even an *Open Happiness* track that made it into the iTunes Top 40 (JWT, 2011a).

2.2 Games

Like story, games are also integral to human culture and can be found in all cultures (Chatfield, 2010). The oldest known game is *Mancala* played during Egypt's age of empires between the XV and the XI centuries B.C., where players moved pieces from one pit to another (McGonigal, 2011), the Chinese game *Tsu Chu*, an earliest form of football, dates from 2500 B.C. (Expert Football, 2012) and the Egyptian board game *Senet* which objective "was to safely navigate all the pieces off the board, while preventing the opponent from doing the same" (British Museum, 2015) has been played for more than 5000 years (Piccione, 1980).

Games were defined by Katie Salen and Eric Zimmerman (2004) as "a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome" (Salen & Zimmerman, 2004, p.80). Jane McGonigal (2011) described four common game traits. The goal the player aims to achieve, the rules, the feedback system, and the voluntary participation where players can enter and leave the game when they desire. She added a good game is capable of prompting participation and hard work (McGonigal, 2011).

Physiologist Mihaly Csikszentmihalyi, in his book *Flow: The Psychology of Optimal Experience* (1990) argued people are most happy when they are in a state of flow. This state

occurs when people forget about everything else and just focus on the present task at hand (Csikszentmihalyi, 1990).

The flow can only be achieved when there is a balance between the challenges of the goal and the skills of the person, otherwise it can cause anxiety or boredom (Chen, 2009). When the challenges and skills are high, the flow is high and the person is completely focused.

The flow theory has been used in various fields, including game design (Debold, 2002). Games are a source of flow that can consistently and efficiently create joyous engagement where players forget about time and external pressures (Chen, 2009; McGonigal, 2011). They can drive people's behavior into a desirable way (Zichermann & Cunningham, 2011).

According to Zichermann & Cunningham, there are four main motivators to why people play - mastery, distress, fun and to socialize (Zichermann & Cunningham, 2011). As for fun, in her paper *Why we play games* (2004), Nicole Lazzaro described four kinds of fun: hard fun where the focus of the players is solving and winning the challenge, easy fun where exploration is the focus of the player, altered states of fun where the player feelings are changed by the game and the people factor, the social fun, where the player engages with other player and games become social experiences (Lazzaro, 2004; Zichermann & Cunningham, 2011).

For games with an ending, only a small portion of the players will ever see it. Players stop playing whenever they feel like it. This is inherent to the form (Berghe, 2013).

As for the different types of players in games, Richard Bartle identified initially four types of players when he studied massively multiplayer online games players (MMOGs) (Bartle, 2004): the achiever represents 10% of players and gets social status through fair winning. The socializer represents most of the players. For these players, their biggest reward

is interacting with other people. The explorer also represents 10% of players. They seek knowledge and enjoy the discovering. The killers are the remaining type of players, representing 1% or less. Their social status comes from others acknowledging and recognizing their power (Bartle, 2004; Reilhac, 2010). These four types of players are not exclusive; in reality almost everyone has a percentage of each type of player that can change throughout life or even according to different games (Zichermann & Cunningham 2011).

Games put players at the center of the action. Whatever happens in the game, happens to the player. If we link this involvement in the first person with the emotional impact of stories, an immersive experience can be created (Rose, 2012).

Recently, neuroscientists have been able to understand how games work on the brain, everything points to games having a strong effect on the neurochemical mechanism behind both learning and addiction (Rose, 2012). As game dynamics are being applied to story, the gaming's more addictive aspects are also becoming present.

2.2.1 Alternate reality games. Alternate reality games are a hybrid of game and story (Rose, 2012) where a community focuses on the collective task of retrieving and putting together story fragments (Askwith, Jenkins, Green, & Crosby, 2006). Jane McGonigal defined them as "an interactive drama played out online and in real world spaces, taking place over several weeks or months, in which dozens, hundreds, thousands of players come together online, form collaborative social networks, and work together to solve a mystery or problem that would be absolutely impossible to solve alone." (McGonigal, 2004).

One of the first ARGs was *The Beast*, a promotional campaign to market Steven Spielberg's movie *Artificial Intelligence*, launched during the summer of 2001. In 120 days, the overall participation in this ARG ranged between half a million to three million players.

There were more than 7,000 active participants and over 300 million impressions in the media. Since then, several ARGs have been released namely *Majestic* (2001), the first commercial ARG which aimed to be commercially sustainable, *I Love Bees* (2004) that promoted the release of *Halo 2* for Xbox; and *Perplex City* (2005) which was based on the sale of collectible puzzle cards (Askwith et al, 2006).

2.2.2 From serious games to location-based games. Serious games have educational and informative purposes. Their primary use is not for entertainment. Used since III century B.C., for military purposes (Halter, 2006), in the second half of the XX century, serious games started being applied to education, business and marketing (Deterding, Dixon, Khaled, & Nacke, 2011; Rapp, 2013).

Pervasive games, on the other hand, are a more recent term, first cited in 2001, but with its origins in the late 1980s with the development of ubiquitous computing (Ejsing-Duun, 2011). These types of games blend the physical world with the fictional world of the game. They bring games into new contexts, situations and spaces.

One of the sub-types of pervasive games is location-based games. Played in an urban environment, the players of location-based games are aware of the real world and the game's imaginary world. The players' movement is influenced by the game's narrative (Drakopoulou, 2010).

Location-based games based on technology have only become possible when technology was able to locate devices. Location-aware technology attaches information to the locations and people around it (Gordon & Silva, 2011), allowing devices to adapt to the location of the user, providing him with relevant information (Ejsing-Duun, 2011). They are a product of the social need to locate who and what's nearby.

Location-based games have two characteristics differentiating then from the other games: the use of an area as a game board and the use of mobile devices with location awareness as interfaces that connect both digital and physical spaces (Silva & Sutko, 2009). Their outcome depends on the player's movement and interaction with the physical locations as well as the events on the screen. Space and place can be used to convey narrative, aesthetic information and the location stories can function as the setting (Ejsing-Duun, 2011).

Location-based games offer situated learning. They can enrich educational practices by engaging participants as not only the receivers of knowledge but as active participants (Gordon & Silva, 2011).

Michael Straeubig (2012) described several types of location-based games such as check-in, searching & finding, geobound, chasing, conquering, hunting, puzzling and challenges. Amongst the dilemmas he pointed out: the game setting expectations, environmental conditions, impact on the environment, device variety, sensor accuracy, battery life, player life and road works (Straeubig, 2012).

2.2.3 Gamification. First used in 2008, gamification became a widespread word in 2010 (Deterding, et al, 2011). Zichermann & Cunningham (2011) defined gamification as "the process of game-thinking and game mechanics to engage users and solve problems (Zichermann & Cunningham 2011, p. xvi). It uses game design elements in non-game contexts (Rapp, 2013) and has the objective to make more enjoyable and engaging non-game products and services (Deterding, et al., 2011). Examples of game mechanics are visual elements commonly used in video game interfaces, mechanisms for rewarding, features for creating challenges amongst users, recognitions of status like badges (Rapp, 2013).

Gamification can align the intrinsic motivations of consumers by using reward structures,

feedback and mechanics, positive reinforcement and by making the consumers experience predictable, repeatable, as well as financially rewarding. The motivation of the consumers drives the outcome (Zichermann & Cunningham, 2011).

Since 2010, more than 350 companies have launched major gamification projects with the objective to raise engagement and loyalty. Consumer brands such as Adobe, NBC, Walgreens, Ford, Southwest, eBay and B2B companies like Oracle and Cisco. Gamification is transforming businesses and aims to change our lives for the better. Nike Plus: Making Fitness Fun, a social running game, has more than five million players improving their personal fitness goals and competing. Khan Academy, CourseHero and Codecademy in education have helped millions to learn new skills. Environmental issues, Recyclebank and OPower have increased recycling by 20% and reduced carbon emissions (Zichermann, 2013; Zichermann & Cunningham, 2011). M2 Research predicts by 2015, the Gamification industry in the United States will be over $2Bn (Zichermann, 2013).

2.2.4 Games in tourism. Destination Management Organizations have been designing their own games namely Thailand, Capetown, Ireland and China. These games besides being entertaining, they can transmit tourist information and raise brand awareness to potential visitors. In their study on understanding the motivation of tourist players, Xu, Tian, Buhalis and Weber (2013) have identified five reasons why tourists play a tourism game on holiday: curiosity; exploration (learn and discover about the destination); socialization between other tourists and locals; fun and fantasy experience is connected with the flow games can achieve; and challenge and achievement. The type of games considered to be played on site were location-based games or augmented reality games. These games should be simple, relaxed and not very challenging. They should give practical information about the destination and permit socialize with other

people (Xu, Tian, Buhalis, & Weber, 2013).

2.3 Tourism

Tourism is an economic and social phenomenon. Over the decades, tourism has experienced continued growth and deepening diversification to become one of the fastest growing economic sectors in the world. Modern tourism is closely linked to development, being a key driver for socio-economic progress (ITB, 2010). In 2013, according to the UN World Tourism Organization there were 1,087 million international tourist arrivals (UNWTO, 2013).

2.3.1 Tourists behavior. Tourists are becoming equipped with portable devices capable of accessing, communicating and sharing information. They have access to a large amount of data and have the desire to live different experiences (Nejjai, 2012). JiWire report indicates 47% mobile owners who booked travel used several devices (smartphone, tablet, or laptop) and 44% use their smartphone to research travel while traveling (ETC, 2013).

Tourists have become foreign locals and feel empowered and comforted by having their mobile devices at hand (JWT, 2011b). According to the World Travel Monitor, 40% of international travelers already own a smartphone with Internet and e-mail access and other functions, and use their devices to get information (ITB, 2010). Worldwide, smartphone adoption has fundamentally changed the way people get travel advice. More than half of travelers (60%) have downloaded travel apps onto their mobile devices and 38% have used their mobile devices to plan a trip. Besides calling and texting, travelers use their mobile

devices for: taking/sharing photos (65%), surfing online (54%), navigation (52%), staying on top of the news (48%) and games (36%) (TripAdvisor, 2011).

Geographic information before, during and after traveling has been made available by location-aware or context-aware technologies and platforms like navigation systems, digital maps, portable guide and/or recommender systems. This has allowed tourists to develop an emotional attachment to tourism destinations, to enjoy their travel and gain a meaningful tourism experience (Tussyadiah & Zach, 2012).

Tourists are also looking for a personalized offers, tailored to their needs. They want to find something immediately based on their current position (JWT, 2011b). TripAdvisor identified 75% of tourists using GPS devices when traveling (TripAdvisor, 2011). Intel study reveals 44% of travellers feel anxious when traveling without their devices. Close to 87% of the young adults feel happier when they have access to social media and Internet during their trips (Pan, 2012).

Despite free Wi-Fi being a top amenity for tourists, roaming is still very expensive. Various initiatives are changing this reality. On October 2013, T-Mobile announced the new international roaming, covering 115 countries, which has unlimited free data and texts (Pogue, 2013). In Florence, the city's multi-museum pass, includes 72 hours of free Wi-Fi at a network of hotspots run by the city; in Tel Aviv, the free_tlv network, launched in 2013 is a free Wi-Fi network with eighty hotspots around its center; in Helsinki, there's a network of password free hotspots; in Hong Kong there are several free Wi-Fi networks; in Macau, WiFiGo offers free internet for visitors every day between 8am and 1am; in Paris, there's a public Wi-Fi network with over 200 public hotspots; in New York, there's a free network of Wi-Fi in public spaces; in Taiwan, Tokyo and Kyoto, tourists can register for free Wi-Fi upon arrival and in London is partly covered by Sky's "Cloud", a public Wi-Fi network (Ronalds-Hannon, 2013; Strachan, 2013). In Europe, mobile roaming fees are scheduled to end by

2015 (European Parliament, 2014).

Smartphones are a powerful and privileged way to communicate with existing and potential tourists (Wang, Park, & Fesenmaier, 2012). They have the ability to support tourists on the move and within the destination. They serve as personal assistants, consider the user preferences and provide location relevant information (Höpken, Fuchs, Zanker, & Beer, 2010). Travel companies are using location-based marketing and getting closer to consumers via local search, mobile ads, SMS marketing, amongst others (EyeforTravel, 2013). Games and gamification are being integrated into city-branding strategies, presenting the city's history in an entertaining way (Candello & Pemberton, 2011).

Social media has changed the way tourists search, find, read, and trust. They also produce information about tourism suppliers, destinations and experiences (Gretzel, Sigala, & Christou, 2012). In the United States, 79 million people (52%) of the 152 million adult leisure tourists already use social media and 41% of US online leisure tourists have becomed travel social fans by following the traveler suppliers' social networking sites (ITB, 2010).

Travel experiences once shared upon returning home, are now shared in real time, amplifying the travellers' experience and avoiding the gratification delay. Sharing travel activities in real time is an important part of the vacation experience. TripAdvisor indicated 38% post status updates in order to keep their friends updated on their travel (TripAdvisor, 2011). In a follow up study, TripAdvisor findings reveal a strong correlation between social media and travel with 42% of American travelers used social media for travel planning while 40% used it for travel inspiration. The most popular use is posting photos of their vacations (91%), followed by 57% post status updates and check-ins while traveling (34%) (TripAdvisor, 2012).

Not all travellers seek connectivity. There are those who feel a digital overload and

aim for digital detox holidays, holidays where they don't access the online world. As an example for connected travellers is Sol Wave House in Majorca, Spain, that in 2013 was the first hotel to provide a Twitter experience to their guests who could ping requests to a Twitter concierge. Another example is Ushuaïa Ibiza Beach Hotel, which provides their guests with the opportunity to instantly update their Facebook status by swiping their fingers on sensors around the hotel and 1888 Hotel in Sydney, the first Instagram hotel gives a free night to Instagram users with more than 10,000 followers (Rosenbloom, 2013).

For detox digital vacations, there are also various examples: Hotel Monaco in Chicago has a tranquility suite and a tech break package; Echo Valley Ranch & Spa in British Columbia, Canada offers herbal oil massages and horseback rides if customers leave their devices behind (Drell, 2012); and Anguilla's Arawak Beach Inn has an Isolation Package, where guests' mobile devices are locked away; the rooms don't have landline phones or televisions (JWT, 2011b).

2.3.2 Storytelling and experience in tourism. Travelers share stories on their tourism experiences. Storytelling plays a major role in our travel culture (Gretzel, Fesenmaier, & O'Leary, 2006) and is a global marketing trend in the tourism industry with studies revealing destinations real or fictive stories can provide destinations "a unique competitive advantage and the tourist a more meaningful experience" (Mossberg, Therkelsen, Huijbens, Björk, & Olsson, 2011, p.1).

In their book, *The Experience Economy*, Pine and Gilmore (1999) argued goods and services weren't enough in the present economy; there is a need to stage experiences in order to provide a distinct economic output and therefore create value.

Walt Disney was at the forefront of staging experiences when he created Disneyland -

the world's first theme park -, involving guests in a story comprised by sights, sound, tastes, aromas, and textures; creating unique experiences.

Staging experiences is more than entertaining guests; it's engaging them. An experience may engage consumers on any number of dimensions. The first dimension of experience corresponds to the level of guest participation, which goes from passive participation were customers are observers or listeners to active participation where customers affect the performance or event and create their own experience. The second dimension, on the other hand describes the connection or environmental relationship customers have with the performance or event. Ranging from absorption to immersion where the consumer is physically (or virtually) a part of the experience itself. The combination of these two dimensions creates the four realms of experiences: entertainment, educational, escapist and aesthetic (Pine & Gilmore, 2011).

Psychologists Travis Carter and Thomas Gilovich say "buying experiences makes people happier, with a greater sense of well-being, than purchasing a good" (Pine & Gilmore, 2011, p. 18).

Elizabeth Dunn and Michael Norton, on their book *Happy Money*, also revealed experiential purchases provide more happiness than buying material things (Dunn, & Norton, 2013).

Brian Solis stated, "experience is everything" (Solis, 2013, p. 9). Business must provide a positive experience and a shareable one (Solis, 2013). According to Henry Jenkins, Sam Ford and Joshua Green (2013), content spreadability could be increased if content is available when and where audiences want it, for it to be portable and easily reusable in a variety of ways, if its relevant to multiple audiences and part of a steady stream of material. However, content spreadability is not the same. Since we share content in lines with our personal standards and that others might value, good content might not be shared. Brands

should realize audiences will not spread content because they were asked to, except if they are supporting a cause significant to them (Jenkins et al., 2013).

Tourism has been at the forefront of staging experience but tourists' experience and motivations are as diverse as tourists and the characteristics of destinations (Oh, Fiore & Jeoung, 2007).

2.3.3 Technology and current travel guides. In 1991, computer scientist Mark Weiser defined the present wave as the ubiquitous computing era, where technology becomes the background of our lives (Dourish & Bell, 2011). The cost of computing power, data storage, bandwidth, core digital technology capabilities, has been decreasing exponentially. The use of the Internet and mobile usage continues to increase worldwide (Hagel, Brown, Samoylova, & Lui, 2013).

Digital technologies are so intertwined with our lives we often disregard the extent of that integration. Ubiquitous computing can link and connect information to a place, transforming the environment into a smart environment that senses, receives, stores and transmits information. Wearable computing is included in ubiquitous computing by sensing environments and also by having the capability of functioning as a communication media (Farman, 2012). It has been present at universities and research company labs for over a decade but only now it is being looked at as the next big consumer technology trend (Norman, 2013).

We are approaching a future in which all of our devices have the computing brains to sense, communicate and even interact with their environments - Internet of Things. Google, known as the world's information organizer has the "goal to put computing everywhere" (Mims, 2013). To survive the next couple of years, the company has realized it must outgrow

the web. New devices like Oculus Rift and new ways of interacting with computing and the Internet are entering the consumer market. These devices are designed to be inconspicuous and non-distracting (Norman, 2013).

Devices are also becoming smaller and more powerful each year. They are easily carried, embedded or worn. They are practical and can anticipate needs. These technological developments have created new possibilities, both commercially and culturally (Dourish, 2011).

Tourists have an inherent unfamiliarity with spaces through which they move. They need information in order to make decisions. The newest generation of travel guides is using mobile location-based technologies to provide historical and cultural information (Candello & Pemberton; 2011). They are also using games (Linaza, Gutierrez, & García, 2013) and story (Kim & Schliesser 2007) techniques to engage and entertain as well as technologies such as augmented reality (Yovcheva, Buhalis, & Gatzidis, 2013) and QR codes. Augmented reality connects physical and electronic information (Lemos, 2008) by enhancing or augmenting the user surroundings with virtual information. QR codes are a two-dimensional mobile tag with encoded information, which is decoded by an application (PSFK, 2012).

Wearable technology also serves as an automated tour guide like Google Glass through its Field Trip application. This app was the ninth app to be approved by Google Inc. during its experimental phase. Field Trip pulls information from 130 online sources and delivers alerts and informational on nearby historical landmarks, attractions, restaurants, and other points of interest all over the world (Liedtke, 2013).

2.4 Summary

This state of the art examined how story carries on playing an essential role and how transmedia storytelling has become relevant because of new consumption habits and available technology.

It presented several transmedia storytelling definitions from leading experts such as Henry Jenkins, Jeff Gomez and Robert Pratten and introduced main design components like interaction and participation. Several measuring tools, which can be used by transmedia storytelling projects, namely Conducttr, Storycaster and Google Analytics, were also described. This chapter carried on by reviewing game related topics, focusing on location-based games and gamification, which have been applied to tourism. Finally it explored current travellers' behavior and the importance of technology and story in tourism.

This research draws upon these fields to understand location based transmedia storytelling impact in tourism.

3. Related Work

3. Related work

The case studies presented on this section were the most influential projects to this research. They are divided into three overall areas: storytelling, games and location based transmedia storytelling. The data collection took place between September 2011 and May 2014. Each project was analyzed in terms of description, location, launch date or duration, platforms used, cost, user's objective, and story or gameplay.

3.1 Storytelling

In this section, the projects - Haunted London, China Heart, WhaiWhai, Paris 3D Saga, Conspiracy for Good, Story Drop and Unlocking the Story: Explore Glasgow's Canals Heritage – are reviewed in order to analyze their storytelling approach to locations.

3.1.1 Haunted London. Is a visitor's guide to London's haunted locations, launched in 2011. It is set in London, United Kingdom (Make it Digital, 2011). This app is only available for iOS operating system, costing £0.69, on February 9th, 2014 (iTunes, 2011a). Users start their adventure by picking one of the hunted locations indicated.

The story of selected London's haunted locations are arranged into five trails, each with different locations and stories: *Jack the Ripper* (with five locations), *Possessed Pubs* (with 11 locations), *Ghostly Graveyards* (with five locations), *Haunted Buildings* (with 19 locations) and *Undead Underground* (with 13 locations).

There is no overall story joining all the different trails. There also isn't a narrative line joining the locations within a trail. The story locations are presented through text (Haunted London, 2011).

The app is easy to learn and use. Its features are self-revealing and indicate how to begin and proceed. The app opens with a featured location. By sliding to the left, one location from each trail is revealed. The style is consistent with each trail having a color associated to it.

The app has four main tabs. One features the showcased locations, the other gives access to the menu where all trails are available, another has London's map with the story locations signaled and a final tab has the remaining information which includes spooky sounds, information about the app, link to the Twitter account and the opportunity to suggest a story to the Haunted London team (Haunted London, 2011).

Below is *Mary Ann Nicholls - A Jolly Bonnet* story location, part of the *Jack the Ripper* trail, as an example of the story style present in this project:

Mary Ann Nicholls - A Jolly Bonnet

The nightmare begins as Jack claims his first victim.

At 3:40 am on the 31st August 1888, the gruesome trail of Jack the Ripper began on the shady back streets of Whitechapel.

A carter by the name of Charles Cross saw what he at first thought was a tarpaulin. As he approached the heap, crumpled into what was then the entrance to Buck's Row, he realized that what he actually saw was the body of a 43-year-old prostitute named Mary Ann Nicholls. Her shirt was pulled up around her waist. It was found that her throat had been cut, more terrifyingly it was later discovered that she had been disemboweled with surgical precision.

Her misfortune came just a few hours after she had been evicted from her lodging house for not paying her rent. As she left she was heart to say, "I'll soon get my doss money. See what a jolly bonnet I've got… (Haunted London, 2011)

3.1.2 China Heart. This free, multi-platform story for smartphones and web, took place in Sydney, Australia from January 30th until February 13th, 2011 (China Heart, 2011a). The live activities run daily, from 10 a.m. to 5 p.m. The iOS application and webpage are still active today despite the project's end (iTunes, 2011b).

By unraveling China's Heart story mystery, participants followed a map and found clues. This project served as a walking tour guided, taking an estimated one to two hours to complete. In this game, participants learned about Chinese Australians history, beginning in the XIX century until now.

Players could start and stop their tour at anytime and didn't need to follow the story in the recommended order. If the player ended the game, he would win a free entry to the Chinese Garden of Friendship for either: one x adult or one x concession/student or one x family group (two adults, two children).

The Powerhouse Museum Collection artifacts were the basis of China Heart story, which revolved around Lian and David's engagement that was threatened by a mysterious package Lian had received filled with strange objects inside.

There were seven story locations, all located in Sydney's Chinatown. Associated to each location were videos and text information.

Below the locations and related information are depicted (China Heart, 2011b):

- Golden Water Mouth Sculpture – Cnr Sussex and Hay Streets

- Video (The Engagement Part)

- Clanhouse – Loong Yee Tong, 52 Dixon St

  - Video (The Translator)

  - Text (Role of the Clanhouses)

  - Text (History of Loong Yee Tong)

  - Text (Translation of Plaque)

- Belmore Park – Belmore Park, Hay Street and Haymarket

  - Video (Old Belmore Markets)

- Sydney Central Yum Cha – 151 Hay St, Haymarket

  - Video (Astronauts' Wives)

  - Text (The Fan)

  - Text (Yum Cha)

- Photoland – Capitol Square, 730-742 George St

  - Video (Photoland)

  - Text (The Toggle)

- Trocadero Ballroom – Albion Place

  - Text (History of the Trocadero)

  - Text (Dragon Balls)

- Chinese Garden of Friendship – Darling Harbour, 100 Murray St

  - Video – Lotus Pond

  - Text – Rank Badge

  - Text - Chinese Gardens of Friendship

Supplementary Material (videos)

- Chinese Debutante & Dragon Ball Oral Histories

- Albion Place Photographic Installation

- Chinese Opera at the Chinese Garden of Friendship, Darling Harbour

China Heart app had five tabs: the project's trailer, the maps and locations, the story materials and a tab with the remaining information on China Heart.

As an example of the stories showcased in China Heart is *Rank Badge* story, one of Powerhouse Museum Collection object's:

The beautiful embroidered panel is known as a "rank badge". Dating from around 1900, it would be worn on the back of a robe by a 9th rank civil official.

The design has a great symbolic meaning: the central Paradise-flycatcher flies towards the sun; the eight bats embroidered around the central bird each hold a symbol of wealth or good fortune in their beaks. Note the lotus flowers on the border.

This "rank badge" is part of the Powerhouse Museum Collection. (China Heart, 2011b)

3.1.3 WhaiWhai. Is a travel guide where tourists discover the city by following a storyline, which only gains shape when enigmas and puzzles are solved (WhaiWhai, 2011a). These story guides are set in Italy (Venice, Rome, Florence, Verona and Milan) and in the United States (New York). The Italian cities guides were launched in 2009 and are only available as books priced at 22€. The New York guide was released in 2011 and besides the app for the iOS operating system at 3.99€ (iTunes, 2011c), it's also available as a book at $21.95.

The book guides have two game sessions; therefore they can only be played two times. There is the possibility to buy a new code number at the shop page of the website and play three more matches.

The app, on the other hand, can be played an unlimited number of times. It has four tabs, two *Single Match* and *Challenge*, where users can choose the mode of playing; the story prologue and the last tab *Help* with information about these guides (WhaiWhai, 2011b).

WhaiWhai user's objective is to embark tourists on an adventure where they discover streets, hidden places, stories and original tales about the city they are visiting. This game puts tourists at the center of his journey, letting them play an active role in discovering the sights. The experience can start at any time, alone or in a group, in the city or even from the tourists' home by activating the sofa mode. The experience can also be customized by choosing how long to play, which part of the city the players wants to start in, and whether to play at the easy or the advanced level (WhaiWhai, 2011a).

Stories begin as a collection of jumbled short stories that only become readable when the player solves the enigmas, by sending a text message with his answers. The game can last between two and nine hours (Glusac, 2010). If the game is being played in sofa mode, then it will be possible to solve enigmas without actually going to location because the questions are about historical events, people and works of art in the locations where the stories are set.

Below are all WhaiWhai travel guides synopses and the number of locations, which are part of each story. The stories are very different from each other but they all have the city's location and historical characters as the cornerstone of the story.

Milan The Diamond (45 story locations)

When Ludovico il Moro descends into battle against the French with a war chest funded by pawning the family jewels, the fabulous Lupo diamond is just one of the precious objects that end up in the hands of moneylender Giovanni Beolco. Today, after many ups and downs, the diamond has been stolen by a cunning thief. The Milanese police is on his tail and needs your help. (WhaiWhai, 2011a)

Verona AMOR (35 story locations)

Eros, the God of love, was banished from Olympus and chose Verona as his new homeland. When he was exiled, he took two magic instruments with him: his famed bow and arrows that can shoot out sparks of love. Could this be why the most renowned tragic love story took place here? Why does the Capulet family's last descendant need your help? (WhaiWhai, 2011a)

Rome The Ruyi (60 story locations)

The Ruyi, the magic scepter Marco Polo stole from Kublai Khan at the end of the 13th century, has been purloined from Venice and brought to Rome. An ancient sect known as the Invincibles has been pursuing it, but the old Venetian professor Carlo Dolfin is only a step away from solving a mystery that links the Eternal City to the Marine Republic. (WhaiWhai, 2011a)

Venice The Ruyi (60 story locations)

As the 13th century drew to a close, Marco Polo returned from China with the Ruyi, a legendary scepter he stole from Emperor Kublai Khan. After Marco Polo's death, the magical sword lay hidden with the traveler in his tomb in Venice. Today, both the tomb and the scepter have vanished. Carlo Dolfin, an old Venetian professor, has found some papers in his personal archive that could be of vital importance to locate the Ruyi. But he needs your help to find it, before it falls into the wrong hands. (WhaiWhai, 2011a)

Florence 2054 (45 story locations)

October 27th, 1954 - Twenty unidentified flying objects soar through the skies of the capital of the Renaissance and hover above the city's famous monuments for a good fifteen minutes. While everyone stands with their necks bent backwards and stares, no one realizes what's actually happening. The aliens are looking for something that fell to the Earth centuries ago. What secret could Florence be hiding? (WhaiWhai, 2011a)

New York The Pegleg (40 story locations)

In 1647 A.D., a particular pegleg, a prosthesis with mystical powers, appeared on Manhattan Island. In that year, Peter Stuyvesant, stepped ashore and planted his wooden leg, which was covered with bands of silver, firmly on this soil. After Stuyvesant's death, the magical limb lay hidden with him in his family's crypt in the east village, but right before the crypt was permanently sealed, the peg leg vanished and has been missing ever since. Shlep Wallace has accidentally found a secret, lost notebook of the renowned scientist, Nikola Tesla that could be of vital importance to locate the legendary pegleg. But he needs your help to find it. (WhaiWhai, 2011a)

3.1.4 Paris 3D Saga. This multiplatform experience told the story of Paris using various channels (Carole, 2012). This project, released in 2012, was composed by:

1. *Paris, the Great Saga* - a 90-minute documentary, broadcasted on Planète+ (October 1st at 8.45 p.m.);

2. *Paris, a Capital Story* – a series of four episodes, with 52 minutes each, broadcasted on Planète+ (October 2nd and 9th at 8.45 p.m.);

3. *Le Parvis de l'Hôtel de Ville* - an interactive and immersive event, set in Paris, with virtual reality (September 29th at 9 p.m.);

4. An immersive and interactive 180° projection on nine giant (ten meters) screens of clips from the documentary and 3D live reconstructions demo that were where watched by 15,000 people (Paris 3D Saga, 2012a);

5. A website with an interactive 3D real-time visit to monuments mentioned in the documentary series such as Notre Dame, Bastille, Louvre, and Tour Eiffel at key periods (released on September 29th);

6. A 128-page book from Flammarion, published on October 3rd. In this book, users could manipulate monuments by using augmented reality. The monuments could also be seen with the book's enclosed stereoscopic glasses;

7. A free iPad app, launched on September 29th, with 360° 3D visits, documentaries extracts and experts interviews (iTunes, 2012a). The iPad app main screen had links to various monument and related time period (Paris 3D Saga, 2012b):

- The Oppidum – Gaul (52 BC)

- The Forum – Roman Gaul (210)

- The Arenas – Roman Gaul (210)

- The Baths – Roman Gaul (210)

- The Louvre – Philip II Augustus (1200)

- Notre Dame – Middle Ages (1350)

- The Louvre – Charles V (1370)

- The Louvre – Henry IV (1610)

- The Bastille – French revolution (1789)

- The Louvre – Napoleon (1810)

- The Eiffel Tower – World's Fair (1889)

- Paris from the sky – Present day (2012)

This app was available in twelve languages including English, German, Spanish, French, Italian and Portuguese.

By choosing one monument, for example Notre-Dame, a 360º view allowed users to navigate and choose the tabs:

- Learn more about the construction of Notre-Dame (video clip – 43 seconds)

- Do you know the origins of Notre-Dame of Paris? (video clip – 1:12 seconds)

- Admire the view from the top of the towers (360º view)

- Discover the greatest construction site of the middle ages (video clip – 2:12 seconds)

There was also an option, where users could erase and change the period, and discover the actual Notre-Dame and it's surroundings.

3.1.5 Conspiracy for Good. In this social benefit storytelling, audiences participated in a fictional story and did real good in the real world. A pilot online was released in 2010. The project finished in London, in a four-week event.

The story followed Nadirah X, a schoolteacher, Ann Marie Calhoun, CFG spokesperson, and the underground resistance movement, Spira. The audience objective was to help Nadirah X and Ann Marie to defeat the corporation Blackwell Briggs, before it could install an oil pipeline and destroy a Zambian school and library.

The result was the building and stocking of five libraries in Africa, the funding of 50 scholarships for schoolgirls and more than 10,000 books for Zambian libraries through WeGiveBooks.org (Conspiracy For Good, 2010).

3.1.6 Story Drop. This free app (iOS and Android) was released in 2013 (Story Drop, 2013a) and uses GPS technology (Brighton Royal, 2014). Set in Brighton & Hove, United Kingdom, Story Drop tells the stories of thousands of objects from the Royal Pavilion and Museums collections. By going to the locations, users learn more about the city's history (iTunes, 2013a).

This app is easily learnable and usable with its features being self-reveling. It opens with the six tabs over the map. It is easy to navigate and aesthetical pleasing. The story locations are presented through text with an accompany image.

This app has five tabs: the *Intro* tab with the introduction of the project in text and audio format, the *Tours* tab with three available tours, the *Map* tab with the locations signaled, the *All Places* tab with the location list and the *Achievements* tab with the users achievements (Story Drop, 2013b).

There were three available tours: *Heritage at Hand* tour with seventeen locations; *Pavilion Estate* tour with five locations; and *Tuner in Brighton* tour with twelve locations, an introduction by Dr. Sue Berry, information about J.M.W. Turner, why he came to Brighton and about the tour.

Below is the transcription of some of Tuner in Brighton tour stories, namely Dr. Sue Berry introduction, who was J.M.W. Turner, why did Turner come to Brighton and about the tour. All stories are available in text and as an audio commentary:

Introduction by Dr. Sue Berry

I am Sue Berry and I have published many articles, and a book, about Brighton and Hove, with another in the pipeline. I use all sorts of sources for my work, archives such as letters and deeds, newspapers, maps, prints and paintings are

just some examples. The period between 1750 and 1830 when Brighton flourished as a famous Georgian and Regency resort is my favorite. (Story Drop, 2013b)

Who was J.M.W. Turner?

When Joseph William Mallard Turner (1775-1851) visited Brighton in 1824 he was a famous and controversial artist. A very large collection of his work is on display in the Turner wing of Tate Britain in London. To view some of his works in the setting of the country house for which they were intended, a visit to Petworth House in West Sussex, owned by the National Trust is worthwhile. The pictures there were completed for the Earl of Egremont, who was a patron of Turner, and who let him use a studio there, which is periodically accessible today. (Story Drop, 2013b)

Why did Turner come to Brighton?

By the time of his brief visit in 1824, Turner was well established. His main interest then was the new Chain Pier, from the end of which it was possible to just see the roofline of the Royal Pavillion, so less of the building than is shown in the watercolor he produced from this trip for a volume of Picturesque Views on the South Coast of England published by W.B. Cooke in 1826. The picture was sold by Turner to B. G. Windus, a keen collector of his work. It is this water color which is owned by the Royal Pavilion and Museums.

Turner's subsequent visits to Brighton in late 1820s were associated with a period of patronage by the Earl of Egremont, the owner of both Petworth House and East Lodge in Brighton, close to the Chair Pier, just east of what is now Upper Rock Gardens. This villa was where Turner may have stayed for the Earl was very hospitable to artists and had allowed Turner a studio at Petworth, his huge Sussex

country house. In 1828, Turner completed pictures for Petworth, which included scenes from Brighton; an oil painting of Chain Pier is still in the Carved Room. Turner returned to Brighton in 1830 and again in 1845 or 1846. (Story Drop, 2013b)

About this tour

This walk concentrates on the townscape as Turner would have seen it in the mid to late 1820s when the town was prospering and expanding. In 1821 the population was 24,429 and by 1831 the boom years had increased by just over 40 percent to 34,634. The resort depended heavily on the autumn and early winter patronage of wealthy visitors, especially from London, and also attracted artists and print makers. John Constable was amongst other better known artists painting here in the mid-1820s. (Story Drop, 2013b)

3.1.7 Unlocking the Story: Explore Glasgow's Canals Heritage. This project unveils the social and industrial history of Glasgow canals. It was released in 2013 with two free platforms: an app for the iOS and Android operating system, and a booklet (Scottish Waterways Trust, 2013). On February 12th, 2014, there were 91 signaled locations (iTunes, 2013b; Unlocking the Story, 2013).

The app main wireframe was comprised of six tabs: *Latest Canal News & Events* tab with the latest canal-related news stories from the Scottish Waterways Trust and Scottish Canals; *Canal Maps & Trails* tab with different canal maps including an annotated illustrated map, several archive maps from 1790 and 1920 and a satellite view; *Scan a QR Code* tab where users jump straight to the particular point of interest; *Tell us a Story* tab where users can record an audio clip, take a photo, and send a story; and *Stories & Places* tab with a full

list of points, sorted so the closest point to the users position shows up at the top. This app also used augmented reality to see certain locations by using the option *See Through Time* (Unlocking the Story, 2013).

An example of a story location is portrayed below:

Duntreath Avenue Bridge, Drumchapel

(From Great Western Road, you will find the canal signposted to the left just before Duntreath Avenue Bridge and close to a bus stop. Cross the footbridge and join the towpath on the south side of the canal. Go left.)

As the canal passes under the bridge at Duntreath Avenue, it enters the modern boundaries of the city of Glasgow. To the west, the towpath meanders through East Dumbartonshire until it reaches the canal gateway on the Firth of Clyde at Bowling Harbour, about 5 miles away. Our journey takes us eastwards towards Kelvindale Station on Cleveden Road.

This section was filled in sometime after the canal was closed to allow Duntreath Avenue to be built, but has since been reclaimed. (Unlocking the Story, 2013)

3.2 Games

The analysis of the following section is divided into location-based games where players need to be on site to play the game and other games that use social media or mobile applications as their platforms.

3.2.1 Location-based games

This section reviews the following location-based games: Tripventure, Stray Boots, The Roswell Experience, REXplorer, Geocaching and Street Reads.

3.2.1.1 Tripventure. These location-based games use GPS and can be utilized as guided tours. They use augmented reality to find characters or objects within the real world (Tripventure, 2013a).

In Table 3 is the description of Tripventure's location-based games by locations, duration, genre, languages and cost (Tripventure, 2013a, Tripventure, 2013b, iTunes, 2013c).

Table 3

Tripventure's Location-Based Games

Name	Location	Duration hours	Genre	Language	Cost
Inspector Tripton: Murder Underground	Barcelona, Berlin, Cologne, Hamburg, London, Munich, Paris, Rome and Stockholm	2.5	Gamer, Family, Tour guide	English, German, French	0.89€
Fall of the Wall	Berlin	2.5	Gamer, Family, Tour guide	English, German	2.69€
Rocco Ratcha	Berlin, London	2	Family	English, German	2.69€
Secret City 1	Berlin, Hamburg	1.5	Gamer	English, German	0.89€
Secret City 2	Berlin	2	Gamer	English, German	0.89€
Death at Berlin Wall	Berlin	1.5	Tour guide	German	0.89€
The Dark Eye	Berlin	1.5	Gamer	English, German, French	2.69€

These games were all available as an app for iOS and Android operating systems (iTunes, 2013c). The story of Tripventure games range from pure fiction to history based. Below are all the games' synopses:

Inspector Tripton: Murder Underground

As the sun is rising in the inner city, a dead body is discovered near an underground station. The deceased is the journalist Tom Keller, evidently murdered. There is a flurry of activity at the scene of the crime and confusion reigns supreme amongst the victim's friends, family and acquaintances. As Inspector Tripton you set out to find the murderer. (Tripventure, 2013a)

Fall of the Wall

West Berlin, 1989. The rather nosy student Bruno Fuchs discovers a notebook that used to belong to a certain Gertrud Liebig. He soon finds out that she had been sent to East Germany as a CIA agent. Her boss, Frank Weber, now demands the notebook back as it contains clues to the whereabouts of important documents – documents that Gertrud Liebig hid somewhere in East Berlin before she died as they could lead to the fall of the Berlin Wall. Bruno decides to play detective with his girlfriend Henny and sets off on an adventure-filled journey through Berlin in search of clues – and you go along. (Tripventure, 2013a)

Rocco Ratcha

Rocco's extensive clan is meeting up this evening for a grand family get-together. To make sure that the party is a success and the hungry relatives have nothing to grumble about, Rocco is called upon to procure an enormous pizza. But as

fate would have it, Toni, the proprietor of the cockroaches' favorite Italian restaurant, doesn't even have a single pizza slice left! Will little Rocco still be able to save the day and make the family proud? (Tripventure, 2013a)

Secret City 1

You've only just arrived in town when you get a call from Max, an old school friend. "I have to meet you. It's important." He suggests that you get to his flat. You haven't seen Max for ages, but he has always been quite reckless. Is he in trouble again? (Tripventure, 2013a)

Secret City 2

You've already made some progress in the search for your missing friend Max in the first episode. Episode II drives the mad story forwards. But now you are faced with new challenges: negotiate with the men in grey, experience the particle accelerator and find the right entrance to the rabbit warren. Red or blue? Truth or lie? Matter or antimatter? (Tripventure, 2013a)

Death at Berlin Wall

Rudolf Müller is a cross-border commuter from West Berlin. His wife and two children live apart from him in East Berlin. As reuniting the family appears impossible, Müller digs an escape tunnel underneath the Wall. But their escape is overshadowed by a tragic incident: Reinhold Huhn, an East German police officer, loses his life. The reunion of the Müller family becomes a crystallization point for the conflict between East and West. (Tripventure, 2013a)

The Dark Eye

You awake in the witch wood Hexenwald without any recollection of how you got here. All you remember is a dream you had just before waking up. In the dream, a fairy asked for your help as a witch cast a dark spell on the wood. It is on you to save the fairy, break the spell and remember what brought you here. Face the sinister henchmen of the witch and interact with the inhabitants of the wood. (Tripventure, 2013a)

3.2.1.2 Stray Boots. This app provides gamified sightseeing experiences. It's a mixture between a walking tour and a scavenger hunt, suited for a first time visitor, locals, with usually 15-25 locations and no schedules. It was launched in 2009, being presently available as an app for iOS and Android operating system (Stray Boots, 2013a; iTunes, 2013d).

Participants receive clues that can range from asking to find things, to solving riddles, taking pictures or even answering trivia questions. After visiting the location, participants send in the answer. By getting it right, they receive points and gain knowledge about the visited location.

Stray Boots tours are set in the United Kingdom and in the United States (Boston, Chicago, Las Vegas, Los Angeles, Nashville, New Orleans, New York City, Philadelphia, Portland, San Diego, San Francisco, Seattle, Bear Valley, Washington, D.C. and Miami). The individual tours range between free to $15. Aggregated tours, which include two individual tours or more, are priced between $5 and $70.

Stray Boots app has five main tabs: the *Home Screen* tab with information on Stray Boots, the *Team* tab where invitations can be sent and teammates added, the *Map* tab with the

location, the *Hint* tab with tips about the challenge and the *Skip* tab allows users to ship that particular challenge (Stray Boots, 2013b).

One of the tours available is the *Miami – Cultural Shock*. This tour has 18 challenges, 250 points and lasts between two to three hours. The recommended playing times are Monday to Friday between 11 a.m. and 5 p.m., and Saturday to Sunday between 11 a.m. and 11 p.m. The tour starting point - 13th St and Washington Ave – was also suggested.

The story of the *Miami – Cultural Shock* tour is transcribed bellow:

South Beach isn't all just parties and booze, there's also drugs and rock and roll. Just kidding, there's a cultural side to South Beach that's often overlooked. Here's your chance to discover the subtler side of SoBe, class it up a little bit, and show you've got a brain to accompany that bangin' body. Saunter down Lincoln Road Mall as you sample Miami's chic-est shopping. Grab a drink at an outdoor café, then confess your sins at South Beach's first church and most significant synagogue. Whisper down quaint Espaniola Way before resting at a hidden cafe. Feast your eyes on the works of local starving artists at the Southern Florida Arts Center, and strike a tune at the One World Symphony. By the time you stop into Miami Ink, you won't need a tattoo to remember your South Beach experience forever. (Stray Boots, 2013b)

3.2.1.3 The Roswell Experience. This free location-based game, set in Roswell in 2012, had three main goals: to introduce visitors to a wider local history, to incentivize visitors to visit local businesses and to discover critical success factors. The Roswell Experience took place during two weeks (June 9-22) and used various platforms such as local

flyers, noticeboards, book, website, app, social media and live activities (crop circle; UFO sightings; radio station interruption and prize draw) (Pratten, 2012).

The player had to find the GPS coordinates of the alien landing and the amulet. He received daily questions by email to find the GPS coordinates. The answers were unlocked via check-ins at local stores and points-of-interest. To find the amulet location, the player had to tweet or text five codes. To unlock the history of the amulet and earn points and badges, he had to tweet or text all the codes.

The Roswell Experience told the true history of Roswell through the lens of a fictional alien from outer space.

According to Robert Pratten (personal communication December 29, 2013), the end of the game was changed while the game was in progress because the task of decoding the GPS proved to be too challenging or at least took too long to be accomplished. There was an assumption players would play the game for several weeks but visitors to Roswell stay only a few hours. While many played the game, none would play for long enough to gather all the clues. While the GPS quest remained, it was never resolved. Emphasis shifted from finding the right five codes to finding the amulet, making it much easier for players to participate.

The final location was placed at the scene of another town event and was texted to winners who texted the five codes. A local resident dressed as the alien arrived with the amulet and posed for photographs.

The journey of this project was more important than reaching the end of the story. In fact the prize was hardly a motivator because visitors were unlikely to be in town to collect the prize or learn the conclusion to the story.

The Roswell Experience was targeted to Roswell visitors who were not residents. However the results showed the best players were new residents who had recently moved into town because they had the curiosity of a visitor and had more time to play.

Amongst the lessons learned from the creator - Robert Pratten (Pratten, 2012) were:

- Design story to be location-aware (have the possibility to engage with the game first, before the travel) but not location-dependent (to actually be in Roswell). Physical travel creates a big barrier to adoption. In terms of partners, stores should be represented on online platforms in order to entice journey to real store;

- Direct call-to-action – visitors don't want to read a set of rules, they can get to know them as they explore;

- Give rewards early and frequently so the experience is fun and surprising;

- Keep it simple, frictionless and fun. The intellectual, physical and technological demands should be kept to the minimum as well as the time commitment;

- Design for existing behaviors, i.e. what do visitors already enjoy doing and enhance those behaviors;

- Understand visitor dynamics, demographics and habits;

- Know the geography;

- Local retailers have to be committed to bring audience to the project and not only benefit from the awareness the project brings. For example, in-store staff should be involved in the call-to-action and the presentation of the project should be consistent and clear;

- Integrate the experience in the destination marketing organizations so audiences can get to know the project while they are still planning their trips;

- Use interactivity to capture visitor heat maps and other market research;

- Integrate with the town's social media strategy.

3.2.1.4 REXplorer. This game was designed for tourists. Set in Regensburg, Germany during the 2007 and 2008 touristic seasons, REXplorer blended location services, mobile

photo, video blogging, and phonecam-based interactions, bringing Regensburg history and culture to live. It changed visitors' perception of the city, by engaging narratively and using physical mobility (Kratz et al., 2006). The game was played in a device composed of a mobile phone and a GPS receiver, which was available to rent for 12€/1.5 hour (ETHZ, 2011).

REXplorer had the design assumption of a maximum of 30 simultaneous players, with an average gameplay session ranging from one to two hours.

The target audience was German language proficiency adults between the ages of 13 – 30, staying one day in the city. They had limited time, and committed to this game experience, primarily because they could get to know the city through the game (Ballagas, Walz, & Borchers, 2006).

In this game, tourists' role-played the scientific assistants, which helped Professor Rex. Tourists encountered spirits stationed at points of interest. When they reached the spirit, and with the correct spell, players received and resolved multiple quests (Kratz et al., 2006).

3.2.1.5 Geocaching. This free worldwide treasure hunt game uses GPS-enabled devices. Since 2000, participants navigate to a specific set of GPS coordinates and attempt to find the geocache hidden at that location (Geocaching, 2014).

The game play is simple. Players have to register for basic membership, choose the geocache and enter its coordinates into their GPS device. When players find the geocache, they sign the logbook and return the geocache to its original location. If they want, they can share their geocaching stories and photos online.

3.2.1.6 Street Reads. This free location-based game uses QR codes. Set in Brisbane City and South Bank, it ran between September 4th-15th, 2013 (Street Reads, 2013).

Street Reads used a print map, QR codes and a website (Digireado, 2013). The player started the game by scanning the code on the pavement poster at Reddacliff Place. On the loaded webpage, he read the story, heard the music or saw the art. Then he chose which adventure to follow, looked for the next pavement poster and scanned it again. The player was asked to do activities and get photographic evidence. At the end, he entered his name and email for the chance to win a prize.

Below is the synopsis from one of the story trails:

The (Hero's) Apprentice

Every Hero needs an Apprentice, and this time you've been picked. Your Quest, should you choose to accept it, is to take back South Bank from the evil claws of the Dark Legion, all the while avoiding a ferocious band of avian spies and decoding the riddles provided by Oracles stationed around the cultural precinct, who may or may not point you in the right direction. Will you choose to team up with the brawny and brave yet not-so-brainy Hero and head into Dark Legion territory, or will you run the other direction trying to avoid all this unwanted attention? Either way, you'll find South Bank a changed place as you encounter adventure at every turn. (Street Reads, 2013)

3.2.2 Other Games

This section examines Brasil Quest, Agent UK, Tag Me If You Can and Smile Thailand. These games are location aware but not location-dependent.

3.2.2.1 Brasil Quest. This mobile game set in Brazil, transmited touristic information on the 2014 World Cup twelve cities. Released in 2012 (Aquarela2020, 2012), this free application was available for iOS and Android operating system (iTunes, 2012b).

Yep the protagonist of this game lived in a very sad planet with two grumpy aliens - Stu and Bozzy. One day he found a portal that transports him to Brazil, a country filled with color and joy (Brasil Quest, 2012).

The player's objective was to guide Yep through the Brazilian cities while capturing orbs, which make him happier.

3.2.2.2 Agent UK. This game, set in the UK, was part of 007 Skyfall tourism campaign. In it, players got to know Britain's locations by assuming the identity of an international spy for four weeks (5 October 2012 until 2 November 2012).

This free game used three platforms: website, Twitter (@VisitBritain) and Facebook (Love UK). These two social networks had a series of clues hinting at the agent's exact location (VisitBritain, 2012).

Players had to do four missions across four zones in Britain. Each mission contained four tasks. All four tasks had to be completed within each mission before players were

eligible for the grand prize draw. There was also a chance to win one of six additional prizes in a secret mission level, if players completed all four tasks within each mission.

3.2.2.3 Tag Me If You Can. Released in 2012, this online interactive game, had Australian TV star, traveling to secret locations in Australia and New Zealand. Players had to tag his location within ten meters to win cash prices up to 150,000 dollars. This free game used two platforms: a website and a YouTube channel which had the video clues (Kuo, 2012).

3.2.2.4 Smile Thailand. This free social network game, released in 2011, covers more than forty provinces in Thailand and explores hundreds of destinations.

Players have to travel to all the required places in order to achieve the rank of Thailand's best traveler. During the journey to each destination, players find the hidden treasure of that particular location and collect it as proof of visit (Smile Thailand, 2011).

There are several mini-games currently available for various platforms such as: *Thailand Racing* (for Windows Phone) where players race across Thailand; *Siam Fun Fair* (ovi for Nokia) which is a Thai local event set in Buddhist temples during festivals with a lot of entertaining activities and exciting rides; *Tuk Tuk Racing* (for Facebook) a race with the most popular Thai vehicle; *Somtam Sukjai* (for iPad) on Thai food; *Siam Tempo* (for Android) where players practice and play Thai Sabat Chai Drum, and *Muay Thai* (for iPhone) on the Thai martial arts (iTunes, 2012c; Smile Thailand, 2011).

Below is *Smile Thailand - Muay Thai Sukjai* sysnopsis game:

Muay Thai Sukjai is a Thai kickboxing game, which allows the player to experience the exotic Thai martial arts. The player is transformed into a Thai kickboxing champion who has to fight through a challenging tournament. Besides the tournament enemies, the player can also create a competitor by inserting a picture. In this game, the player gets to know the Muay Thai, also referred to as the "Art of Eight Limbs" or the "Science of Eight Limbs" because it makes use of punches, kicks, elbows and knee strikes, thus using eight "points of contact". (Muay Thai Sukjai, 2012)

3.3 Location based transmedia storytelling

3.3.1 The Builders' Challenge. Its makers described *The Builders' Challenge* as a transmedia adventure in the heart of gothic cathedrals. Released in 2012, this France-Germany co-production portrays locations from both countries: Freiburg, Ulm, Rosenwiller, Sélestat, Ribeauvillé, Rouffach, Guebwiller, Thann and Mulhouse, Saverne, Reutenbourg and Niederhaslach. The Strasbourg cathedral was the center stage of this project (Builders' Challenge, 2012a).

The Builders' Challenge had six platforms: 3D feature film, making-of, docu-game, mobile app for iOS and Android operating system, media library and blog:

The Cathedral – The Master Builders of the Strasbourg Cathedral (3D film - 90 minutes). Shot entirely in 3D, this film told the story of five architects. It portrayed each stage of Strasbourg cathedral's construction, which became the world's tallest building and it

held that distinction until the XIX century. The first transmission was on December 15th, 2012 at ARTE.

Making-of. This documentary on the shooting of the film described the technical challenges of shooting in 3D, the differences between editing in 3D and 2D, and other technical challenges of the film. The first transmission was on December 16th, 2012 at ARTE.

Tower Builder / Doc-game. A web-documentary where players discovered the master builders' secrets and designed a virtual second tower for the Strasbourg cathedral using the *Tower Builder* design tool. It was built up like a video game. Players became young architects and got in touch with various experts. They could get access to interactive documents and to the archives of the Museum Oeuvre Notre-Dame.

Mobile app. This free mobile app, available in English, French and German, functioned as an interactive tour guide to the cathedrals in Strasbourg, Ulm, and Freiburg. It had background information, reconstructions, games, anecdotes, photos and original blueprints (iTunes, 2012d; Builders' Challenge, 2012b).

There were three main options:

- Do a cathedral tour in augmented reality, which included visits to other medieval sites that are linked to the cathedral's history such as the museum Œuvre Notre-Dame in Strasbourg and other places throughout the Rhine Valley. This tour included videos with game scenes, 3D-animations and interviews from the film.

- Play in site by searching for hints on site, and solve some of the secrets surrounding the cathedral and the museum Œuvre Notre-Dame, thus gaining new components for the *Tower Builder* game.

- On site, the virtual towers, designed by other players on *Tower Builder*, could be seem by pointing the smartphone at its façade. The players could also vote for the most beautiful design for the second cathedral tower, and share it on social networks (Facebook, Twitter, Google+).

This app opened with a map of the projects' French and German locations: Strasbourg Freiburg, Ulm, Rosenwiller, Sélestat, Ribeauvillé, Rouffach, Guebwiller, Thann and Mulhouse, Saverne, Reutenbourg and Niederhaslach.

Strasbourg was the main location and had four different views: map, list, 3D and GPS. The users could chose between three sections:

- Worth seeing – in this section, seventeen questions were answered through video and pictures.

- Game – it was comprised by three games:

  - The errors game where players needed to find seven errors in the pictures in order to discover the history of the south portal;

  - The stonemasons' marks game where players needed to replace the stonemasons' marks in the cathedral's plan;

  - The paper chase game where players followed the traces and solved the puzzle in the museum Deuvre Notre Dame.

- Second tower - visitors saw the second tower in augmented reality.

Media library. It aimed to be an encyclopedia by giving to the general public, free access to the project's historic documents both in French and in German. It was divided into two sections:

- Abécèdaire with forty-nine items had image, text, audio and video;

- Thèmatiques branched into four sections with several questions.

Blog. Its main objective was to provide the project updates and behind the scenes information.

4. Design of the Research

4. Design of the Research

This investigation aims to understand the impact of using transmedia storytelling techniques applied to tourism, particularly its advantages and disadvantages and to identifying the best practices.

The main questions addressed are:

- Can transmedia storytelling transform tourist visits into more engaging experiences?

- What are the tourists' behaviors across the different platforms?

- What content do tourists create, share and how frequently?

- Which are the best analytic tools to measure location based transmedia storytelling projects?

Transmedia storytelling is a very broad field. In order to study the impact of transmedia storytelling techniques, which have locations as its principal characteristic, we proposed in 2012, the term - location based transmedia storytelling (Ferreira et al., 2012) - as the art of telling stories based on a specific location through multiple platforms with audience participation, where each storyline makes a valuable and distinctive contribution to the story.

The data collection was divided into three stages.

The first stage had the objective to describe tourists' practices, their needs and behaviors. The tools used at this stage were participant observation, case studies and exploratory interviews. The data gathered from this stage offered the basis for the construction of a pilot location based transmedia storytelling project – TravelPlot Porto.

The second stage aimed to capture tourists' behaviors across different platforms and which content they created, shared and how frequently in TravelPlot

Porto. At this stage, the following tools were used to gather qualitative and qualitative data: online questionnaires, interviews to foreign tourists at a Porto hostel and written interviews to Portuguese university students, Google analytics, Facebook insights, YouTube analytics, Twitter and Tweet Reach, Pinterest and PinReach, menus sold and print maps distributed.

The third stage consisted on the analysis of TravelPlot Porto results and other related work, to extract conclusions and identify the best practices (see Figure 1).

First Stage
Describe tourists' practices, their needs and behaviours

Second Stage
Capture tourists' behaviours across different platforms and which content they created, shared and how frequently

Third Stage
Analyse the results of TravelPlot Porto and other worldwide case studies
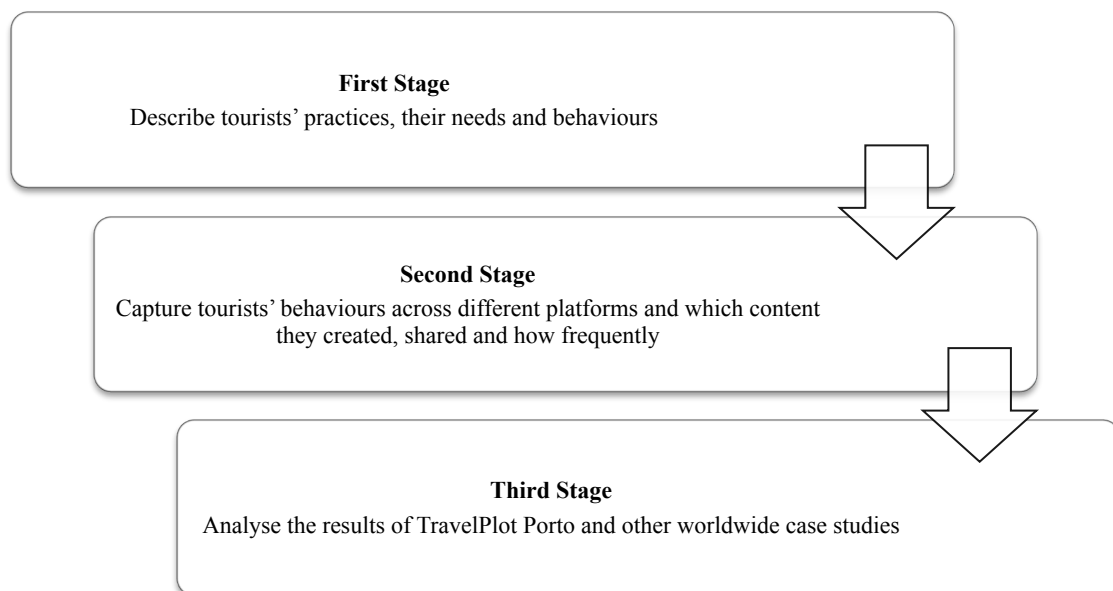
Figure 1. Stages of the data collection

4.1 Overall analysis of related work

Storytelling. These projects main objective was to transmit background information on destinations, locations and historical characters. Most invited participants to join an adventure (Haunted London and Conspiracy for Good), solve a mystery (China Heart and

WhaiWhai) or get to know historical information in a more traditional approach (Paris 3D Saga, Story Drop and Unlocking the Story: Explore Glasgow's Canals Heritage).

Users were put at the center of their discovery journey. They were able to choose which paths and information they wanted to know. The user interaction was mostly limited to sending stories (Haunted London and Unlocking the Story: Explore Glasgow's Canals Heritage) or sharing their experience online (Haunted London).

The stories were based on existing stories destination such as historical characters, legends and story locations. Some projects only used historical facts not having an overall projects' classical narrative structure but merely individual stories (Unlocking the Story: Explore Glasgow's Canals Heritage, Story Drop, Paris 3D Saga). Other projects created a fictional story inspired by true events, locations and characters (China Heart and WhaiWhai). Haunted London didn't have an overall story but each trail had an associated story and locations.

The mobile app was usually the main platform or only platform of these projects (Haunted London, China Heart, Story Crop and Unlocking the Story: Explore Glasgow's Canals Heritage).

These apps were mostly free (Paris 3D Saga, China Heart, Story Drop and Unlocking the Story: Explore Glasgow's Canals Heritage) or had a reduced cost (Haunted London and WhaiWhai).

The apps were practical. Their user interfaces were simple and easy to use. The apps satisfied the basic need of location information and were cohesively designed. Most had images and short texts (Haunted London, China Heart, Unlocking the Story: Explore Glasgow's Canals Heritage and Story Drop). Videos were also popular (China Heart, Unlocking the Story: Explore Glasgow's Canals Heritage, Story Drop and Paris 3D Saga).

Most of these projects can serve as a walking tour: location-based like China Heart or WhaiWhai where users need to be on site to solve clues and reach the end of the story or non location-based like WhaiWhai's sofa mode, Story Drop and Unlocking the Story: Explore Glasgow's Canals Heritage, which allow users to access information without being on site.

Games

Location-based games. These games allow users to get to know their surroundings in some cases they can act as guided tours (Tripventure, Stray Boots). They tend to have a short duration, usually up to three hours (Tripventure, Stray Boots and REXplorer).

The main platform is usually a mobile app (Tripventure, Stray Boots) but other platforms such as social networks, print maps, website, live activities amongst others can contribute to the game (Street Reads, The Roswell Experience).

Some projects were free (Geocaching, Street Reads, The Roswell Experience) while others were paid, with an individual tour/game under $15 (Tripventure, Stray Boots) or a device rental 12€/1.5 hour (REXplorer).

These games took gamers on scavenger hunts (Stray Boots), quests (REXplorer, Street Reads); or adventures to find hidden objects (Tripventure – Rocco Ratcha and Fall of the Wall, Geocaching), locations (The Roswell Experience) or even characters (Tripventure – Secret City 1/ 2 and Inspector Tripton: Murder Underground).

Most had a fictional story based on the locations history and characters with the exception of Geocaching, which is based solely on GPS coordinates. The texts of the story, locations and characters were short.

Other games. The four games examined were free and had as their principal objective to communicate destinations' information and culture (Brasil Quest, Agent UK, Tag Me If You Can and Smile Thailand).

The platforms ranged from mobile apps (Brasil Quest, Smile Thailand), website (Tag Me If You Can and Agent UK) or social networks (Tag Me If You Can and Agent UK), according to each project.

The stories were based on the locations' culture and characters. They were short and easily understood.

4.2 TravelPlot Porto

As we found no data regarding the impact of using transmedia storytelling techniques in tourism with the initial case study analysis and exploratory interviews, it was decided to make one pilot experience based in Porto that we named TravelPlot Porto.

TravelPlot Porto is a location based transmedia storytelling project, which strived to provide its users a fun and engaging way to visit Porto through the process of locating a hidden treasure. It offers a challenge to users and sparks curiosity to explore Porto's history, monuments and historical characters as well as to experience Porto's events, sights, wine and gastronomical delights.

This pilot blended historical information with fictional story. Tourists could accompany the story protagonist experience in synchronism online through his social networks.

The design is detailed in the next chapter.

5. TravelPlot Porto Design and Production

5. TravelPlot Porto design and production

To collect the data required to design and produce TravelPlot Porto, three qualitative methods were used: participant observation, exploratory interviews and case study analysis.

The first method, participant observation, demanded "a firsthand involvement in the social world chosen for study" (Marshall & Rossman, 2006, p.100). These participant observations in the tourists' context proved to be extremely useful since it provided insights on their natural behaviors and obstacles encountered. This participant observation occurred inside and outside Porto, under different circumstances, such as:

- Traveling with a group of friends, one friend or family;

- Sightseeing foreign cities with locals and non-locals;

- Was the country's language known or not.

In Porto, the participant observations focused on visiting the most touristic places, namely monuments, wine cellars and doing a Douro cruise.

The exploratory interviews were done mostly to tourism researchers and touristic agents, including Melchior Moreira and Isabel Castro from Turismo de Porto e Norte de Portugal (Moreira, M. & Castro, I., personal communication, October 21, 2011); Maria João Nunes - Oportonity City (Nunes, M. J., personal communication, November 21, 2011); Teresa Resende - Departamento Municipal de Arquivos da Câmara Municipal do Porto (Resende, T., personal communication, February 3, 2012); Célia Lima – Sovignus (Lima, C., personal communication, December 14, 2011); Nuno Fazenda - Comissão de Coordenação e Desenvolvimento Regional do Norte (Portugal) (Fazenda, N., personal communication, February 10, 2012) and António Tavares – DouroAzul (Tavares, A., personal communication, December 12, 2011).

The data gathered from the the participant observation, exploratory interviews and case study analysis provided the basis for the construction of TravelPlot Porto. Since there isn't a framework for the construction of transmedia storytelling projects, this pilot was built by freely applying Jesse James Garrett (2010) conceptual framework depicted on his book, *The Elements of User Experience: User-Centered Design for the Web and Beyond*, originally devised to design the user experience on websites. This framework was comprised of five planes: the strategy plane, the scope plane, the structure plane, the skeleton plane and the surface plane (Garrett, 2010). In the strategy plane, a compromise between user needs and the site objectives is achieved. The creation of functional specifications and content requirements occurs in the scope plane. The information architecture is addressed in the structure plane. The information design, interface design and navigation design are thought out in the skeleton plane. Finally, the surface plane focuses on the sensory experience provided by the finished product.

5.1 Strategy plane

The first step of TravelPlot Porto design was the definition of the user experience conceptual framework, particularly how the project platforms would integrate. The strategy was then defined in terms of key objectives and expected results for the users and the researcher.

The key objective for the users was to create an emotional and engaging experience, which would result in a personalized visit to Porto, tailored to tourists' tastes and participation. This pilot would also allow them to get to know Porto's main sights and culture in an active or passive way, according to the chosen platforms.

The researcher's key objective was to gather first hand information on the following questions:

- Can transmedia storytelling transform touristic visits into more engaging experience?

- Which is the willingness for local based transmedia storytelling products?

- How do tourists behave across the different platforms?

- Which are the media channels most used and in what ways?

- What content do tourists create, share and how frequently?

- How willing are the tourists to interact with the story?

Market Segmentation. The chosen brand/region for TravelPlot Porto was Porto with a connection to Douro. Both locations are World Heritage by UNESCO. Porto was awarded this distinction in 1996 due to its "outstanding universal value as the urban fabric" (UNESCO, 1996), while Alto Douro Wine Region became World Heritage in 2001 because of its landscape, created by human activities (UNESCO, 2001).

TravelPlot Porto targeted two strategy Portuguese tourism products set by the Portugal's National Strategic Plan for Tourism (Turismo de Portugal, 2007): city break, and gastronomy and wine.

This pilot would run for twelve weeks, matching the highest touristic Porto season, starting on June 17th 2012, the day of Porto's biggest street festival (Saint John) and ending on September 9th 2012, which corresponds to Douro's harvest season.

Several studies were analyzed in order to understand tourists' behavior and habits. Amongst the metrics reviewed were the main motives to visit Porto and North of Portugal, the preferred lodging options, the average number of nights spent in Porto urban area, if tourists were traveling alone or in a group, the average money spent during the trip and the main activities performed during their visit. From this data, the main conclusions relevant for

TravelPlot Porto design was that more than half of visitors were travelling by leisure and sleeping in hotels. The vast majority were traveling in groups and organizing their trip over the Internet. Their main activities included visiting monuments, experiencing gastronomy, shopping and visiting the wine cellars (IPDT, 2008) (IPDT, 2009) (IPDT, 2010). Therefore, the target group set was tourists visiting Porto on vacations/leisure. Even though TravelPlot Porto story was aimed at United Kingdom tourists' since it focused on the common history between Portugal and the United Kingdom, all tourists were encouraged to participate and should be able to relate to the project. Due to the strong connection locals have with Porto, some engagement with this project on their part was expected.

TravelPlot Porto locations and story encompassed tourists' main and preferred activities in Porto like experimenting gastronomy, visiting monuments, Porto wine cellars and museums.

Three different personas and user scenarios were created to represent the target users (see Table 4, Table 5, and Table 6).

Table 4

Persona #1 and Scenario

Name	Ollie Smith
Age	30
Occupation	Farmer
Nationality	British
Background	Ollie and his wife relish travelling to wine regions all over the world and do wine tastings. Porto has been on their visit list for a very long time.
Technical comfort level	Low
User goals	Learn about Port history and go to wine tastings.
Scenario	Ollie searches online for information about Porto. Ollie clicks on TravelPlot Porto website. Ollie reads the story introduction. Ollie downloads the app. Ollie selects and visits the selected locations in Porto.

Table 5

Persona #2 and Scenario

Name	Paco, Beatriz and Marisa
Age	23
Occupation	Students
Nationalities	Spanish
Background	They are adventurous and want to learn the city's history in a fun way. They love to interact and share their experiences on social networks as well as eat and drink well.
Technical comfort level	High
User goals	To sightsee Porto in a fun way and get to know its history.
Scenario	Paco, Beatriz and Marisa arrive to the tourism office. They grab TravelPlot Porto map at the tourism office. They download the app at the tourism office. Paco, Beatriz and Marisa visit the locations near to their present location. When they arrive home, they follow the project on the social networks.

Table 6

Persona #3 and Scenario

Name	Janet Sheridan
Age	47
Occupation	Teacher
Nationality	British
Background	Janet and her niece are passionate about cities with heritage. They are keen in experimenting different types of foods.
Technical comfort level	Medium
User goals	To visit Porto's monuments and try Porto's gastronomy.
Scenario	Janet eats the TravelPlot Porto menu and gets to know the stories behind the dish menu. Janet downloads the app. Janet visits two locations near her. Janet shares her pictures on the social networks.

5.2 Scope plane

In this plane, the focus was on the content and functionality offered to TravelPlot Porto users. TravelPlot Porto's story was mostly based on real events, real locations, historical characters and traditions. By participating, users got to discover Porto's culture and history.

Story. TravelPlot Porto told the story of Peter, an English tourist, who was on a mission to save Port Wine. In order to succeed, Peter had to find the location of Bacchus's cup, which held the magic of wine and the remaining hidden treasure before Filipe.

The story was very simple and easily understood. It was divided into nine chapters that correspond to nine historical events of Porto's history. Each chapter was a *narrative line* and each story location, a *stop*. Using the subway map analogy, the user could choose any line and exit at any stop. There was no specific order that needed to be followed to understand the story. Users could choose the location they wanted to visit according to their proximity, tastes, story chapters or even visit the locations following the story's chronological order.

TravelPlot Porto had 42 locations (see Table 7). Thirty-seven locations were known. The remaining five locations could only be discovered by going to TravelPlot Porto partners (Cálem; DouroAzul; Vinhas d'Alho; Porto com Arte) and by filling out the project's questionnaire (see Figure 2).

Figure 2. Secret location at Vinhas d'Alho restaurant.

Table 7

TravelPlot Porto Chapters and Locations

Chapters	Locations
Introduction	
Chapter 1 – The Romans (79 B.C.)	(1A) Casa do Infante (Interior) (Historical Building/Museum)
Chapter 2 – Commerce Treaty (1353)	(2A) Sé (Exterior/Cathedral)
	(3) Torre da Rua de D. Pedro Pitões (Historical Building)
	(4) Torre da Rua de Baixo (Historical Building)
	(5) Porta de Sant'Ana (Landmark)
Chapter 3 – D. Pedro I Attacks (1355)	(6) Muralha Fernandina (Landmark)
	(7) Casa da Rua da Reboleira nº55 (Historical Building)
	(8) Postigo de Carvão (Landmark)
Chapter 4 – D. João I Marriage (1387)	(9) Estátua do Porto (Statue)
	(10) Ruína Medieval da Casa da Câmara (Historical Building)
	(11) Estação de São Bento (Historical Building/Train Station)

(table continues)

Chapters	Locations
Chapter 5 – Departure to Ceuta (1415)	(1B) Casa do Infante (Exterior) (Historical Building/Museum) (12) Monumento ao Infante D. Henrique (Statue) (13) Bandeirinha da Saúde (Landmark) (14) Torre do Palácio dos Terenas (Historical Building) (15) Monumento aos Tripeiros (Statue) (16) Farol de S. Miguel, o Anjo (Historical Building)
Chapter 6 – Ponte das Barcas' Disaster (1809)	(2B) Sé (Interior / Silver Altar) (Cathedral) (17) Monumento aos Heróis da Guerra Peninsular (Statue) (18) Hospital de Santo António (Historical Building/Hospital) (19) Palácio das Carrancas (Historical Building/Museum) (20) Igreja dos Terceiros de S. Francisco (Church) (21) Alminhas da Ponte (Landmark) (22) Monumento evocativo do desastre da Ponte das Barcas (Landmark) (23) Ponte Pênsil (Landmark) (24) Mosteiro da Serra do Pilar (Church)
Chapter 7 – Porto's Siege (1832)	(25) Igreja de Santa Clara (Church) (26) Monumento a D. Pedro IV (Statue) (27) Castelo do Queijo (Historical Building) (38) Igreja da Nossa Senhora da Lapa (Church)
Chapter 8 – Port Wine (1865)	(28) Casa da Feitoria (Historical Building) (29) Casa da Rua da Reboleira nº59 (Historical Building) (30) Barco Rabelo (DouroAzul) (Boat) (31) Ponte D. Luís I (Bridge) (39) Ponte D. Maria Pia (Bridge)
Chapter 9 – Present (2012)	(32) Chafariz da Rua de São João (Fountain) (33) Mercado do Bolhão (Market) (34) Muro dos Bacalhoeiros, Casa nº 114 (Building) (35) Vinhas d'Alho (Restaurant) (36) Porto com Arte (Souvenir Shop/Wine Shop/Art Gallery) (37) Cálem (Wine Cellar) (40) Jardins do Palácio de Cristal (Garden) (41) Parque da Cidade (Garden) (42) Câmara Municipal do Porto (City Hall)

Characters. TravelPlot Porto story was comprised of both fictional and historical characters.

The four main fictional characters - Peter Smith, Kevin Smith, Filipe Melo Oliveira and Miguel Gomes Oliveira (see Table 8) – were part of the last story chapter.

Table 8

TravelPlot Porto Main Fictional Characters

Peter Smith was not the typical 18-year-old English tourist. He came to Porto on a quest: to find Porto's hidden treasure. Initially lost, he soon became fascinated by the city's history and beauty but above all the warmth of its people. He uploaded a video portraying his adventures weekly to his little brother Kevin.

Kevin Smith was Peter's 8-year old brother. He always dreamt of finding Porto's treasure.

Filipe Melo Oliveira was born and raised in Porto. His father Miguel trained him to become the next Cale but realized his son's greed and had no other option but to disinherite him. Filipe couldn't accept Miguel's decision and set of to discover the treasure location at any cost.

Miguel Gomes Oliveira was the present Cale. His disagreements with Filipe, his son, had taken a very heavy toll on him. Just when he thought everything was lost, he found Peter, the true bloodline of the Cale.
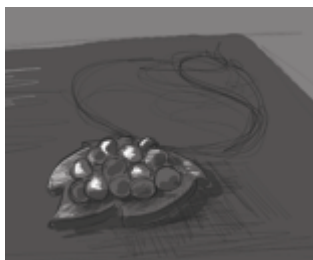
Cales were the protectors of the Bacchus' cup and gold coins.

The remaining five secondary fictional characters of TravelPlot Porto story were scattered through various story chapters: in chapter 2 - Ana Alho Gonçalves (daughter Afonso Martins Alho), in chapter 5 - Rodrigo Silva de Figueiredo (son Aires Gonçalves de Figueiredo), and in chapter 6 - Francisco Gama Pereira and his daughters: Ana Pereira Silva and Joaquina Pereira Silva.

TravelPlot Porto historical characters were present in all story chapters:

- Introduction – Mythological Gods (Dionysus and Rhea);

- Chapter 1 – Perpena (roman soldier);

- Chapter 2 – Afonso Martins Alho (merchant and ambassador) and Afonso IV (king of Portugal);

- Chapter 3 – Afonso IV (king of Portugal and father of D. Pedro), D. Beatriz (mother of D. Pedro), D. Pedro, Inês de Castro (lover of D. Pedro) and D. Fernando (legitimate son of D. Pedro);

- Chapter 4 - João de Aviz (son of D. Pedro and future king of Portugal – D. João I), D. Beatriz (daughter of D. Fernando), Juan I of Castile (Spanish king and husband of D. Beatriz), Phillippa of Lancaster (wife of D. João I) and Aires Gonçalves de Figueiredo (horseman);

- Chapter 5 – Infante D. Henrique (son of D. João I and D. Philippa);

- Chapter 6 – General Soult (Napoleon General) and Duke of Wellington (British soldier);

- Chapter 7 – D. Pedro IV of Portugal (D. Pedro I of Brazil), D. Miguel (D. Pedro IV brother), Maria da Glória (D. Pedro IV daughter), Almeida Garrett and Alexandre Herculano (part of D. Pedro IV battalion);

- Chapter 8 – António Alves Cálem (founder of Porto Cálem).

User Journey. Participants could find the possible treasure locations through an iPhone/Android app, map or website, while live events and social networks allowed real-time interaction between Peter and the audience.

There were three main reading options to TravelPlot Porto story: chronologically, by chapter or by location. To read the story chronologically, the user would begin by reading the story's introduction, followed by the first chapter and correspondent location text. If the user choose to read it by chapter, he would picked his favorite chapter, for example the Departure to Ceuta chapter and then read the texts relating to the locations that were associated to this chapter like Casa do Infante (Exterior), Monumento ao Infante D. Henrique, Bandeirinha da Saúde and so on. If he wished, he could continue the story by reading the remaining chapters. Lastly, the user could opt to read only the story locations texts. He would begin by reading his favorite location story. If he wanted a broader historical context, he could then read the story chapter or remaining locations.

Each location had a story, each chapter had a story, which was related to the chapter locations and the story of TravelPlot Porto encompassed all story chapters and story locations. Therefore, the reading of TravelPlot Porto story could be done from top-down or bottom-up since each story was contained within itself (see Figure 3).
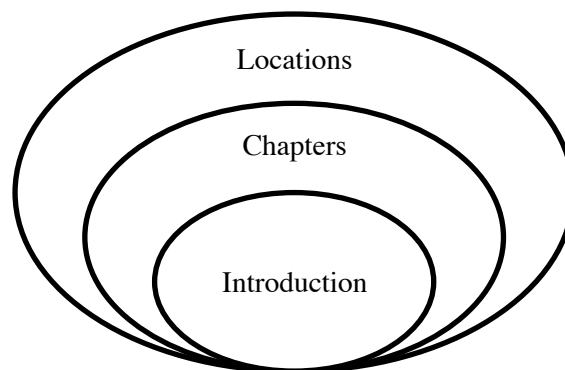
Figure 3. TravelPlot Porto story

Platforms. The platforms chosen to deliver TravelPlot Porto story and act as promotion vehicles were a mobile app (iPhone and Android), a website, social networks (Facebook, Twitter, Pinterest and YouTube), a map and live events (gastronomy, Douro cruise, wine tasting and souvenirs) (see Table 9).

Table 9

TravelPlot Porto Platforms and Main Objective

TravelPlot Porto platforms	Main objective
Mobile application (iPhone and Android)	Helping tourists to reach their points of interest and deliver location-based information.
Website	Aggregate all TravelPlot Porto information and provide the release schedule of all project's platforms.
Peter Smith social networks (Twitter, Pinterest and YouTube)	Allow interactivity between TravelPlot Porto protagonist – Peter – and the users.
TravelPlot Porto social networks (Facebook, Twitter and YouTube)	Project promotion
Print map	Analog platform for those users that didn't have access to an iPhone or Android phone. It also served as a promotional tool.
Live events	Experience Porto's gastronomy, do a Douro cruise or a wine tasting and buy some Porto's souvenirs.

Gamification / Location-based game. TravelPlot Porto was a gamified project by using game design elements in non-game contexts – tourism. The app by itself functioned has a location-based game. The treasure hunt took place in the real world (Porto and Vila Nova de Gaia) and used a mobile location-tracking technology (smartphone with GPS). Location was a fundamental part of the game play since the check-in could only be done on site. The story of TravelPlot Porto was told in the space where the player was.

TravelPlot Porto could therefore be played both actively or passively. If the participants were outside Porto, they could follow the treasure hunt through the protagonist' eyes on

Peter's social networks: Twitter, Pinterest or YouTube. If they were in Porto, they were invited to go on the physical treasure hunt and check-in at the story locations with the projects' app. They should position themselves according to the drawing and read the small location text with the historical data (see Figure 4).
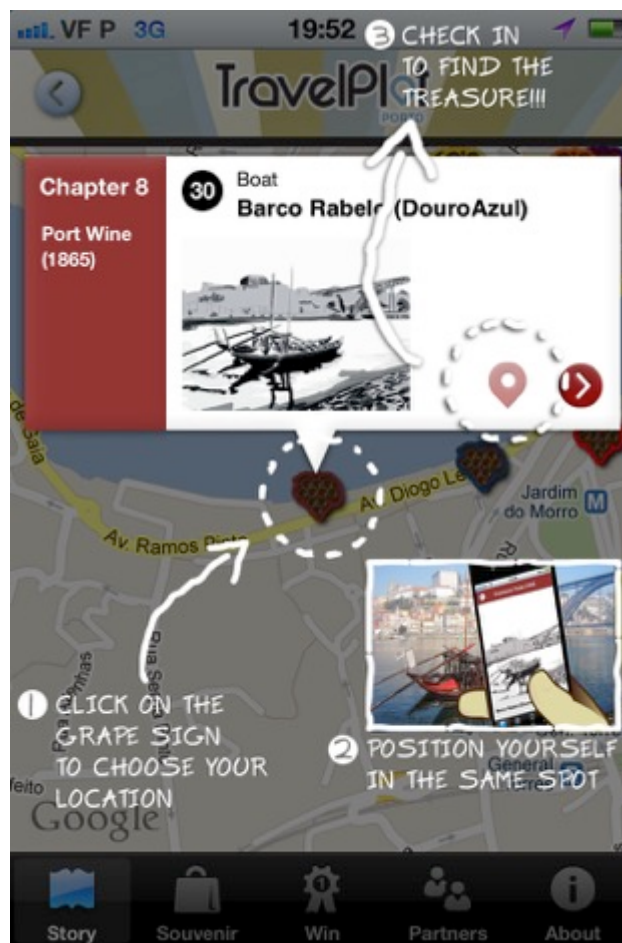
Figure 4. Gameplay

By checking-in, the participant would find out if the treasure was at the chosen location or not (see Figure 5 and Figure 6).
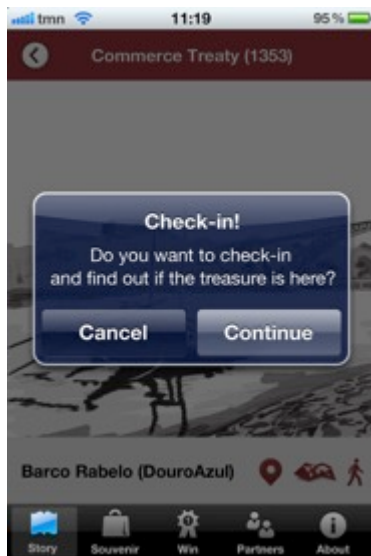
Figure 5. TravelPlot Porto check-in #1
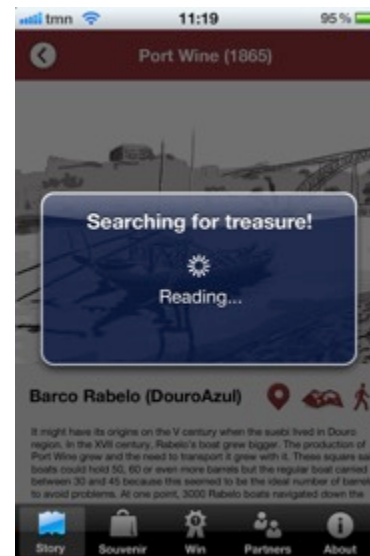
Figure 6. TravelPlot Porto check-in #2

On the app, there was also a souvenir tab, so participants could share their treasure hunt online with friends, through Facebook, Twitter or email (see Figure 7 and Figure 8).

Figure 7. TravelPlot Porto digital souvenir
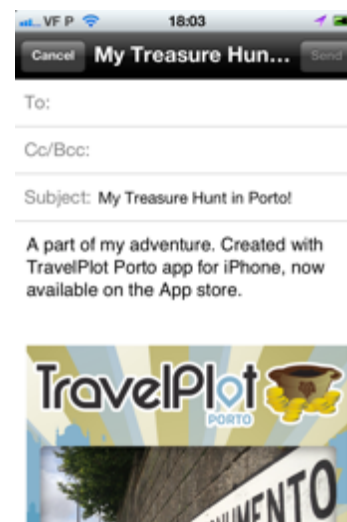
Figure 8. Sharing TravelPlot Porto digital souvenir by email

5.3 Structure plane

The conceptual structure for TravelPlot Porto story was divided into a three-act story, according to the classical narrative structure (see Figure 9 and Figure 10):

- I Act – presentation of story, characters and locations;

- II Act – Peter's journey through all the locations and his interaction with participants on his social networks;

- III Act – story climax at Cálem's wine cellar where Peter found the treasure live, surrounded by tourists. The story resolution occurred at TravelPlot Porto Facebook page, where the page fans got to share their own Porto's treasure.
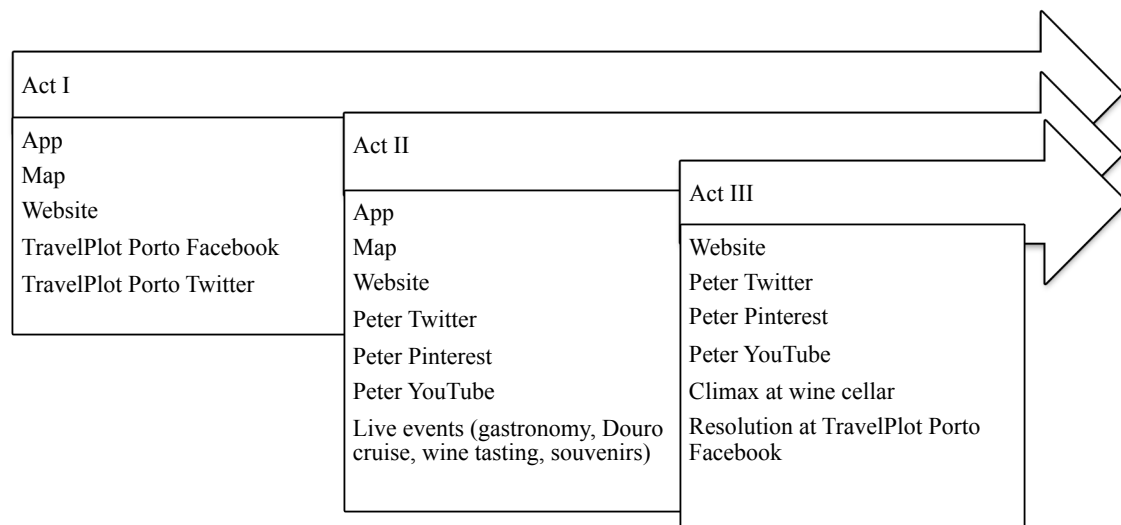
Figure 9. Three-act structure of TravelPlot Porto
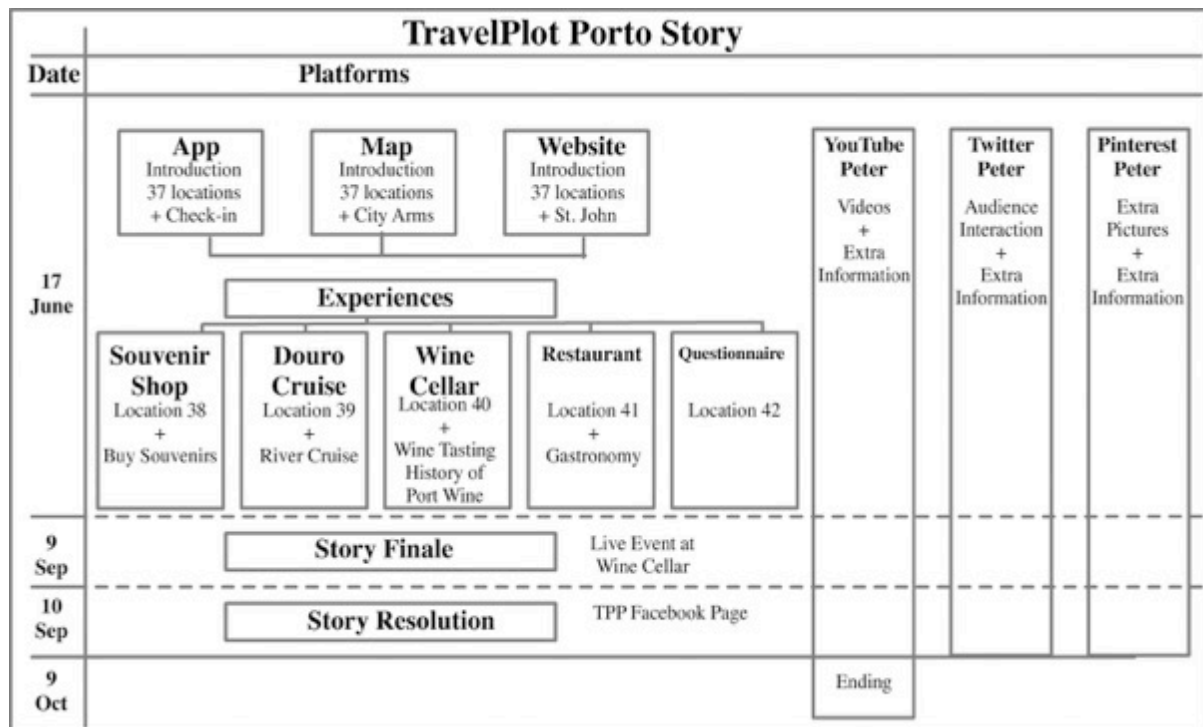
Figure 10. TravelPlot Porto story elements by platforms and release schedule

TravelPlot Porto story platforms had different parts of the story. The institutional platforms – TravelPlot Porto Twitter and Facebook account - convey mostly news and other information related to the project. TravelPlot Porto YouTube channel contained only the project trailer in English and a Portuguese version (see Figure 11).

Story

- App
- Website
- Print Map
- Peter YouTube
- Peter Twitter
- Peter Pinterest
- Live events (gastronomy, Douro cruise, wine tasting and souvenirs)

TravelPlot Porto Brand Promotion

- Twitter
- Facebook
- YouTube
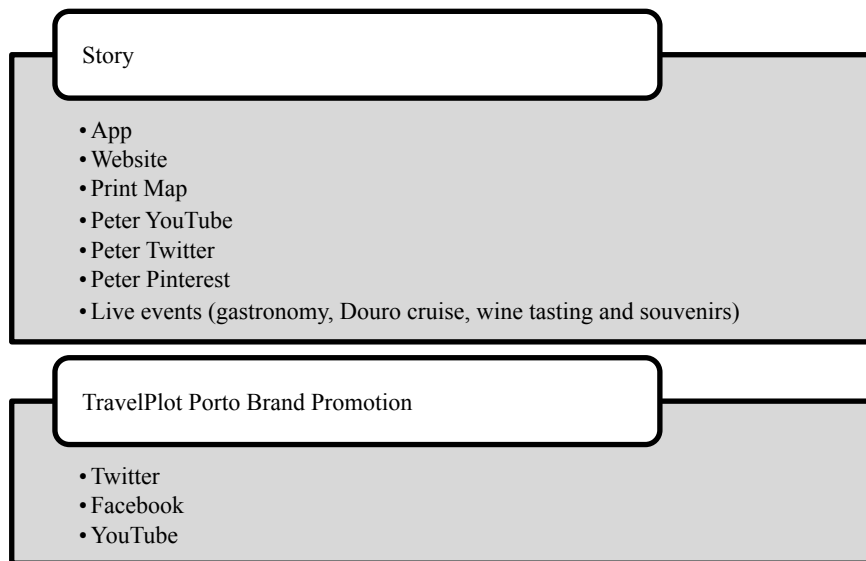
Figure 11. Information architecture of TravelPlot Porto

5.4 Skeleton plane

In the skeleton plane, the wireframes of TravelPlot Porto app, website and map were defined, describing the components they would have and how they would work as a whole (see Table 10, Table 11, and Table 12). The social networks already had a pre-existing layout.

Table 10

Wireframe of TravelPlot Porto App, Website and Map

Platform's main page	Tabs/buttons
App	Story
	Souvenir
	Win
	Partners
	About
Website	Home
	Story
	Release schedule
	Win
	Partners
	About
	Share your experience
	Links to App Store, Google Play, TravelPlot Porto
	Facebook and TravelPlot Porto Twitter, Peter's
	Twitter, Pinterest, Peter's YouTube
	Terms and Conditions
Print map	Story
	Locations
	Partners
	Poster
	Porto's city arms

Table 11

TravelPlot Porto App Content View for Tool Bar

Tabs	Content view
Story	Trailer
	Synopsis
	By chapters
	By locations
	All
	Characters
	Map
	More
Souvenir	
	Questionnaire
Win	
Partners	
About	FAQ
	Social responsibility
	Team
	Terms and conditions
	Win rules

Table 12

TravelPlot Porto Website Content View for Tool Bar

Tabs	Content view
Home	
Story	Synopsis
	By chapters
	By locations
	All
	Characters
	Saint John festival
Release schedule	
Win	Questionnaire
Partners	
About	Team
	FAQ
	Social responsibility
	Press kit

5.5 Surface plane

In a transmedia storytelling project, the design across the multiple platforms should be consistent. In this particular case, TravelPlot Porto poster was the starting point for the several teams (see Figure 12, Figure 13, Figure 14, Figure 15, Figure 16, Figure 17, Figure 18, Figure 19, Figure 20, Figure 21, Figure 22, and Figure 23).

The call to action (Can you find the treasure?) enabled participants to immediately understand the experience TravelPlot Porto proposed.

Figure 12. Poster TravelPlot Porto

Figure 13. TravelPlot Porto app

screen shot #1
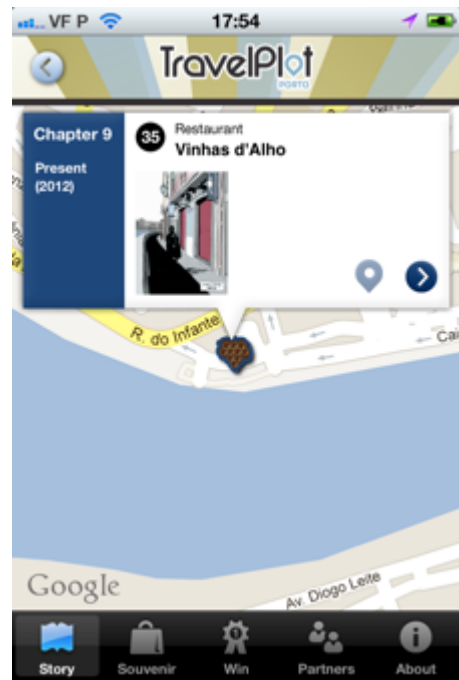
Figure 14. TravelPlot Porto app

screen shot #2
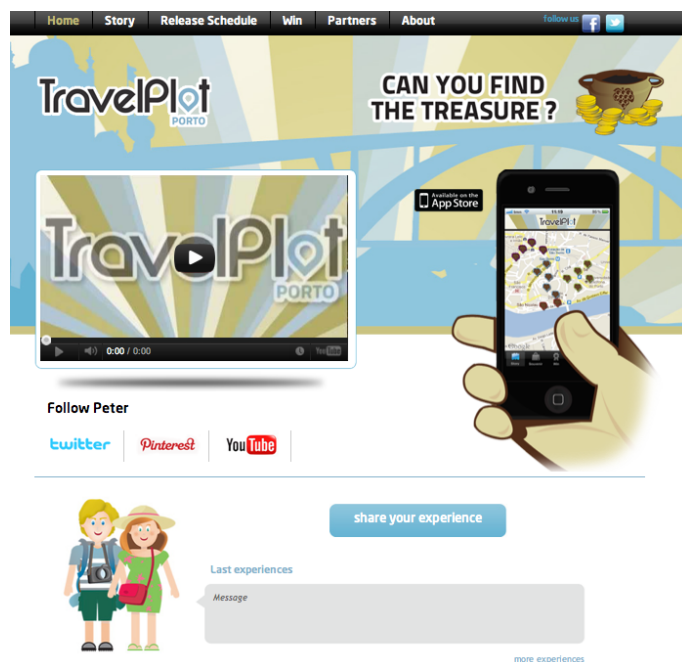
Figure 15. TravelPlot Porto website main page screen shot

Figure 16. TravelPlot Porto map front

Figure 17. TravelPlot Porto map back

Figure 18. TravelPlot Porto Facebook page

Figure 19. TravelPlot Porto YouTube channel

Figure 20. TravelPlot Porto Twitter account

Figure 21. Peter's Twitter account
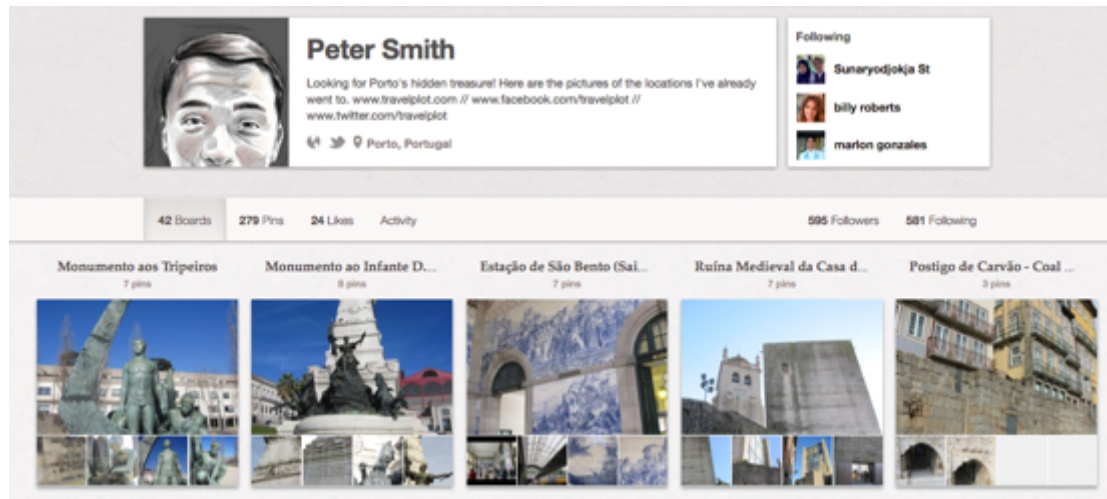
Figure 22. Peter's Pinterest account
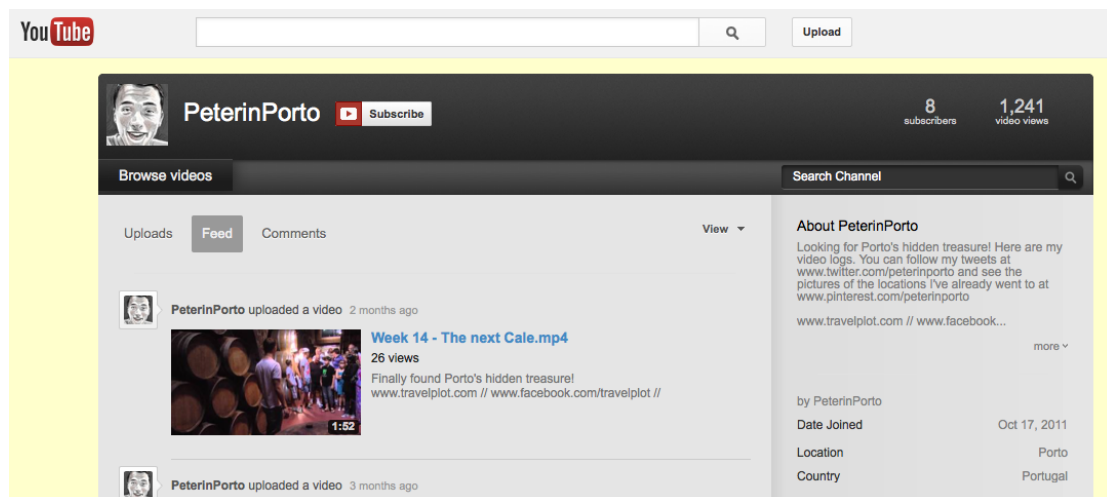
Figure 23. Peter's YouTube channel

5.6 TravelPlot Porto finale

TravelPlot Porto conclusion happened at Cálem wine cellar. In this live event, Peter and Filipe had their final confrontation surrounded by tourists. The treasure was found live and the related pictures and video were published on TravelPlot Porto social networks (see Figure 24 and Figure 25).

Figure 24. Finding TravelPlot Porto treasure #1

Figure 25. Finding TravelPlot Porto treasure #2

TravelPlot Porto conclusion took place on the Facebook page, where followers were asked to share their own favorite Porto treasure (see Figure 26).

Figure 26. TravelPlot Porto finale

TravelPlot Porto was also a social responsibility project by joining the campaign to raise funds for the construction of the new pediatric wing of Hospital de São João.

TravelPlot Porto live event partners agreed to donate 1€ in the ensuing products:

- Cálem – wine cellar tour ticket if TravelPlot Porto was mentioned;

- DouroAzul - six bridges cruise ticket if TravelPlot Porto was mentioned;

- Vinhas d'Alho – buying TravelPlot Porto menu (Caldo Verde, Francesinha, Tripas à Moda do Porto and/or Bacalhau à Gomes de Sá and Leite Creme) (see Figure 27);

- Porto com Arte – buying TravelPlot Porto basket (Portuguese chocolates, a sardine magnet, small magnets and postcards) (see Figure 28).

Figure 27. TravelPlot Porto menu

Figure 28. TravelPlot Porto basket

By taking part on TravelPlot Porto live events, participants would transform TravelPlot Porto fictional treasure into a *real* treasure, which would be donated at the end of the project to Hospital de São João.

5.7 TravelPlot Porto and the media

TravelPlot Porto press conference occurred on June 21st, originating a vast media coverage namely on TV, newspapers, magazines, blogs, newsletters and social media (see Figure 29, Appendix 3 and Appendix 4).

Figure 29. TravelPlot Porto press conference

6. TravelPlot Porto Results

6. TravelPlot Porto results

At the time of TravelPlot Porto launch, there wasn't access to a platform, which could aggregate data and permit an overall data analysis of this location based transmedia storytelling pilot. Therefore, each TravelPlot Porto platform was analyzed individually by resorting to specific tools that were available at the time of the data analysis (see Table 13).

Table 13

Data Collection Tools

Platforms	Tools
App	Google Analytics; App store and Google play
Website	Google Analytics
Print Map	Number of prints
TravelPlot Porto Facebook	Facebook analytics
TravelPlot Porto YouTube	YouTube analytics
TravelPlot Porto Twitter	TweetReach and Twitter
Peter Twitter	TweetReach and Twitter
Peter Pinterest	PinReach and Pinterest
Peter YouTube	YouTube analytics
Live events	Partners data

The sample of this data collection was a convenience, non-random sample.

In addition to the previous tools, TravelPlot Porto website and app had an online questionnaire, composed by closed and open questions (see Appendix 5).

In the original planning, a focus group was predicted to take place at the end of TravelPlot Porto but due to the lack of eligible people, a different collection data method was used: interviews.

These interviews were both written and spoken, taking place after TravelPlot Porto finale with the exception of two spoken interviews.

The written interviews were done to forty students at Trás-os-Montes e Alto Douro University – Second year of the Communication and Multimedia degree.

The semi-structured spoken interviews were done to seven foreign tourists at Tattva Design Hostel, the biggest Porto hostel. Two interviews done during TravelPlot Porto were added to this sample – despite being friends with the researcher – due to the richness of their input.

The researcher had an active interaction with the social networks. This compromise was necessary due to the need to check the material that was being uploaded on the social networks and the need to promote TravelPlot Porto, an unknown project to the public that was tested in a real world environment. This interaction was kept to a minimum.

6.1 Mobile application

The iPhone app was released on June 17th like all the other main platforms of TravelPlot Porto. Due to the public demand, an app for the Android operating system was also released on July 23rd.

Six weeks after the TravelPlot Porto app release, the number of downloads were 755 (725 iOS operating system and 30 Android operating system). At the end of the project, the number of downloads were 950 (834 iOS operating system and 116 Android operating system).

The data from both operating systems was aggregated onto a single Google analytics account. It was opted to remove the data from July 17th because, on that day, the Android app was tested.

During twelve weeks, the app had 1,895 visits (see Figure 30). There were 22 daily average visits. The maximum number of daily visits on any given day was 107 visits while the minimum was two visits.
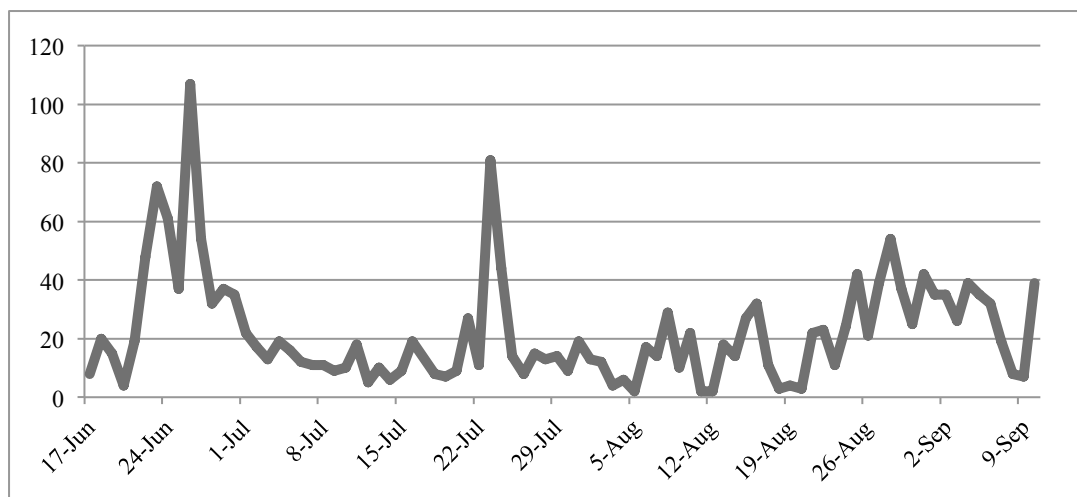
Figure 30. Visits to TravelPlot Porto app

The app visits came from 32 countries/territories, ten of which contributed to 94,99% of visits (see Table 14). The top countries were Portugal (1,391), Spain (150) and Italy (45).

TravelPlot Porto app had visitors from 168 cities (see Table 15 and Table 16).

Porto and Lisbon together counted for 873 visits, almost half of the total visits. The top ten of national cities was mostly comprised by northern Portuguese cities.

As for the international cities with most visits, Madrid (87) was the city with most visits, followed by Milan (32) and Wroclaw (24).

Table 14

Top 10 Countries TravelPlot Porto App

Country / territory	Visits	% Visits
Portugal	1,391	73.4%
Spain	150	7.92%
Italy	45	2.37%
Netherlands	40	2.11%
Poland	38	2.01%
Brazil	34	1.79%
United Kingdom	31	1.64%
France	29	1.53%
Switzerland	25	1.32%
Germany	17	0.9%
Total	1,800	94.99%

Table 15

Top 10 Portuguese Cities Visiting TravelPlot Porto App

City	Visits	% Visits
Porto	515	27.18%
Lisbon	358	18.89%
Funchal	79	4.17%
Vila Nova de Gaia	55	2.9%
São João da Madeira	49	2.59%
Maia	48	2.53%
Leiria	34	1.79%
Matosinhos	33	1.74%
Gondomar	28	1.48%
Vila do Conde	25	1.32%
Total	1,224	64.59%

Table 16

Top 10 International Cities Visiting TravelPlot Porto App

City	Visits	% Visits
Madrid	87	4.59%
Milan	32	1.69%
Wroclaw	24	1.27%
Barcelona	16	0.84%
Zurich	13	0.69%
São Paulo	13	0.69%
Bilbao	13	0.69%
London	13	0.69%
Amsterdam	12	0.63%
Paris	10	0.53%
Total	233	12.3%

The language with most pageviews was Portuguese (Portugal) accessed in Portugal with 653 pageviews (34.46%) and Portuguese accessed in Portugal with 381 pageviews (20.11%). After that was Spanish accessed in Spain with 183 pageviews (9.66%) and English accessed in Portugal with 79 pageviews (4.17%) (see Table 17).

From the 1,895 visits to TravelPlot Porto app, 74% of visits (1,400) were from returning visitors and 26% of the visits (495) were from new visitors.

There were a total of 6,421 pageviews. This number includes the pages viewed and the check-ins made on the TravelPlot Porto app.

The duration of the majority of pageviews (1,629) was between 61-180 seconds and 181-600 seconds (1,572) (see Table 18).

Table 17

Top 16 Languages TravelPlot Porto App

Language/country of app access	Pageviews	%
Portuguese (Portugal) / Portugal	653	34.46%
Portuguese / Portugal	381	20.11%
Spanish / Spain	183	9.66%
English / Portugal	79	4.17%
German / Germany	76	4.01%
English / United States	74	3.91%
Italian / Italy	46	2.43%
Polish / Poland	45	2.37%
English / Great Britain	44	2.32%
Ducth / Netherlands	41	2.16%
Portuguese / Brazil	41	2.16%
French / France	34	1.79%
Lithuanian / Lithuania	29	1.53%
Russian / Russia	18	0.95%
Simplified Chinese / China	17	0.9%
English (Great Britain) / Great Britain	12	0.63%
Total	1,773	93.56%

The pages with the most pageviews were the map (1,405), the souvenir page (601) and the win page (576) (see Table 19). Two of TravelPlot Porto partners were in the top 20 most viewed pages: Barco Rabelo (DouroAzul) with 75 pageviews and Cálem with 68 pageviews.

Table 18

Visit Duration TravelPlot Porto App

Visit duration (seconds)	Pageviews
0-10	454
11-30	496
31-60	648
61-180	1,629
181-600	1,572
601-1800	634
1801+	988
Total	6,421

Table 19

Top 20 Content Pages TravelPlot Porto App

Page	Pageviews
/page/Map	1,405
/page/Souvenir	601
/page/Win	576
/page/Story/All	210
/page/Locations/Casa do Infante (Interior)	196
/page/Story/Characters	196
/page/Chapter/The Romans (79 B.C.)	166
/page/Locations/Sé (Exterior)	107
/page/About/FAQ	94
/page/About/(null)	93
/page/Chapter/Introduction	88
/page/About/Team	83
/page/Chapter/Present (2012)	80
/page/Chapter/Commerce Treaty (1353)	80

(table continues)

Page	Pageviews
/page/Locations/Hospital de Santo António	77
/page/Locations/Barco Rabelo (DouroAzul)	75
/page/Locations/Monumento aos Heróis da Guerra Península	74
/page/Locations/Mosteiro da Serra do Pilar	74
/page/Locations/Cálem	68
/page/Locations/Castelo do Queijo	63

A total of 127 check-ins from 21 participants were registered. Mercado do Bolhão was the location with the most check-ins (See Table 20).

Table 20

Top 11 Locations by Check-ins

Location number	Location	Check-ins
33	Mercado do Bolhão	22
5	Porta de Sant'Ana	9
36	Porto com Arte	9
11	Estação de São Bento	8
28	Casa da Feitoria	7
30	Barco Rabelo (DouroAzul)	7
8	Postigo de Carvão	5
26	Monumento a D. Pedro IV	5
1B	Casa do Infante (Exterior)	4
25	Igreja de Santa Clara	4
34	Muro dos Bacalhoeiros, Casa nº114	4

The devices most used were Apple's iPhone and iPad (51.35%), Samsung (18.89%) and SonyEricsson (3.11%) (see Table 21).

Table 21

Mobile Device Information TravelPlot Porto App

Mobile device info	Visits	% Visits
Apple iPhone	810	42.74%
(not set)	295	15.57%
Apple iPad	163	8.6%
Samsung GT-I9100 Galaxy S II	115	6.07%
Samsung GT-I9001	77	4.06%
Samsung GT-S5660 Galaxy Gio	65	3.43%
SonyEricsson LT15i Xperia Arc	59	3.11%
Samsung GT-N7000 Galaxy Note	37	1.95%
Samsung Galaxy Nexus	35	1.85%
Samsung GT-P7300 Galaxy Tab 8.9	29	1.53%
Total	1,685	88.92%

6.2 Website

TravelPlot Porto website had 3,159 visits (see Figure 31). The data from the first two days (June 17th and 18th) aren't included in this analysis due to a programming error.

The day with higgest number of visits was June 26th, a direct result from the TravelPlot Porto press coverage.
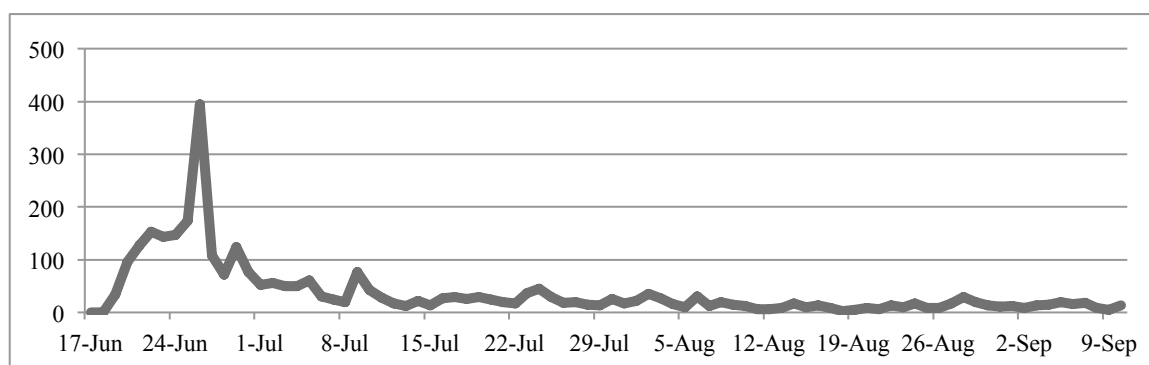
Figure 31. Visits to TravelPlot Porto website

TravelPlot Porto was visited by 51 countries/territories. Portugal was by far the country with most visits (2,560), followed by the United States (102) and the United Kingdom (99) (see Table 22).

Table 22

Top 10 Countries to Visit TravelPlot Porto Website

Country / territory	Visits	%
Portugal	2,560	81.04%
United States	102	3.23%
United Kingdom	99	3.13%
Brazil	67	2.12%
Spain	55	1.74%
Germany	27	0.85%
Canada	22	0.7%
France	22	0.7%
Netherlands	22	0.7%
Australia	21	0.66%
Total	2,997	94.87%

There were people from 350 different cities visiting TravelPlot Porto website (see Table 23 and Table 24). Porto was the Portuguese city with most visits (1,109) followed by Lisbon (461). As for the foreign cities, London was the foreign city with the highest number of visits (36), followed by New York with 24 visits.

Portuguese and English were the most frequent languages (93.13%) to the TravelPlot Porto website (see Table 25).

Table 23

Top 10 Portuguese Cities Visiting TravelPlot Porto Website

City	Visits
Porto	1,109
Lisbon	461
Vila Nova de Gaia	222
Maia	109
Braga	65
Matosinhos	60
Felgueiras	44
São João da Madeira	43
Funchal	42
Aveiro	38
Total	2,193

Table 24

Top 10 International Cities Visiting TravelPlot Porto Website

City	Visits
London	36
New York	24
Sydney	17
Madrid	16
Cardiff	14
Derby	10
Araras	10
Belo Horizonte	9
Orange	9
Athens	8
Total	153

Table 25

Top 15 Languages Visiting TravelPlot Porto Website

Language	Visits	%
Portuguese (Portugal)	1,431	45.3%
English (United States)	859	27.19%
Portuguese	362	11.46%
Portuguese (Brazil)	159	5.03%
English (Great Britain)	72	2.28%
English	59	1.87%
Spanish (Spain)	34	1.08%
French (France)	28	0.89%
Spanish	21	0.66%
Dutch (Netherlands)	19	0.6%

(table continues)

Language	Visits	%
German (Germany)	17	0.54%
French	16	0.51%
Italian (Italy)	10	0.32%
Dutch	10	0.32%
German	8	0.25%
Total	3,105	98.3%

There were 2,395 unique visitors (76%) to the TravelPlot Porto website and 764 visits from returning visitors (24%). The total number of pages viewed (pageviews), including the repeated view of a single page was 9,099 pageviews. The duration of most pageviews was between 181-600 seconds and 0-10 seconds (see Table 26).

Table 26

Visit Duration TravelPlot Porto Website

Visit duration	Visits	Pageviews
0-10 seconds	2,033	2,153
11-30 seconds	146	409
31-60 seconds	149	493
61-180 seconds	345	1,686
181-600 seconds	304	2,348
601-1800 seconds	155	1,555
1801+ seconds	27	455
Total	3,159	9,099

The operating system that contributed to the highest number of visits was the Windows system (1,641), iOS (716), Macintosh (664) and Android (76) (see Table 27).

A quarter of the traffic of TravelPlot Porto (799 visits) came from mobile devices, including tablet.

Fifteen different types of mobile devices contributed to 96.25% of the total of visits (see Table 28). The vast majority of the mobile visits came from Apple devices (89.61%).

The first traffic source to TravelPlot Porto website was Google with 861 visits and direct with 787 visits. The rest of the traffic came from referrals such as wowsystems.pt, Facebook and news sites (see Table 29).

Table 27

Operating System Visiting to the TravelPlot Porto Website

Operating system	Visits	Pages / visit
Windows	1,641	3.36
iOS	716	1.58
Macintosh	664	3.11
Android	76	2.32
Linux	52	3.79
(not set)	4	2
BlackBerry	4	2
SymbianOS	1	4
Windows Phone	1	1
Total	3,159	2.88

Table 28

Top 15 Mobile Devices TravelPlot Porto Website

Mobile device info	Visits	%
Apple iPhone	559	69.96%
Apple iPad	136	17.02%
(not set)	23	2.88%
Apple iPod Touch	21	2.63%
SonyEricsson LT15i Xperia Arc	8	1%
Samsung GT-I9000 Galaxy S	5	0.63%
Samsung GT-I9100 Galaxy S II	5	0.63%
Asus Eee Pad Transformer TF101	4	0.5%
Samsung GT-P7300 Galaxy Tab 8.9	4	0.5%
Samsung GT-S5660 Galaxy Gio	4	0.5%
Total	769	96.25%

Table 29

Top 10 Traffic Sources TravelPlot Porto Website

Source / medium	Visits	%
Google / organic	861	27.26%
(direct) / (none)	787	24.91%
wowsystems.pt / referral	479	15.16%
facebook.com / referral	332	10.51%
noticias.up.pt / referral	231	7.31%
t.co / referral	44	1.39%
boasnoticias.clix.pt / referral	41	1.3%
lowcostportugal.net / referral	38	1.2%
scoop.it / referral	36	1.14%
yellow.pt / referral	35	1.11%
Total	2,884	91.29%

When analyzing the content visited on TravelPlot Porto website, the main page was the page with the most pageviews (3,191) and unique views (2,297). It was also the page with the highest average time spent on (one minute and forty seven seconds). The page with the second higher number of pageviews (958) and unique views (825) was the *Win* page, where the questionnaire was inserted, the *Release Schedule* had 562 pageviews and 469 unique views; and the *Team* page had 438 pageviews and 355 unique views (see Table 30).

There was a preference to read the story by locations (432 pageviews), then by chapters (422 pageviews) and chronologically (86 pageviews).

Table 30

Top 15 Content Page TravelPlot Porto Website

Page	Pageviews	Unique pageviews	Average time on page (seconds)
/en/	3,191	2,297	107
/en/win	958	825	90
/en/synopsis	794	610	28
/en/release-schedule	562	469	62
/en/team	438	355	72
/en/story/by-locations	432	220	17
/en/story/by-chapters	422	267	17
/en/partners	385	305	20
/en/share-your-experience	110	93	26
/en/faq	98	84	78
/en/story/characters	94	66	11
/en/all	86	68	51
/en/saint-john-festival	84	76	54
/en/press-kit	70	62	92
/en/story/by-locations/casa-do-infante-interior	70	59	24

6.3 Social networks

6.3.1 TravelPlot Porto Facebook. TravelPlot Porto Facebook page was launched on June 1st with the teaser *Did you know there is a hidden treasure in Porto?*

In the days leading to the project's launch, several information regarding the story and characters was released. The posts were bilingual - English and Portuguese - due to the majority of fans being Portuguese. No paid advertising was done.

Even though the page was launched on June 1st, our data analysis began on June 17th, the launch of TravelPlot Porto, and ended on the 10th of September, the day after the end of this project, so it would match with the data collection and data analysis done from the other TravelPlot Porto platforms.

The metrics used to analyse TravelPlot Porto Facebook's page are: posts (by weekday and type), demographics metrics (gender, age, country, city and language), likes (sources and referrers), impressions (by weekday, month, type, highest and lowest lifetime post total impressions), reach (by weekday, month, type, highest and lowest lifetime post total reach), stories (by action and type), talking about this (by action, type and by post), negative feedback and the engagement rates (average post engagement rate and daily page engagement).

Posts. There were a total of 188 posts posted at TravelPlot Porto Facebook's page. Monday was the weekday with more posts (33), while Saturday (22) and Wednesday (22) were the weekdays had the least amount of posts (see Table 31).

The type posted more often was photos (120) and links (43). The least used type post was status update (12) (see Table 32).

Table 31

Posts by Weekday

Post	Number	%
Saturday	22	11.7%
Sunday	27	14.4%
Monday	33	17.6%
Tuesday	27	14.4%
Wednesday	22	11.7%
Thursday	28	14.9%
Friday	29	15.4%
Total	188	100%

Table 32

Posts by Type

Post type	Number	%
Photo	120	63.8%
Link	43	22.9%
Video	13	6.9%
Status update (including share)	12	6.4%
Total	188	100%

Genre and age. Based on the data entered into the Facebook profile, 54% of the unique users who liked TravelPlot Porto Facebook Page were female while 44% were male. The remaining 2% didn't indicate their genre (see Table 33).

The higgest age bracket was between 25-34 years old with 40%, followed by the 35-44 age bracket with 26% and the 18-24 age bracket with 19%. The remaining 15% unique users were between 13-17 and 45 or more.

Table 33

Lifetime Aggregated Likes by Gender and Age

	13-17	18-24	25-34	35-44	45-54	55-64	65+	Total	Total %
Female	1	46	98	43	18	9	2	217	54%
Male	2	30	60	61	17	4	5	179	44%
Unknown	0	1	5	1	0	0	0	7	2%
Total	3	77	163	105	35	13	7	403	100%
Total %	1%	19%	40%	26%	9%	3%	2%	100%	

Countries. Based on the users' IP address, there were unique users from 25 countries who liked TravelPlot Porto Facebook page. The users from Finland, Croatia and Republic of Korea unliked the page, before the end of the project. Most unique users were from Portugal (85.9%), the United Kingdom (3.2%), Brazil (2.7%) and United States (2.2%) (see Table 34).

Table 34

Lifetime Aggregated Likes by Country

Countries	Likes	%
Portugal	346	85.9%
Great Britain	13	3.2%
Brazil	11	2.7%
United States	9	2.2%
Spain	3	0.7%
France	3	0.7%
Italy	2	0.5%
Turkey	2	0.5%
Argentina	1	0.2%

(table continues)

Countries	Likes	%
Australia	1	0.2%
Belgium	1	0.2%
Canada	1	0.2%
Switzerland	1	0.2%
Germany	1	0.2%
Denmark	1	0.2%
Greece	1	0.2%
Hong Kong	1	0.2%
Hungary	1	0.2%
Ireland	1	0.2%
Japan	1	0.2%
Mozambique	1	0.2%
Norway	1	0.2%
Total	403	100%

Cities. There is only city information available for 330 users. This can be explained by several factors, namely if the user didn't indicate the name of the city or erased it on the profile. The majority of users were located in Portuguese cities (92.1%) and the remaining 7.9% in foreign cities.

During TravelPlot Porto, there were likes from 90 Portuguese cities. At the end, there were users from 31 Portuguese cities. More than half were from Porto (50.3%), Lisbon (8.5%) and Porto's neighboring cities: Vila Nova de Gaia (8.2%), Maia (3.3%) and Matosinhos (2.1%) (see Table 35).

Table 35

Lifetime Aggregated Likes by Portuguese Cities

City	Likes	%
Porto	166	50.3%
Lisboa	28	8.5%
Vila Nova de Gaia	27	8.2%
Maia	11	3.3%
Matosinhos	7	2.1%
Póvoa de Varzim	5	1.5%
Viana do Castelo	5	1.5%
Aveiro	4	1.2%
Funchal	4	1.2%
Rio Tinto	4	1.2%
Braga	3	0.9%
Coimbra	3	0.9%
Gondomar	3	0.9%
Leça da Palmeira	3	0.9%
Sintra	3	0.9%
Vila Nova de Famalicão	3	0.9%
Vila do Conde	3	0.9%
Viseu	3	0.9%
Barcelos	2	0.6%
Bragança	2	0.6%
Fânzeres	2	0.6%
Guimarães	2	0.6%
Peso da Régua	2	0.6%
São Mamede de Infesta	2	0.6%
Custóias	1	0.3%
Faro	1	0.3%
Mafamude	1	0.3%
Penafiel	1	0.3%

(table continues)

City	Likes	%
Praia de Esmoriz	1	0.3%
Torre de Moncorvo	1	0.3%
Torres Vedras	1	0.3%
Total	304	92.1%

Adding to the Portuguese cities previously mentioned, the following cities were also represented at one point of TravelPlot Porto: Évora, Albergaria-a-Velha, Alcochete, Alfena, Angra do Heroísmo, Arrifana, Beja, Bombarral, Caldas da Rainha, Canelas, Caniço, Carregueira, Cete, Charneca de Caparica, Cinfães, Covilhã, Entroncamento, Ermesinde, Espinho, Esposende, Fátima, Fafe, Santa Maria da Feira, Ferreira do Alentejo, Foz do Arelho, Guarda, Lavra, Leça do Balio, Mindelo, Oeiras, Olhão, Oliveira de Azeméis, Ourém, Ovar, Paço de Sousa, Paços de Brandão, Paranhos, Paredes, Pedras Rubras, Pedrouços, Pinhão, Pinheiro Grande, Pombal, Ponta Delgada, Ponte de Lima, Portalegre, Ribeira de Pena, São João da Madeira, São Pedro Fins, Santo Tirso, Seixal, Senhora da Hora, Sermonde, Silves, Torres Novas, Vagos, Valongo, Vieira do Minho, Vila Real.

As for the foreign cities, during TravelPlot Porto, there were likes from 60 foreign cities. At the end of TravelPlot Porto, there were users from 11 foreign cities. The two cities with the most likes were English: Derby (6) and London (4). Madrid had three likes, followed by Brazilian cities São Paulo (3) and Rio de Janeiro (2); Atlanta (2) and Istanbul (2) (see Table 36).

During the project, there were also users from the following foreign cities: A Coruña, Spain; Antwerp, Belgium; Austin, United States; Bergen, Norway; Brasília, Brazil; Brussels, Belgium; Budapest, Hungary; Canoas, Brazil; Cedar Park, United Stated; Chellaston, United

Kingdom; Contagem, Brazil; Dublin, Ireland; Dundee, United Kingdom; Guaymallén, Argentina; Helsinki, Finland; Horsens, Denmark; Las Vegas, United States; Lausanne, Switzerland; Leeds, United Kingdom; Liverpool, United Kingdom; Los Angeles, United States; Lutz, United States; Meguro-ku, Japan; Mendoza, Argentina; Milan, Italy; Montpellier, France; Munich, Germany; Natal, Brazil; Nova Iguaçu, Brazil; Paris, France; Pescara, Italy; Plymouth, United Kingdom; Portland, United States; Quebec, Canada; Salt Lake City, United States; Sant'Elpidio a Mare, Italy; Seoul, Republic of Korea; Sherman Oaks, United States; South Jordan, United States; Tampa, United States; Toulouse, France; Trondheim, Norway; Tucson, United States; Uberlândia, Brazil; Washington, United States; Weston-super-Mare, United Kingdom; Wollongong, Australia; Zürich, Switzerland; Zagreb, Croatia.

Table 36

Lifetime Aggregated Likes by Foreign Cities

City	Country	Likes	%
Derby	United Kingdom	6	1.8%
London	United Kingdom	4	1.2%
Madrid	Spain	3	0.9%
São Paulo	Brazil	3	0.9%
Atlanta	United States	2	0.6%
Istanbul	Turkey	2	0.6%
Rio de Janeiro	Brazil	2	0.6%
Belo Horizonte	Brazil	1	0.3%
Fortaleza	Brazil	1	0.3%
Maputo	Mozambique	1	0.3%
Oelde	Denmark	1	0.3%
Total		26	7.9%

Language. Based on the default language setting selected when accessing Facebook, the data indicates most of unique users (70%) who liked TravelPlot Porto Facebook page spoke Portuguese (Portugal), English (United States and United Kingdom) and Portuguese (Brazil) (see Table 37).

Table 37

Lifetime Aggregated Likes by Language

Language	Likes	%
Portuguese (Portugal)	282	70%
English (United States)	55	13.6%
English (United Kingdom)	36	8.9%
Portuguese (Brazil)	15	3.7%
Spanish (Spain)	5	1.2%
Italian (Italy)	3	0.7%
Turkish (Turkey)	2	0.5%
German (Germany)	1	0.2%
Greek (Greece)	1	0.2%
Spanish (Lao People's Democratic Republic)	1	0.2%
French (Canada)	1	0.2%
French (France)	1	0.2%
Total	403	100%

Likes. When TravelPlot Porto treasure hunt began, on June 17th, there were already 76 followers attained during the pre-launch. On July 30th, the middle of TravelPlot Porto, the number of fans was 357. On September 10th that number of fans rose to 403 fans.

According to Facebook data, the most common place of page likes, during our data analysis, was on the page profile (276 likes), on the timeline (22 likes), hovercard (18 likes) and mobile (15 likes) (see Table 38).

Table 38

Daily Like Sources

Sources	Likes
page_profile	276
Timeline	22
Hovercard	18
Mobile	15
Api	6
video_flyout	2
like_story	1
Search	1
Ticker	1
Total	342

Referrers. The total account of referring external domains, which sent traffic to the Facebook page were the website of TravelPlot Porto with 98 likes, followed by google.com and google.pt each with 26 likes (see Table 39).

Table 39

External Referrers

External Referrers	Likes
travelplot.com	98
google.com	26
google.pt	26
boasnoticias.clix.pt	7
paginas.fe.up.pt	6
t.co	6
google.com.br	3
search.babylon.com	2
sigarra.up.pt	2
assist.babylon.com	1
bl163w.blu163.mail.live.com	1
cidadaodoplaneta.com.br	1
google.ca	1
google.ch	1
lobisomemluizdias.blogspot.pt	1
pinterest.com	1
rtp.pt	1
sn145w.snt145.mail.live.com	1
Total	185

Impressions. TravelPlot Porto Facebook page only had organic and viral impressions (see Figure 32).

The lifetime post total impressions of TravelPlot Porto Facebook page was 143,790. The daily average of impressions was 765 daily impressions. The highest number of daily impressions was 1,438 and 284 was the minimum of daily impressions.

In terms of lifetime post organic impressions, the total count was 128,910 impressions. The daily average was 686, the maximum daily number of organic impressions was 1,352 and the minimum was 199 impressions.

As for the lifetime post viral impressions, the total count was 14,880 impressions. The maximum post viral impressions was 486 and the minimum one. The daily average of viral impressions was 82 impressions.
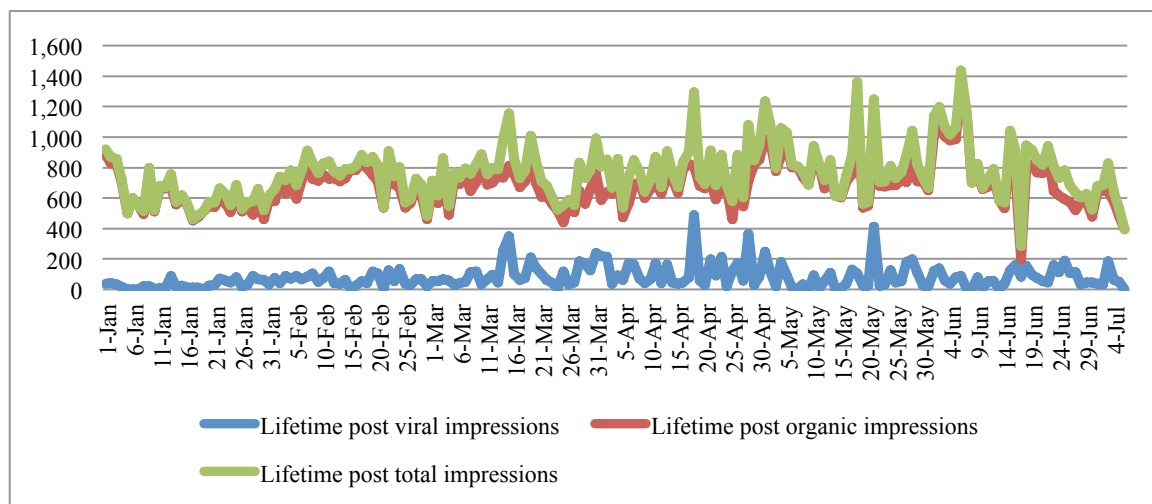

Figure 32. Lifetime post impressions: total, organic and viral

Impressions by weekday. Saturday and Monday were the weekdays with the biggest average lifetime post total impression with 808 and 807 impressions respectively (see Figure 33). Thursday and Wednesday, on the other hand, were the weekdays with the lowest average lifetime post total impressions with 702 and 709 impressions respectively. The weekday average lifetime post total impressions was 765 impressions.

In terms of average lifetime post organic impressions, there were a few differences regarding the lifetime post total impressions. The two days with the biggest number of

average impressions was Saturday and Sunday with 695 and 691 impressions respectively. The days with the lowest average impressions were also Thursday and Wednesday with 637 and 654 impressions respectively. The weekday average lifetime post organic impressions was 686 impressions.

There were also a few differences in the average lifetime post viral impressions compared with the average lifetime post total impressions. Even though Saturday continues to be the day with the higgest average lifetime post viral impressions with 118, the second weekday with the higgest average lifetime post viral impression is Tuesday with 94 impressions. The average of lifetime post viral impressions was 82 impressions.
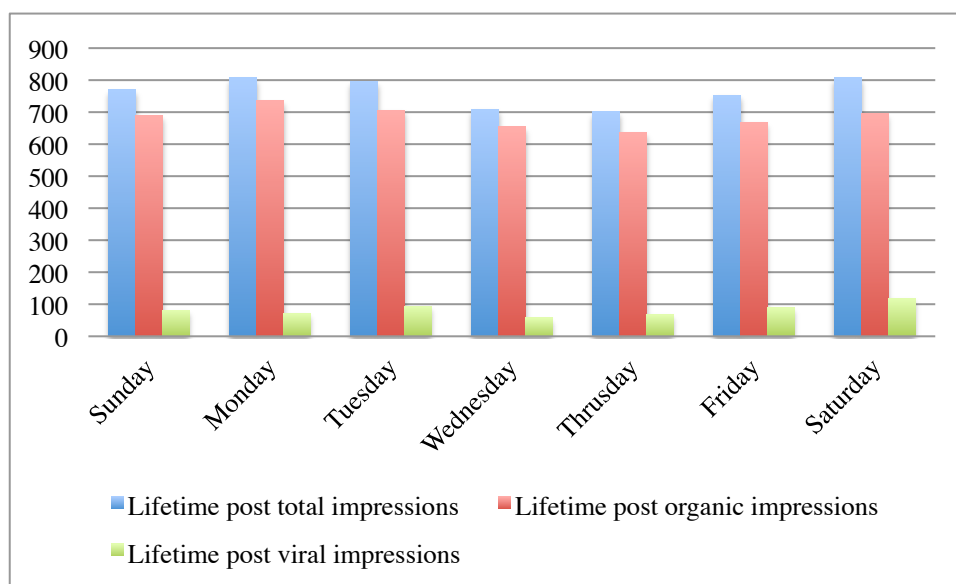

Figure 33. Lifetime post impressions by weekday: total, organic and viral

Impressions by month. The average of lifetime post total impressions decreased every month: June (807); July (805); August (703) and September (681) (see Figure 34). It's monthly average was 765 impressions.

This pattern didn't occur in the average lifetime post organic impressions and in the average lifetime viral impressions. September got a higher number of average lifetime post organic impressions with 660 impressions than August with 646 impressions. The average monthly lifetime post organic impressions was 686 impressions.

As far as the highest number of average lifetime post viral impressions, July was the month with the highest average with 109 impressions. September was again the month with the lowest average lifetime post viral impression with a 25 impressions. The average monthly lifetime post viral impressions was 82 impressions.
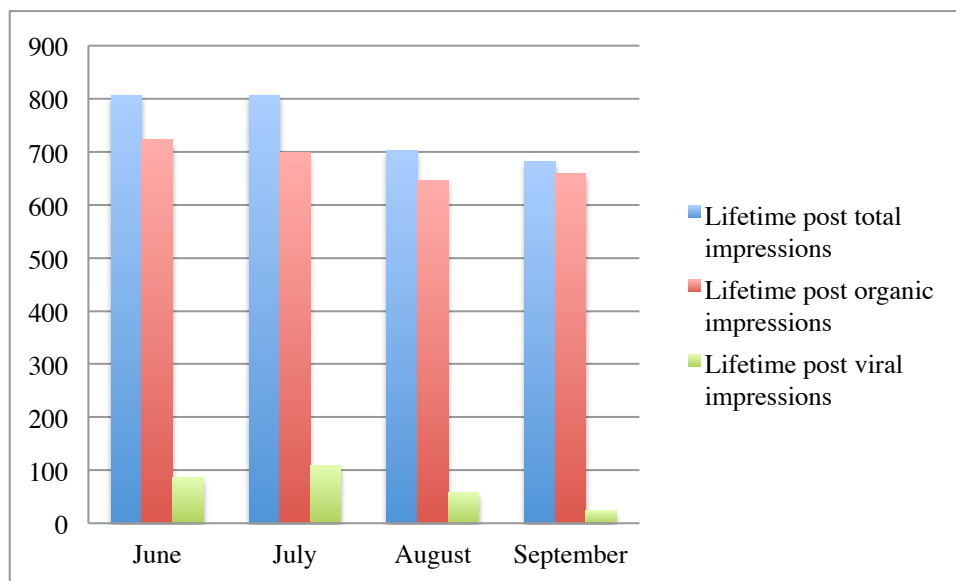

Figure 34. Lifetime post impressions by month: total, organic and viral

Impressions by type. Even though the type of post status update and share were the least used type of posts, with 1.6% and 4.79% of the total type of post; they were the posts with a higher average of lifetime post total impressions with 825 impressions and 819 impressions respectably (see Figure 35). Photos had 794 impressions.

The average lifetime post organic impressions followed the same pattern as the average lifetime post total impressions.

The average lifetime post viral impressions on the other hand didn't. The highest average lifetime post viral impressions were photos with a 97 average impressions. This was the only type of post above the average of all post types. Video remains the type of post with the lowest average lifetime viral impressions with a 40 average impressions, followed closely by the status update and share, both with a 47 average lifetime post viral impressions.
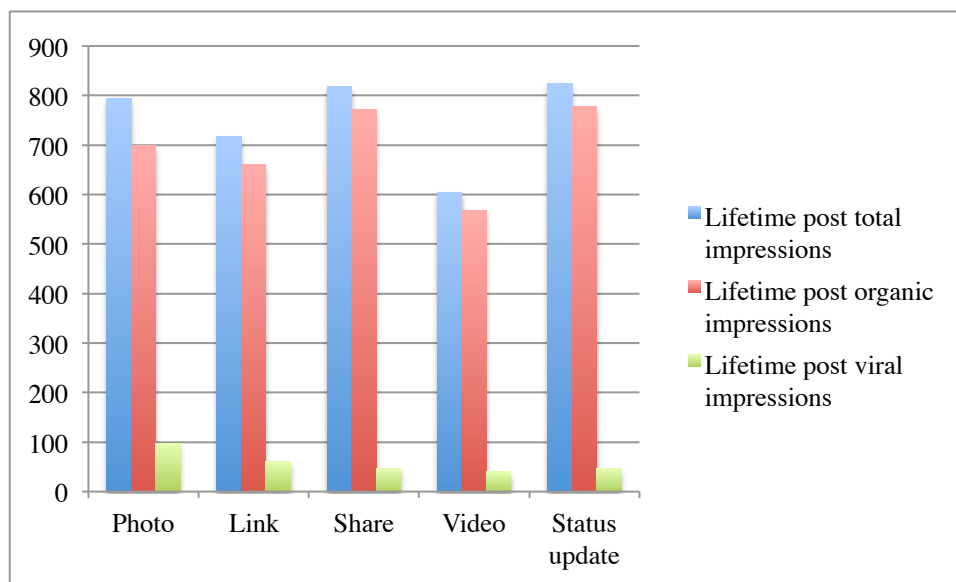

Figure 35. Lifetime post impressions by type: total, organic and viral

Highest and lowest lifetime post total impressions. As showed in Table 40, the ten posts with the highest number of impressions were mostly photos posted between June and July.

Table 40

Highest Lifetime Post Total Impressions (Top 10)

Posted	Post message	Type	Lifetime post total impressions	Weekday	Month
6/25/12	In the XIV century, Porto had become a center for commerce, full of Portuguese and foreign merchants. We are giving away a lavender Ach Brito Soap courtesy of Porto com Arte to the picture or post portraying Porto's commerce calling. The picture or post with the more likes until the 30th June wins!	Share	1,438	Monday	June
7/1/12	Porto has always been a very resourceful city. According to the legend, in 1355, Porto's wall was covered with ships masts and sails to pretend that it was complete and trick D. Pedro I, which was ready to attack Porto. Upload the picture that shows Porto's resourcefulness. The picture with the most likes until the 7th of July wins a Porto com Arte notebook!	Photo	1,363	Sunday	July
7/14/12	Do you like this sunset at Porto?	Photo	1,295	Saturday	July
6/30/12	Today was the celebration of the Social Media day. TravelPlot Porto was one of the projects featured at Social Media Day – Portugal. It was lots of fun. Check out this picture of the audience liking this event!	Photo	1,246	Saturday	June
7/8/12	One of Porto's most famous weddings was the marriage of D. João I, king of Portugal and Philippa of Lancaster. This is a representation of that day. The first person to tell us where this picture was taken from until the 14th of July wins a Port Wine Bottle courtesy of Cálem!	Photo	1,234	Sunday	July
6/26/12	TravelPlot Porto - Jornal da Tarde RTP - 26/6/2012	Link	1,198	Tuesday	June
6/25/12	Congratulations Sara Mendes. Your Saint John picture had the more likes. Please go to Porto com Arte to collect your prize!	Status Update	1,160	Monday	June
7/30/12	What a great way to finish off this Monday! Who wants to go to Ribeira and have a drink?	Photo	1,157	Monday	July
6/27/12	Peter is ready for tonight's game. Are you? Go Portugal!!!	Photo	1,137	Wednesday	June
7/8/12	Good Morning! Congratulations Raquel Vaz Casinha! Your picture showing Porto's resourcefulness had the more likes. Please go to Porto com Arte to collect your prize!	Photo	1,089	Sunday	July

As showed in Table 41, half of the posts were videos.

Table 41

Lowest Lifetime Post Total Impressions (Top 10)

Posted	Post message	Type	Lifetime post total impressions	Weekday	Month
6/22/12	TravelPlot Porto featured in Bits & Bytes - Porto Canal	Video	284	Friday	June
6/17/12	TravelPlot Porto Trailer - Legendado PT	Video	393	Sunday	July
8/30/12	Who likes Francesinha?	Video	463	Thrusday	August
8/8/12	Good morning! Nextpower Norte team helped us with the communication of TravelPlot Porto. Thank you Nextpower Norte!	Link	484	Wednesday	August
8/30/12	Good morning! Let's go for a walk?	Photo	485	Thrusday	August
9/8/12	See you tomorrow!	Photo	499	Saturday	September
8/29/12	A moving postcard.	Video	514	Wednesday	August
9/5/12	We love the peacocks at Cristal Palace gardens. What about you?	Video	517	Wednesday	September
9/4/12	Good morning! How Porto used to be.	Photo	519	Tuesday	September
8/24/12	Good morning! It's almost harvest time in Douro.	Photo	522	Friday	August

Reach. The reach can be organic, viral or paid. In this case study, there was only organic and viral reach since no advertising was done.

The average daily lifetime post total reach was 243 unique users, with a maximum of 479 and a minimum of 97 unique users (see Figure 36).

The average daily lifetime post organic reach was 194 unique users. The maximum daily organic lifetime post reach was 264 unique users and the minimum was 61 unique users.

As for the lifetime post viral reach, it's average was 52 unique daily users. The maximum daily viral lifetime post reach was 268 unique users.
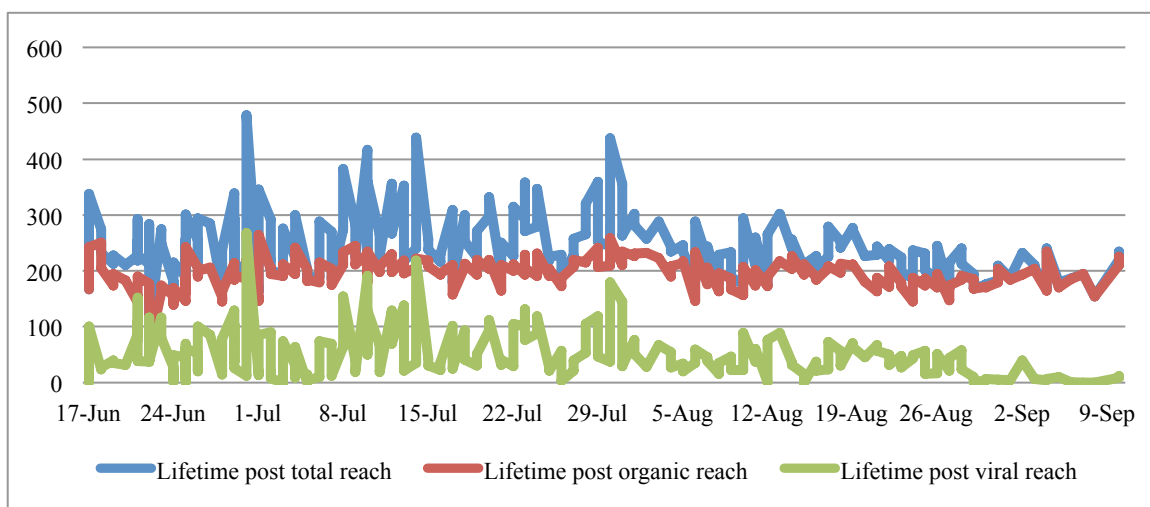

Figure 36. Lifetime post reach: total, organic and viral

Reach by weekday. The average daily lifetime post total reach was 243 unique users (see Figure 37). The day, which achieved a bigger average reach was Tuesday and Saturday with 257 and 254 unique users reached respectably. The day with the lowest average reach was Thursday with 223 unique users reached, but this reach was relatively close to the average reach of the other weekdays.

In terms of the average lifetime post organic reach, the daily average was also very similar. The day with a highest average lifetime post organic reach was Monday with a

unique users reach of 203, followed by Wednesday with a unique users reach of 200. The day with the lowest average unique reach was Friday with 188 unique users.

The average lifetime viral reach was also very similar daily. The day with the highest average was Saturday with an average of 66 unique users and Tuesday with an average of 62 unique users. The day with the lowest average lifetime viral reach was Wednesday with an average of 38 unique users.
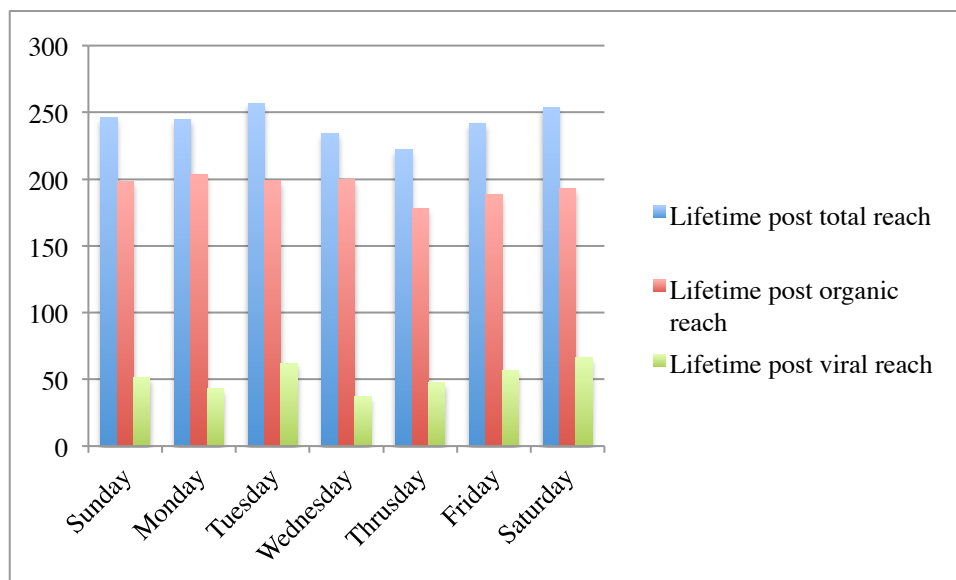

Figure 37. Lifetime post reach by weekday: total, organic and viral

Reach by month. July was the month with a highest lifetime post total reach with an average of 267 unique users and September was the month with the lowest reach with an average of 205 unique users (see Figure 38).

July was also the month with the highest lifetime organic reach with an average of 207 unique users but the month with the lowest reach was August with an average of 191.

As for the lifetime total viral reach, the same pattern occurred as the lifetime post total reach. July was the month with the highest lifetime viral reach with an average of 64 unique users. September the month with the lowest lifetime viral reach with an average of ten unique users, very below the 52 average unique users of the four months.
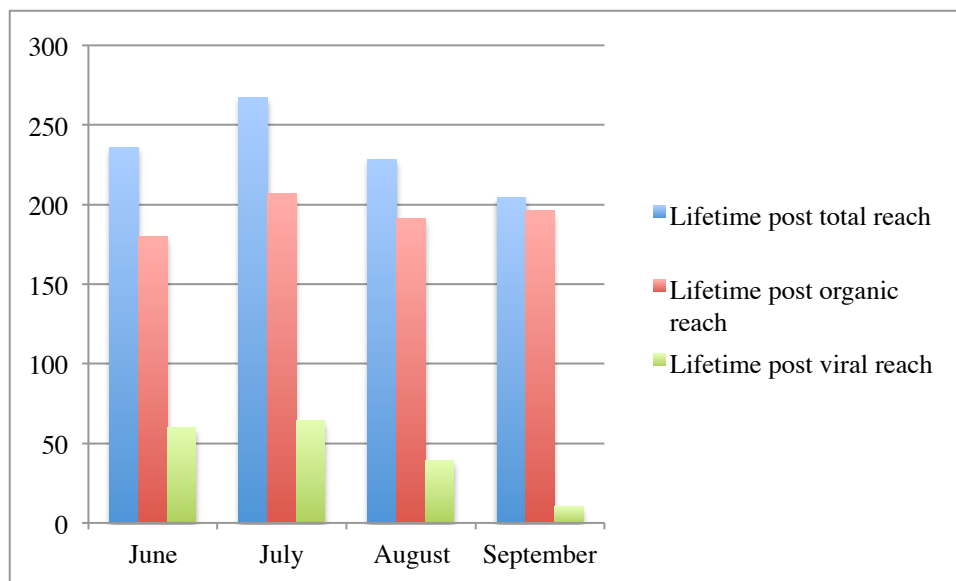

Figure 38. Lifetime post reach by month: total, organic and viral

Reach by type. The type of post, which achieved the highest lifetime total reach was photos with an average reach of 258 unique users followed by status update with an average reach of 234 unique users (see Figure 39). The video post was the post type with a lowest average reach, reaching 186 unique users.

The lifetime post organic reach type with a highest reach was status update with 207 unique users reached followed closely by photos with an average reach of 200 unique users. Video was still the type of post with a lowest reach average with 166 unique users.

The lifetime post viral reach, followed the same pattern as the lifetime post total reach type, with photo being the type of post with the highest viral lifetime post reach with 60 unique users reached in average. With half of the photo type post reach was status update. The lowest lifetime post viral reach was video with an average reach of 22 unique users.
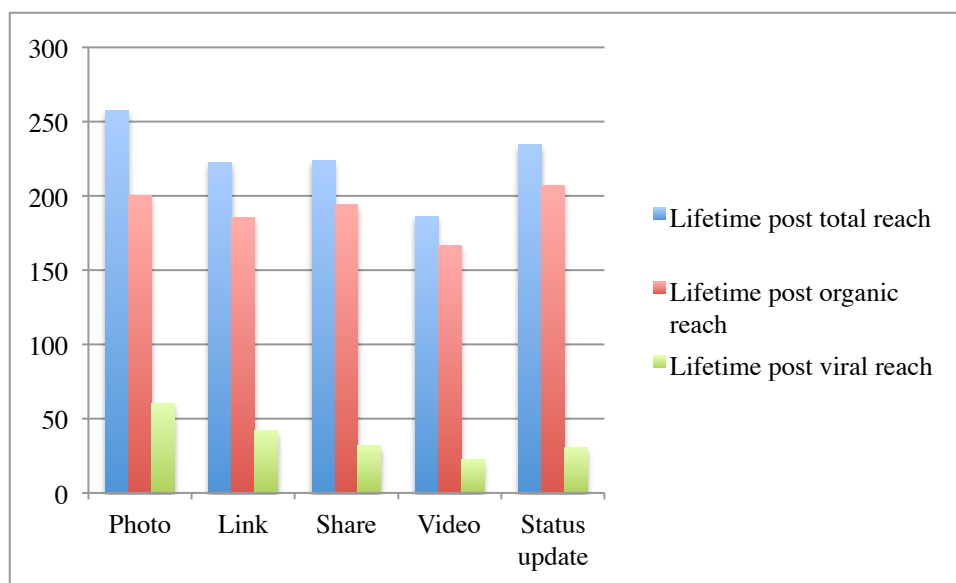

Figure 39. Lifetime post reach by type: total, organic and viral

Highest and lowest lifetime post total reach. All of the ten posts with the highest reach were photos (see Table 42). The ten posts with the lowest reach were comprised by links (5), videos (3), a share and a photo (see Table 43).

Table 42

Highest Lifetime Post Total Reach (Top 10)

Posted	Post message	Type	Lifetime post total reach
6/30/12	Today was the celebration of the Social Media day. TravelPlot Porto was one of the projects featured at Social Media Day – Portugal. It was lots of fun. Check out this picture of the audience liking this event!	Photo	479
7/14/12	Do you like this sunset at Porto?	Photo	439
7/30/12	What a great way to finish off this Monday! Who wants to go to Ribeira and have a drink?	Photo	437
7/10/12	Good morning! Do you like this Porto view?	Photo	417
7/8/12	One of Porto's most famous weddings was the marriage of D. João I, king of Portugal and Philippa of Lancaster. This is a representation of that day. The first person to tell us where this picture was taken from until the 14th of July wins a Port Wine Bottle courtesy of Cálem!	Photo	382
7/10/12	TravelPlot Porto - UT Austin I Portugal - 9/7/2012	Photo	361
7/29/12	Good morning! What a beautiful day to do the 6 bridges cruise! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	Photo	360
7/23/12	This is how Porto is looking like today!	Photo	358
7/31/12	Good morning! Have you visited this brand new tourism interactive store at Porto's airport? Thank you Porto e Norte for all your support!	Photo	356
7/12/12	Good morning! This is one of the locations of TravelPlot Porto! Do you like it?	Photo	356

Table 43

Lowest Lifetime Post Total Reach (Top 10)

Posted	Post message	Type	Lifetime post total reach
6/22/12	TravelPlot Porto featured in Bits & Bytes - Porto Canal	Video	97
6/24/12	Peter just uploaded some videos from last night so his little brother Kevin can see what Saint John is all about!	Link	140
9/8/12	See you tomorrow!	Photo	154
6/25/12	TravelPlot Porto - Centro De [Estudios] Estudos Euro [Rexionais] Regionais Galicia [Galiza]. Norte De Portugal - 25/6/2012	Link	162

(table continues)

Posted	Post message	Type	Lifetime post total reach
7/1/12	Good Morning! Are you still trying to figure out what you should eat today? What about one of the 7 Portuguese Gastronomical Wonders finalists: Bacalhau à Gomes de Sá. You can eat this and other Portuguese traditional dishes on our TravelPlot Porto Menu. For each TravelPlot Porto Menu sold, Vinhas d'Alho donates 1€ to "A Place for Joãozinho".	Link	164
6/28/12	Have you seen the beginning of our story?	Video	164
7/1/12	Congratulations Pedro Vaz Casinha! Your post portraying Porto's commerce calling had the more likes. Please go to Porto com Arte to collect your prize!	Link	165
6/28/12	Good morning! Peter is proudly wearing his Portuguese scarf today. Did you already check the pictures he took at Porto's Cathedral yesterday?	Link	167
6/17/12	TravelPlot Porto Trailer - Legendado PT	Video	167
8/27/12	Good morning! Congratulations Rui Camboa! You are the winner of this week's competition. Please go to Porto com Arte to collect your prize.	Share	168

Stories. TravelPlot Porto Facebook page generated a total count of 2,431 stories (see Figure 40).
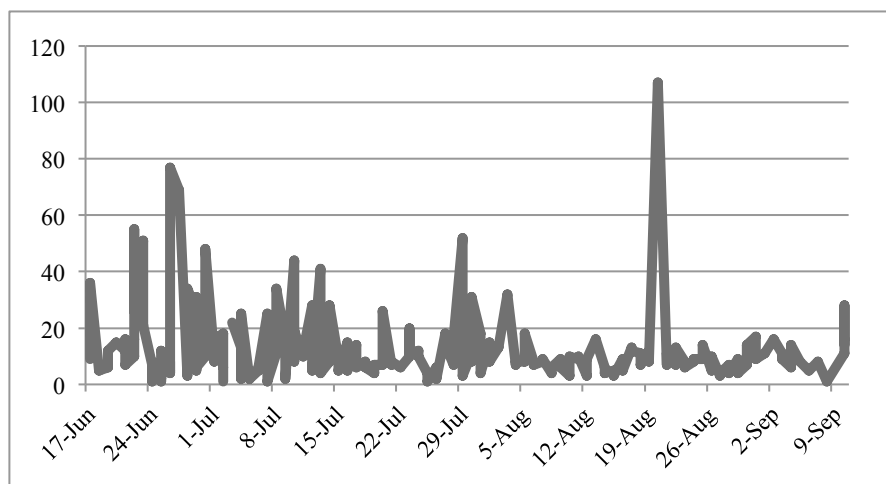

Figure 40. Lifetime post stories

Stories by action and type. From the 2,431 stories created about TravelPlot Porto Facebook page, 2,049 were likes, 231 were shares and the remaining 151 stories were comments (see Table 44).

Photos were the post type with the biggest number of comments (104), likes (1,512) and shares (156), followed by the post type link with 31 comments, 351 likes and 45 shares. The post type with the lowest number of comments (3), likes (20) and shares (1) was the status update.

Table 44

Stories by Action and Type

Post type	Comment	Like	Share	All
Photo	104	1.512	156	1,772
Link	31	351	45	427
Share	4	70	11	85
Video	9	96	18	123
Status update	3	20	1	24
All	151	2,049	231	2,431

Talking about this. There were 2,024 unique users who created a story about TravelPlot Porto page post from, which: 1,874 were likes, 123 were comments and 218 were shares.

Talking about this by action and type. Photos was the post type with the biggest number of comments (89), likes (1438) and shares (148), followed by links, which had 265 likes, 19 comments and 44 shares (see Table 45).

Status update was the type of post with the lowest number of likes (20), shares (1) and comments (2).

Table 45

Talking About This by Action and Type

Post type	Comment	Like	Share	All
Photo	89	1,438	148	1,675
Link	19	265	44	328
Share	4	63	10	77
Video	9	88	15	112
Status update	2	20	1	23
All	123	1,874	218	2,215

Talking about this by post. Table 46 shows the 25 posts, which registered the biggest number of people talking about this. The post that reached the biggest number of people talking about this was related to Douro Valley (87). The next post was related to football followed by three posts with media coverage on the launch of TravelPlot Porto. The vast majority of these posts are photos (21), link (3) and share (1). June (11) and July (10) were the top months followed by August (3) and September (1).

Table 46

Talking About This by Post (Top 25)

Post message	Type	Posted	Lifetime talking about this
Did you know that Alto Douro Wine Region is World Heritage since 2001?	Photo	8/20/12	87
Peter is ready for tonight's game. Are you? Go Portugal!!!	Photo	6/27/12	58
TravelPlot Porto - Jornal da Tarde RTP - 26/6/2012	Link	6/26/12	47
Destak Porto - 22/6/2012	Photo	6/22/12	47
TravelPlot Porto - Público - 22/6/2012	Photo	6/23/12	44
Good morning! What a beautiful day to do the 6 bridges cruise! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	Photo	7/29/12	42
Good Morning! You never did Porto's 6 bridges cruise? You are missing views like this! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	Photo	7/13/12	39
Today was the celebration of the Social Media day. TravelPlot Porto was one of the projects featured at Social Media Day – Portugal. It was lots of fun. Check out this picture of the audience liking this event!	Photo	6/30/12	37
Good morning! Do you like this Porto view?	Photo	7/10/12	30
Good morning!	Photo	8/3/12	28
Good morning! This is one of the locations of TravelPlot Porto! Do you like it?	Photo	7/12/12	28
Peter and Filipe finally meet.	Photo	9/10/12	27
One of Porto's most famous weddings was the marriage of D. João I, king of Portugal and Philippa of Lancaster. This is a representation of that day. The first person to tell us where this picture was taken from until the 14th of July wins a Port Wine Bottle courtesy of Cálem!	Photo	7/8/12	26
Do you like this sunset at Porto?	Photo	7/14/12	25
Did you know that representatives of UNESCO - World Heritage Portuguese Origin already heard about TravelPlot Porto? And what about your friends and family? Have you told them yet? Invite them to experience Porto in a fun way!	Photo	6/28/12	24
Download our free app and start your treasure hunt!	Link	6/17/12	24
What a great way to finish off this Monday! Who wants to go to Ribeira and have a drink?	Photo	7/30/12	23
Good morning! Do you know why Portuguese say "You are clever as a garlic"? What does garlic has to do with being clever? Here's a hint!	Photo	6/29/12	23
The treasure hunt in Porto has begun! Check out our website to get all the information!	Share	6/17/12	22
There are 42 different locations in TravelPlot Porto. Even at night you can do your treasure hunt. This is one of the points of view of Porto you will encounter. Have a great weekend!	Photo	7/20/12	21

(table continues)

Post message	Type	Posted	Lifetime talking about this
Good Morning! Porto here we go!	Photo	7/7/12	21
Brazil is already talking about TravelPlot Porto!	Link	6/29/12	21
Obrigado! Thank you! Gracias! Merci! Kiitos! Danke! Grazie! Takk! To all our facebook fans for joining us on this treasure hunt. According to facebook, we have already representatives from 5 of the 7 continents! Do you have any friends or family in other countries? Invite them to join us!	Photo	7/4/12	19
TravelPlot Porto - Metro (Porto) - 22/6/2012	Photo	6/29/12	19
There is no exact number of how many people died at Ponte das Barcas disaster. According to French propaganda, the death toll reached thousands of people. After the disappearance of Ponte das Barcas, several bridges were built in Porto. The first person to tell us the name of this bridge until the 11th of August wins a lavender Ach Brito Soap courtesy of Porto com Arte!	Photo	8/5/12	18

Negative Feedback. The total of TravelPlot Porto's Facebook page negative feedback is negligible. There were a total of 13 negative feedbacks: ten negative feedbacks were from the type Hide all clicks and three negative feedback from the type hide clicks (see Table 47).

Table 47

Negative Feedback

Post message	Type	Posted	Hide all clicks	Hide clicks
Who wants to drink Port Wine?	Photo	8/11/12	1	
Good morning! Let's play? http://itunes.apple.com/us/app/travelplot-porto/id530161189?l=pt&ls=1&mt=8 https://play.google.com/store/apps/details?id=com.wow.travelplot	Photo	8/4/12	1	
Good morning! Have you visited this brand new tourism interactive store at Porto's airport? Thank you Porto e Norte for all your support!	Photo	7/31/12		1
Good morning! What a beautiful day to do the 6 bridges cruise! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	Photo	7/29/12	1	
Have a great weekend!	Photo	7/27/12		1

(table continues)

Post message	Type	Posted	Hide all clicks	Hide clicks
Have you seen the video that Peter uploaded yesterday? You can watch it here!	Video	7/16/12	1	
Good Morning! You never did Porto's 6 bridges cruise? You are missing views like this! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	Photo	7/13/12		1
Porto is represented in this statue has a vigilant warrior, supported by a spear and a shield. The first known statue dates from 1293. The present statue dates from 1725! Do you like it?	Photo	7/11/12	1	
Good Morning! Porto here we go!	Photo	7/7/12	1	
Good Morning! We already know who Afonso Martins Alho was. What about Gomes de Sá? Do you know anything about him? Here is a hint!	Photo	6/30/12	1	
Peter is ready for tonight's game. Are you? Go Portugal!!!	Photo	6/27/12	1	
Don't forget to send us your picture celebrating Saint John. The picture with the more likes until tomorrow wins a glass of Port Wine at Porto com Arte!	Photo	6/23/12	2	
Total			10	3

Engagement Rates. The Socialbakers formulas were used to determine the average post engagement rate and the daily page engagement rate (Socialbakers, 2012).

Average post engagement rate. The average post engagement rate is measured as the average number of likes, comments and shares per post on a given day divided by the total number of fans for the page.

TravelPlot Porto Facebook page had a 5% average post engagement rate throughout the project. The maximum average post engagement rate was 29% and the minimum 0%.

The highest average post engagement rate occur on the launch of TravelPlot Porto on June 17th (29%), and August 20th that with a single post about Alto Douro Wine Region achieved a 28% average post engagement rate (see Figure 41). The other three highest

average post engagement rate were related to news that followed the press conference of TravelPlot Porto on June 21st, June 27th (27%), June 23rd (19%) and June 22nd (14%).
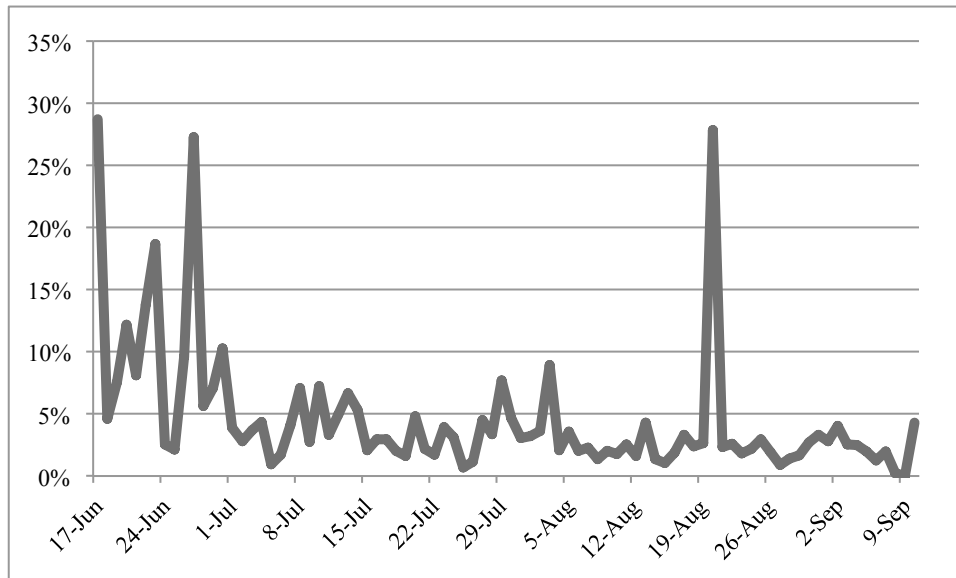

Figure 41. Average post engagement rate

Daily page engagement rate. The daily page engagement rate is measured as the average number of likes, comments and shares on a given day divided by the total number of fans for the page.

The daily page engagement rate was 11%, which according to Socialbakers is above the average of a Facebook page between 0 and 10,000 fans that has an average engagement rate of 0.96% (Socialbakers, 2011).

The day with the maximum engagement rate was June 17th, the day of TravelPlot Porto launch, and the days following TravelPlot Porto press conference: June 22nd (69%), June 21st (49%), June 29th (42%), June 26th (38%) and June 23rd (37%) (see Figure 42).
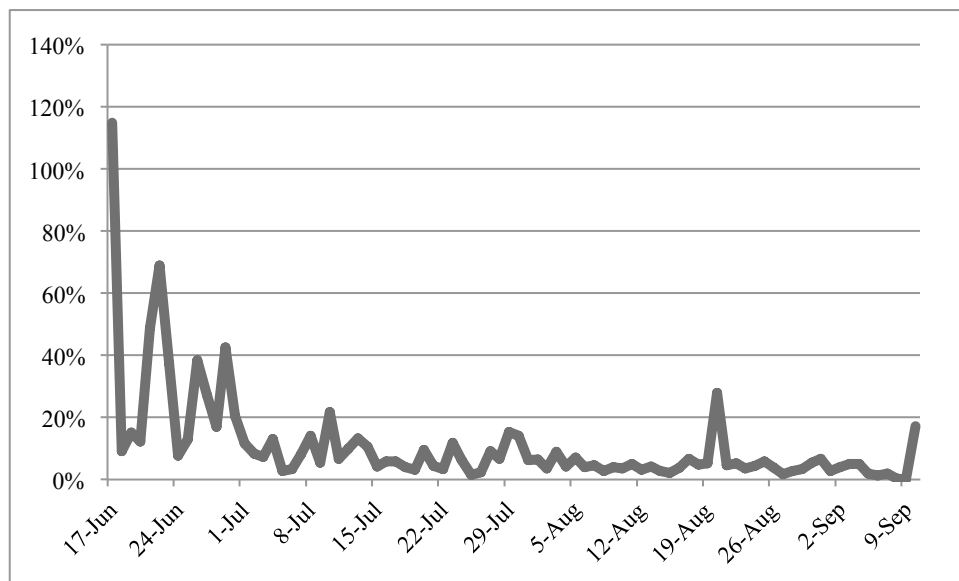
Figure 42. Daily page engagement rate

6.3.2 TravelPlot Porto Twitter. TravelPlot Porto twitter was launched on June 2nd with the call to action - *Did you know there is a hidden treasure in Porto* - and respective teaser. Immediately there was an interest within the transmedia Twitter community (see Figure 43) and the Portuguese tourism community (see Figure 44).

Figure 43. Blerime Topalli (transmedia strategist, storyteller & speaker) tweets

Figure 44. APHORT (Associação Portuguesa de Hotelaria, Restauração e Turismo) tweet

On TravelPlot Porto's launch, this Twitter account already had 129 followers, six weeks after (July 30th), 341 followers and on September 10th, 422 followers.

According to the Tweet Reach report, the highest value for the tweets reach was after the public presentation of the project on June 21st with 51,489 accounts reached on June 26th. After this high, TravelPlot Porto's Twitter account reach remained between 19,900 and 1,032 unique users (see Figure 45).
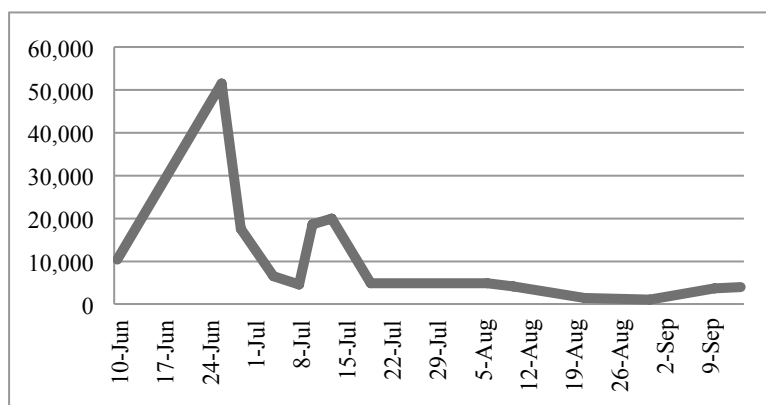
Figure 45. TravelPlot Porto Twitter reach

In terms of exposure, the highest exposure also happened around the public presentation of TravelPlot Porto with 57,450 impressions. After June 26th, exposure was between 25,171 and 6,702 impressions (see Figure 46).
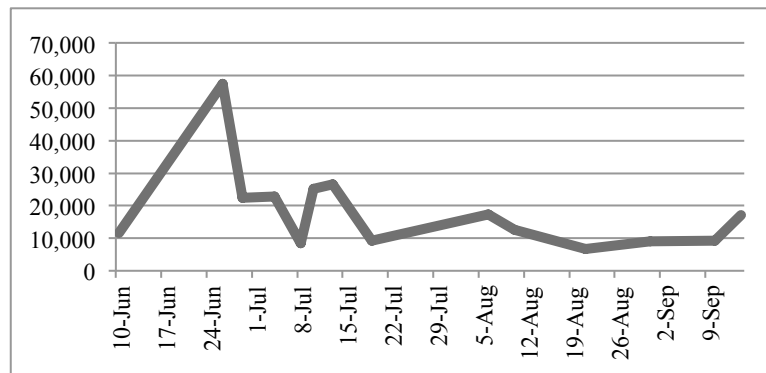
Figure 46. TravelPlot Porto Twitter exposure

The top contributor for this exposure was Laurel Papworth (one of Forbes Top 50 Social Media Influencer), at the moment with 40,803 followers (see Figure 47).
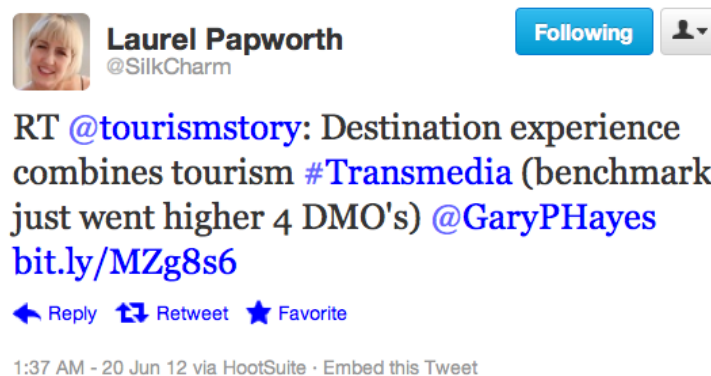
Figure 47. Laurel Papworth tweet

The ratio between reach and exposure represents the depth of penetration of TravelPlot Porto tweets (TweetReach Blog, 2011). The overall average ratio was average (0.5) indicating a normal distribution of tweets, retweets and amplification. There were two periods when the average ratio was high (0.6-0.99): June 26th-29th and July 10th-13th (see Table 48). This shows that a wide variety of different people were tweeting to a number of diverse followers, spreading the message far and wide during those periods.

Table 48

TravelPlot Porto Twitter Ratio Reach/Exposure

Date	Reach	Exposure	Racio R:E
26-Jun	51,489	57,450	0.90
29-Jun	17,576	22,363	0.79
4-Jul	6,553	22,854	0.29
8-Jul	4,614	8,397	0.55
10-Jul	18,566	25,171	0.74
13-Jul	19,900	26,579	0.75
19-Jul	4,808	9,320	0.52
6-Aug	4,901	17,257	0.28
10-Aug	4,116	12,516	0.33
21-Aug	1,355	6,702	0.20
31-Aug	1,032	9,151	0.11
10-Sep	3,648	9,257	0.39

6.3.3 TravelPlot Porto YouTube channel. The only element uploaded to TravelPlot Porto YouTube channel was the projects' trailer (English and Portuguese version).

Between June 17th and September 10th, 2012 there were 1.701 views and eight likes (see Figure 48). The English version had 1,254 views and five likes while the Portuguese version had 447 views and three likes. The videos were shared eight times on Facebook.

Thirty-eight countries viewed the trailer in this YouTube channel. The countries, which viewed it more often, were Portugal (1,450 views), Brazil (44 views), United Kingdom (35 views), United States (30 views) and Spain (24 views).

Most of the views took place in the first three weeks of the launch of the project, matching the press coverage. The days with most views were June 18th (179 views) and June 26th (174 views).
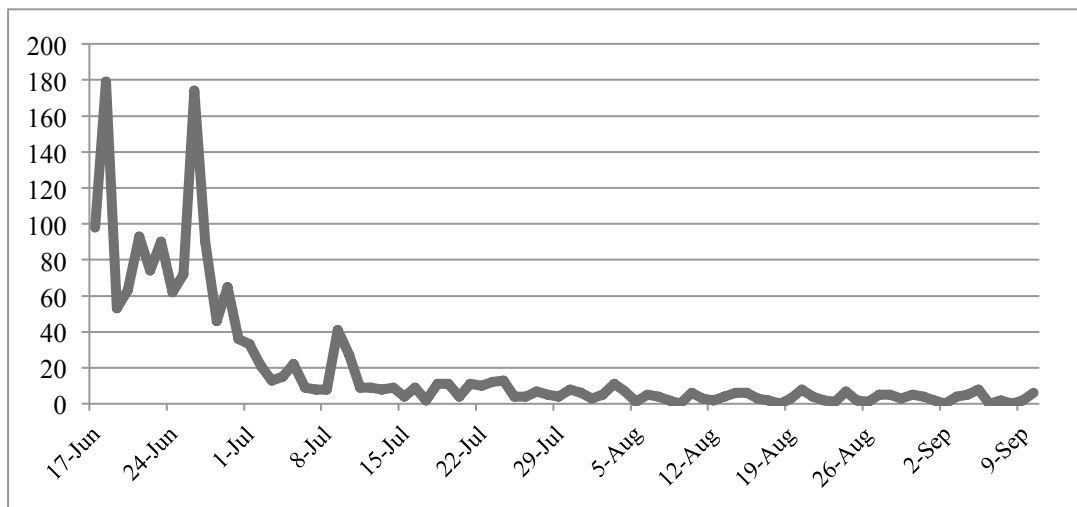
Figure 48. TravelPlot Porto YouTube channel views

In terms of gender, 57.3% of the views came from male viewers while 42.7% of the viewers were female.

There were three types of location playback of the trailer. The majority of the views (72.78%) occured on embedded player on other websites. The rest of the views happened on the YouTube page (19.75%) and on mobile devices (7.47%).

The traffic sources were mobile apps and direct traffic (85.7%), view referrals from outside YouTube (8.2%) and view referrals from YouTube (6.1%).

6.3.4 Peter's Twitter. On June 17th, Peter's Twitter account was launched with the link to his first weekly video log. On July 30th, there were 201 users following Peter's adventure and six weeks later that number rose to 266 followers. The growth on this platform was slow but the engagement achieved increased towards the last few weeks of TravelPlot Porto. The tipping point was Peter's trip to Douro on August 24th (see Figure 49 and Figure 50).

Figure 49. Peter's Twitter conversation #1
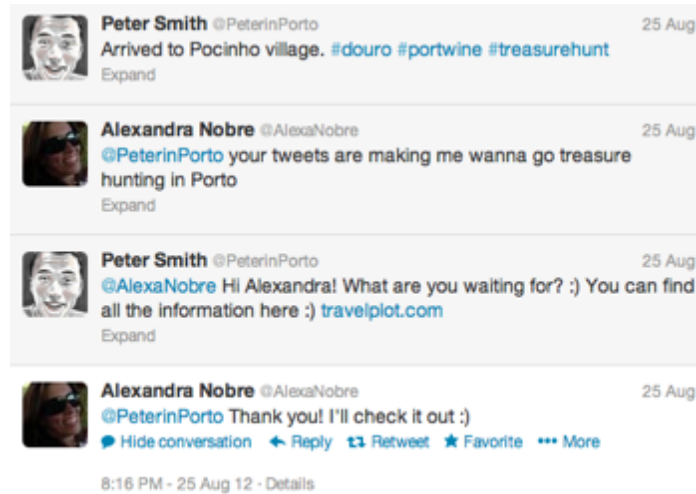
Figure 50. Peter's Twitter conversation #2

The partners' brands were also included in Peter's adventure and had positive feedback from the followers (see Figure 51).

Figure 51. Peter's Twitter conversation #3

Peter's Twitter account biggest reach was on July 19, with 3,706 unique twitter account receiving tweets about his journey (see Figure 52). With the exception of September 5th, the reach was between 2,719 and 3,706 accounts.
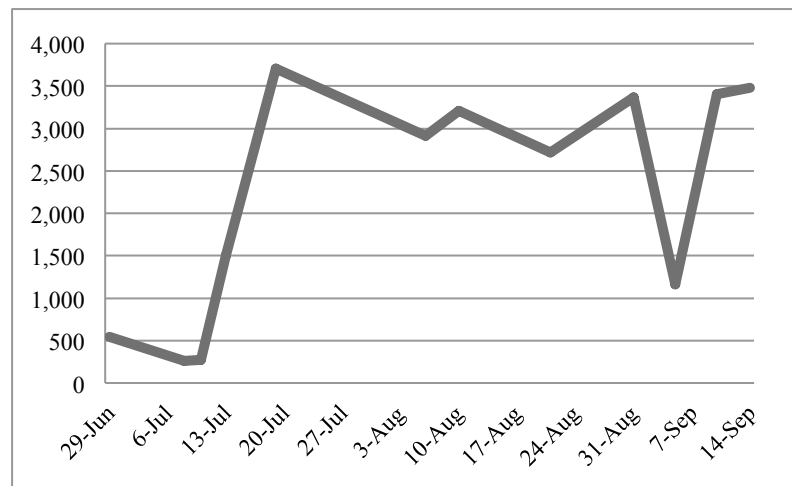
Figure 52. Peter Twitter reach

The highest exposure happened on August 21, with 17,621 total impressions, matching Peter's investigation of Port Wine and following Douro trip (see Figure 53). The second highest exposure took place at the end of the project with 10,951 impressions.
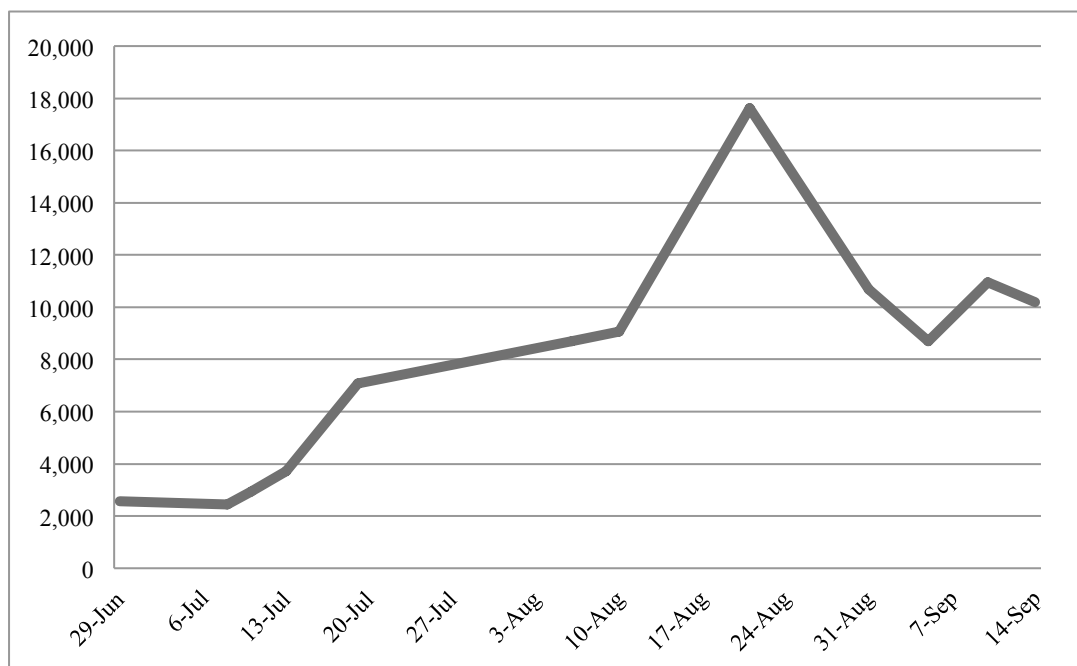
Figure 53. Peter Twitter exposure

The overall average ratio throughout Peter's treasure hunt was average (0.27) which indicates a normal distribution of tweets, retweets and amplification (see Table 49).

Table 49

Peter's Twitter Ratio Reach/Exposure

Date	Reach	Exposure	Racio R:E
29-Jun	545	2,574	0.21
08-Jul	261	2,437	0.11
10-Jul	274	2,932	0.09
13-Jul	1,506	3,713	0.41
19-Jul	3,706	7,085	0.52
06-Aug	2,912	8,699	0.33
10-Aug	3,207	9,056	0.35
21-Aug	2,719	17,621	0.15
31-Aug	3,364	10,675	0.32
05-Sep	1,165	8,699	0.13
10-Sep	3,403	10,951	0.31

6.3.5 Peter's Pinterest. Peter used the social network Pinterest to share his pictures. Each board usually corresponded to one of TravelPlot Porto locations. Even though the final data was collected on September 10th, it didn't reflect the last board added, "Finding the treasure" and its eleven pins.

On July 30th there was a total of 16 boards, 103 pins and 298 followers on Peter's Pinterest. Six weeks later, on September 10th, the number of boards was 41 with 268 pins and there were 508 followers (see Table 50).

The followers' likes grew from 31 likes, on July 30th, to 101 likes on September 10th. The repins also witnessed a significant growth from 23 repins on July 30th to 72 repins on September 10th.

The far reaching boards and most popular pins are presented in the next two tables. Estação de São Bento was the board with the most repins, likes and the most popular pin (see Table 50 and Table 51).

Table 50

Far Reaching Boards

Board name	Repins	Followers	Pins	Liked
Estação de São Bento	8	496	7	12
Monumento aos Tripeiros	7	493	7	4
Bandeirinha da Saúde	7	492	11	6
Vinhas d'Alho	5	491	10	0
Casa do Infante	5	492	8	4
Parque da Cidade	4	491	7	0
Sé - Porto's Cathedral	3	494	8	11
Mercado do Bolhão	2	492	9	12
Saint John 2012	2	492	10	2
Monumento aos Heróis da Guerra Penínsular	2	491	11	0
Total	45		88	51

Table 51

Most popular pins

Board / repins	Description	Pictures
Estação de São Bento (6 repins)	Now I know why Saint Bento Train Station is considered one of the most beautiful train stations in the world! The stations' atrium is covered with more than 20 thousand titles!	
Monumento aos Tripeiros (4 repins)	The other side of the monument where we can see its date: 1960.	
Sé - Porto's Cathedral (3 repins)	The entrance. That Rose Window is a decorative element from the original medieval construction from the 15th century. Below is the statue of Our Lady of the Assumption, the Cathedral's patron Saint.	
Vinhas d'Alho (2 repins)	And then I had Francesinha, of course! It is a multilayered sandwich topped with melted cheese and spicy sauce. Inside are several based meat products such as cured ham, sausage and steak.	

(table continues)

Board / repins	Description	Pictures
Monumento aos Heróis da Guerra Penínsular (2 repins)	Another detail of the Heroes of the Peninsular War Monument.	
Vinhas d'Alho (2 repins)	Prince Henry built a fleet in Porto which objective was to conquer Ceuta. To feed this endeavour, a lot of food was needed. An abnormal quantity of cattle was put down. Its meat was immediately cleaned, salted and taken to the interior of the ships. The guts had to stay behind since they spoiled quickly. According to the legend, Porto people had to learn how to cook with the guts since it was what was left behind after the departure of the ships. This is was they are known as "Tripeiros".	
Torre da Rua de Baixo (2 repins)	One of the oldest buildings in Porto. The only example of medieval architecture that managed to survive to the present days.	
Saint John 2012 (2 repins)	Another picture of the fireworks at D. Luís I Bridge!	

The most popular board name of the followers had a combination of these three words: Travel & places & spaces (16). The second most popular name was Portugal with eight boards (see Table 52).

The genre and countries of Peter's Pinterest followers were analyzed directly from Pinterest on September 10th. At that time, there were 510 followers, 16 of them didn't have available data. Most of the followers were female (258), followed closely by male followers

(197). There were 36 companies following Peter's Pinterest and 3 couples (male and female) (see Figure 54).

Table 52

Name of Repined Boards

Name of reppined boards	Number
Travel & places & spaces	16
Portugal	8
Science-nature-animals	4
Other	2
Portuguese tiles	2
Art	2
What a wonderful world - made by humanity	1
Lots of green	1
Soccer	1
NLP	1
Portuguese food	1
Livro de receitas	1
Delicious	1
Food styling	1
Food and drink	1
Taming the world	1
Superior sculptures	1
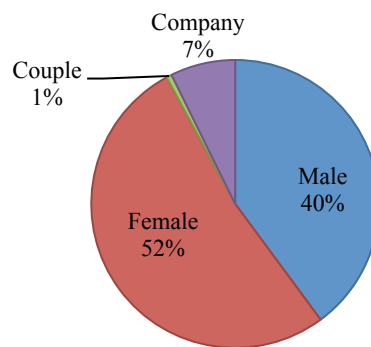
Figure 54. Genre Peter's Pinterest

There were followers from 55 country & subdivisions following Peter. The United States was the country with more followers (90), followed by Portugal (44) and the United Kingdom (33) (see Table 53).

Table 53

Top 10 Countries on Peter's Pinterest

Country	Number	%
United States	90	18.22%
Not available	54	10.93%
Portugal	44	8.91%
United Kingdom	33	6.68%
Spain	32	6.48%
Brazil	30	6.07%
Canada	29	5.87%
Germany	20	4.05%
India	17	3.44%
Japan	13	2.63%

6.3.6 Peter's YouTube channel. Every week, Peter would upload a recap of his week's treasure pursuit, which lasted between two to three minutes. Besides the English version, a subtitled version in Portuguese was also uploaded bringing the number of videos uploads to 26. Besides this weekly logs, it was also uploaded two series of micro videos (between nine to 33 seconds): Saint John 2012 (4) and Porto moments 2012 (7).

There were 912 views to this YouTube Channels, five subscribers, nine likes (five from the United Kingdom and one from Germany, Portugal, United States and Italy), two comments and one share.

Ten of the uploaded videos had 70% of total views. The video with the most views was the first episode with a total of 275 views. All the four videos on Saint John's festival are on the top ten videos uploaded to this YouTube Channel, totaling 218 views (see Table 54). In the top ten videos are also the second, third and forth episodes.

Table 54

Top 10 Videos on Peter's YouTube Channel

Video	Views
Week 1 - The Treasure Hunt Begins!	189
Semana 1 - A caça ao Tesouro Começou!	86
Saint John 2012 - Launching of a Paper Balloon	71
Saint John 2012 - Fireworks - D. Luís I Bridge	58
Week 2 - The Romans (79 a. C.)	53
Saint John 2012 - People Dancing in the street	48
Saint John 2012 - Fireworks - Douro River	41
Semana 2 - Os Romanos (79 a. C.)	40
Week 4 - D. Pedro I Attacks	25
Week 3 - Commerce Treaty (1353)	24
Total	635

Portugal was the country with most views (60.5%), followed by the United Kingdom with 29% of the total views. The United States and Brazil had 2% and France 1%.

The day with most views was the day of Peter's Channel launch with 108 (see Figure 55). The following day was also high with 55 views. The next video upload had also high views with 98 views on June 24th, 59 views and 54 views on the following days.

More than two thirds of the views (76.4%) took place on the YouTube page. The rest of the views occurred on embedded player on other websites (12.1%) and mobile devices (11.5%).

In terms of top traffic sources, 60.6% were view referrals from YouTube, 28.2% were mobile apps and direct traffic and 11.2% were view referrals from outside YouTube.
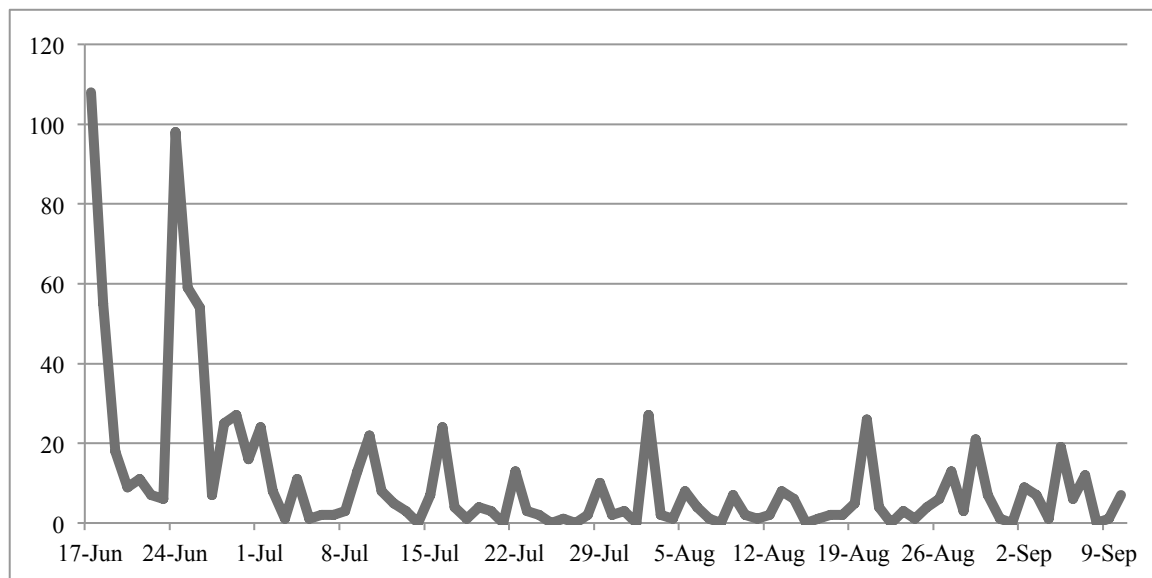
Figure 55. Peter YouTube channel views

6.4 Live Events

Vinhas d'Alho restaurant sold 165 menus in twelve weeks, which translated into a donation of 165 euros to "A Place for Joãozinho". There were no registered sales from Cálem, DouroAzul or Porto com Arte.

6.5 Map

There were 2,500 TravelPlot Porto maps printed. Most of these maps were available and distributed at the tourism offices of TravelPlot Porto partners: Turismo de Porto e Norte de Portugal and Oportonity City.

6.6 UTAD

On October 30th, TravelPlot Porto was presented at University of Trás-os-Montes e Alto Douro to Communications and Multimedia Bachelor students.

At the end of the lecture, four open questions on TravelPlot Porto were given:

- How would you describe TravelPlot Porto?

- Which were the three most liked elements in TravelPlot Porto?

- Which would be the suggested changes to TravelPlot Porto?

- Would you participate in a project like this on your next trip? Why?

A week later, 40 students - 23 male and 17 female between 19 and 36 - delivered their written answers.

There is no information regarding the age and place of residence of four students. Most were from Vila Real (9), Amarante (3), Guimarães (3), Santa Marta de Penaguião (2) and Santo Tirso (2). There was one student from these locations: Aveiro, Barcelos, Braga, Bragança, Cabeceira de Basto, Chaves, Fafe, Freamunde, Guarda, Lamego, Marco de Canaveses, Meinedo, Mondim de Basto, Penafiel, Peso da Régua, Vila Pouca de Aguiar and Vreia de Jales.

How would you describe TravelPlot Porto?

TravelPlot Porto description was divided into the platforms used, the elements, the outcome and a set of adjectives.

The students (21) described TravelPlot Porto as transmedia project or a multiplatform project. There were five students that specifically mentioned the live events and eight referred the gastronomy and wine.

The elements most cited on TravelPlot Porto was story (20), treasure hunt (17), travel guide (16), game (13), monuments (10), historical characters (6), the fact TravelPlot Porto was free (3), used new technologies (2), was a social responsibility project (2) and cultural (1).

The most mentioned outcome of engaging with TravelPlot Porto was the dynamic or interactive way to visit Porto (13). Six students also described it as being a unique or new way to see Porto. The fun factor (12) and the interaction, which was possible with other tourists or locals (10), the knowledge people earn by participating in TravelPlot Porto (6)

times and the personalization the project allowed (5) were other key outcomes mentioned by students. TravelPlot Porto experience was described as thrilling (3), better (2), pleasant or fantastic experience (1).

There were several adjectives used to describe TravelPlot Porto like innovative (11), different (5), interesting (4) and emotional (2). The adjectives active, ambitious, bold, captivating, easy good, great value, modern and simple were indicated once. One student also mentioned TravelPlot Porto app was the best app he had found on the app store.

Which were the three most liked elements in TravelPlot Porto?

The most liked elements on TravelPlot Porto were being a transmedia or multiplatform (15) and a social responsibility project (13). The projects' interactivity (12), two of TravelPlot Porto platforms - the app (12) and print map (11) -, the story element (11) and its narrative lines (4) were also referred. Other elements mentioned were the game aspect (9), the fact most platforms of TravelPlot Porto were free (7), the use of social media (6), the originality of the project (5), the flexibility it allowed (4), its cultural aspects (3) and the diversity of locations (3) found on TravelPlot Porto. There were two mention project design and live events and one mention to the following elements: an interesting way to visit the city, made in Portugal, allowed to share the experience with friends and the promotion of Porto at several levels.

Which would be the suggested changes to TravelPlot Porto?

The vast majority of suggested changes had to do with new elements to TravelPlot Porto and not improvements.

The two most cited elements were the addition of extra languages (21) and the extension of TravelPlot Porto duration (10). More promotion as well as the addition of new cities and new operating systems for the app were each mentioned 9 times. Students also suggested adding more contests (6), locations (5), games (4), narratives lines (4), augmented reality (4) and to be able to leave a message on a notebook (2). These ensuing new elements were indicated once: add bikes, option to download print map, add foursquare, have free live events, have an interactive map with comments, add different points of view, add quick response codes, have a story trailer, have locations suggested by tourists, be able to see information from other users, create a virtual help, be able to vote for the favorite place on the social networks and add volunteers to help tourists.

As for improvements on TravelPlot Porto, the most mentioned aspect was a better explanation of the objective of the app (2). The following elements were mentioned once: make app simpler, improve design, have more participations from partners at the live events, add more publicity and the option of the treasure being found multiple times through a virtual treasure.

Would you participate in a project like this on your next trip? Why?

Thirty-six students, the vast majority of the sample, would participate on a similar project to TravelPlot Porto in the future. Only one person wouldn't participate because he

"likes to walk without a destination and discover the city without any kind of guidance or pre-defined objective." Another student didn't answer the question and two would only participate if she "was in a group" or if he "did an adventurous trip, without planning because it stimulates the adventure spirit and will be able to know the most interesting places to visit in a peculiar way".

The principal reasons cited for participating on a similar project to TravelPlot Porto in the future was the interactivity of the project (12), the fun factor (12), the knowledge it provides (10) and it being a more interesting way to discover the city (9). The story factor was also one of the most mentions elements (8), followed by opportunity to know the locations (7). The project's innovation (6) and originality (4) were also cited along with the mobile application (5), the treasure hunt/game (4), the opportunity to know people (3) and the personalized (3) and simple (3) product. The transmedia aspect was also mentioned by three people, along with several other adjectives such as: accessible (2), different (2), thrilling (2) and attractive (1). Some consider it to be an enriching experience (1), which motivates (1), offers an adventure (1) and is a trusted initiative (1). Others also refer this type of project saves work (1) and avoid getting lost (1). Lastly the social responsibility and the fact of the project being free were also mention once.

6.7 Interviews

Between September 20th and December 3rd 2012, seven interviews to foreign tourists were conducted at Tattva Hostel, a Porto Hostel located near the Cathedral. Despite several platforms of the project no longer being active, tourists were introduced to TravelPlot Porto and asked to try its iPhone or android app. The interviews took place on the following day.

Two extra interviews were added to this sample due to the richness of their input even though these two tourists were friends of the researcher. But they tested TravelPlot Porto on their first trip to Porto, without the researcher, while all the platforms were active.

The countries that constituted this convenience sample were Canada, Italy, Germany, Spain, Croatia (2) and the United States (3). The tourists average age was 31 years old, being the minimum age 20 years and the maximum 52 years old.

These semi-structured interviews were composed essentially by the following questions:

- How would you describe TravelPlot Porto?

- Why did you want to participate?

- What did you like the most?

- What were the biggest difficulties?

- Which platforms did you use?

- Did you interact/engaged with the project? If not, what would make you interact?

- How would you describe TravelPlot Porto to a friend?

How would you describe TravelPlot Porto? & How would you describe TravelPlot Porto to a friend?

These two questions were analyzed as a single question.

Tourists mentioned the project's interactivity (3), the fun factor (2), the help it provided on his journey and possibility of exploring on your own (1). The Canadian tourist also indicated she would recommend TravelPlot Porto to her friends.

The TravelPlot Porto elements most mentioned by tourists were the story (3), the treasure hunt (2), the monuments portraited (1) and it being free (1). The adjectives used were nice (3) and easy (2). The app was considered easy to use (1) and good (2). Other adjectives used once to describe TravelPlot Porto app were: clear, concise, informative, simple, interesting, useful, new, funny and amazing. The Spanish tourist referred the app filled a gap in the app world but he also alluded it seemed unfinished. The German tourist ended his interview by stating, "Don't go to Porto without TravelPlot".

Why did you want to participate?

Most tourists mentioned they didn't have time to do previous research before arriving to Porto (5), others refered the story element (2) present on TravelPlot Porto and being asked to participate in this study (2). Other aspects mentioned once during the interviews were: wanting to find interesting things, wanting to have fun, because it was an interactive, interesting, new and simple way to explore Porto. The German tourist indicated he didn't find another alternative while the tourist from the United States considered TravelPlot Porto to be an exploration city guide without being overbearing.

What did you like the most?

The most liked elements were the story (3), the app map (3), the game element (2) and the existence of a goal (2), the illustrations of the locations (2), the project interactivity (2)

and the ability to share their experience (2). Finally the trailer of the project and the user interface of the app was also named once in the interviews.

What were the biggest difficulties?

The biggest difficulty encountered by the tourists was the lack of free Wi-Fi (4). Others mentioned problems filling in the questionnaire (2), doing the wine tour because of the schedule of the English speaking tours (2). The Croatian tourists didn't find the treasure and were keen on finding it (2). Other elements indicated once was: the app byte size (download), not being able to listen to music while using TravelPlot Porto app and the grammar mistakes of the text.

The improvements given for the next version included the addition of more locations, languages, quick response codes to TravelPlot Porto flyers and finally adding more options to the map like a hybrid or satellite map.

Which platforms did you use?

All the tourists used the iPhone or Android app. Only two American tourists used the print map and did a live event (the Douro Cruise).

Did you interact/engaged with the project? If not, what would make you interact?

Only an American tourist was able to do the check in. The other tourists didn't have access to free Wi-Fi. The Canadian tourist indicated "I couldn't check-in but interacted as in I checked each monument and read about it and went as I went", which was corroborated by the Croatian tourist "We usually went to someplace, check out what is there and then after we read the story and go to another place and we went to somewhere we thought that grape is something there, so we looked on the map and see the story and went to the next grape." An American tourist added, "I've got my Spanish cell phone and wouldn't have Wi-Fi anywhere so it wasn't really as convenient. (…) I just used the map features and the stories."

An American tourist shared a digital souvenir on Facebook and Twitter. According to the other American tourist "I liked that Ben posted my picture on Facebook and Twitter, so I got a chance to like it."

6.8 Questionnaire

The questionnaire was available online between June and December 2012. Responders accessed the questionnaire via TravelPlot Porto website and app. Those who completed the questionnaire could win a prize and got an extra story location. There were 25 questionnaires filled out and submitted.

Demographics

Three questionnaires didn't have information on the genre, age, country, highest degree of education/qualification and country of origin.

There were 13 male and nine female responders, aged between 24 and 53. The average age was 34 years old.

Most were from Portugal (14). Russia, United Kingdom, United States, Canada, Croatia, Spain, Italy and Germany had an entry each.

The majority (15) had completed a graduate degree, 4 had professional education and three had completed high school.

The occupation of 18 responders were as follows: student (3), designer, consulter, accouter, engineer, editorial coordinator, business manager, consultant, digital film manager, informatics student and worker, radiology technician, wine store manager, public administration, environmental chemist, salesman and "sport, traveling, law".

Engagement

TravelPlot Porto was known to eight respondents before arriving to Porto, having found it on the Internet (8) and by friends recommendation (6), while ten didn't knew of its existence and seven indicated this question has not applicable to them.

When asked why did they want to play TravelPlot Porto, the most mentioned reason was being a new experience (17), followed by being fun (13), free (7), the story element (6) and the adventure (4).

There were eight responders, which shared online their participation on TravelPlot Porto. They most used social networks were Facebook (10) and Google + (2). The remaining social networks were referred once: Twitter, Foursquare, Flicker, Pinterest, LinkedIn and Badoo.

Only 19 responders described TravelPlot Porto. Gaining knowledge (5) was the most referred outcome as well as having fun (5), the discovery (3) aspect, the project interactiveness (2), its uniqueness (2) and the recommendation to use TravelPlot Porto (2). Finally, it was also noticed TravelPlot Porto was a good friend for the journey (1), a fantastic experience (1) and good to share with foreign friends (1).

In terms of elements, which constitute TravelPlot Porto, four elements were mentioned: the story (2), the game aspect (1), being a travel guide (1) and the clear map (1).

The adjectives used to describe TravelPlot Porto were interesting (3), modern (1) and useful (1).

When asked what did the responders especially liked about TravelPlot Porto, only 19 responders ended up giving their answers. The most liked elements of TravelPlot Porto was the story (7), followed equally by the illustrations (3), information provided (3), interactivity (3) and the apps user interface (4). The next elements specified were the fun factor (3), the easiness of the app (3) and its map (3). The originality of the project (2), the diversity of locations (2) and the gaming (2) aspect of TravelPlot Porto was also alluded. The last elements indicated was the design (1), it being a transmedia project (1) with live events (1), simple (1), free (1), interesting (1), a guide (1), which provided a good experience (1).

The majority of people (15) didn't answer what they disliked about TravelPlot Porto, hence our sample on this question being only eleven answers.

The biggest dislike or in this case specific problem was the lack of free Wi-Fi (3) throughout Porto. Tourists indicated in the questionnaire that "couldn't connect at times" and "city Wi-Fi plan is no good". The project's single language was also mentioned twice.

The improvements stated was the iPhone app size being too big and forced the connection to Wi-Fi for the download, the illustrations being "rather dark", some design, filling out the questionnaire online, not being able to find the treasure, couldn't listen to music while touring, grammar not being perfect, and it seeming unfinished. It was suggested to add even "more legends and stories".

Platforms

TravelPlot Porto most used platform according to responders were the iPhone (12) and Android (5) app. The next most used platforms with seven mentions each were the website and the map. TravelPlot Porto Facebook (5) and Twitter (3) were the social platforms most used. The live events were also referred: Wine Cellar **(**3), Souvenir Shop (3), Douro Cruise (2) and Restaurant **(**1).

TravelPlot Porto most useful platforms were the iPhone (10) because of being portable, the map (5) and the webpage (4). Due to a programming error there's no input regarding the Android app.

Experience

On the paper *Measuring experience economy concepts: tourism applications*, Oh, Fiore and Jeoung's (2007) developed a measurement scale based on Pine and Gilmore's four realms of experience. Even though this scale was applicable to lodging, the authors' intent was to further refine it and apply it to tourism research across various destinations.

To capture the tourism experience of TravelPlot Porto, this measuring model was applied using a 5-point scale and not the original 7-point scale due to usability issues, in particular the size of the smartphone screen.

The four dimensions of experience – education, esthetics, entertainment and escapism - were represented with four statements, which were reworded to fit this study.

Arousal was evaluated by measuring how interesting, stimulating, exciting and enjoyable was the participation on TravelPlot Porto.

Memory was measured resorting to three statements: "I will have wonderful memories about TravelPlot Porto. I will remember many positive things about TravelPlot Porto. I won't forget my experience on TravelPlot Porto."

The overall perceived quality, overall satisfaction, rating of TravelPlot Porto, its future recommendation and participation on similar projects were also quantified.

Four realms of consumer experience

Education

There were no answers available from three respondents, leaving our sample with 22 responders.

The majority (15) of responders agreed (10) or strongly agreed (5) playing TravelPlot Porto has made them more knowledgeable (see Table 55).

There were an equal number of responders neither agreeing or disagreeing (10), or agreeing (6) and strongly agreeing (4) on learning a lot from TravelPlot Porto.

As for TravelPlot Porto having stimulated the curiosity to learn new things, this question had a somewhat similar result to the previous question. In this case there were nine responders neither agreeing or disagreeing and 12 responders agreeing (8) or strongly agreeing (4).

TravelPlot Porto was considered a real learning experience by the majority of responders (15).

Table 55

Dimensions of Experience - Education

Education	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not available
Playing TravelPlot Porto has made me more knowledgeable	1	1	5	10	5	3
I learned a lot from TravelPlot Porto	0	2	10	6	4	3
TravelPlot Porto stimulated my curiosity to learn new things	0	1	9	8	4	3
TravelPlot Porto was a real learning experience	0	1	6	11	4	3
Total education	1	5	30	35	17	12

Esthetics

There were more responders (10) neither agreeing or disagreeing than agreeing (9) on feeling a real sense of harmony throughout TravelPlot Porto (see Table 56).

The majority agreed (12) or strongly agreed playing TravelPlot Porto was very pleasant as well as TravelPlot Porto locations being pretty interesting (13).

As for the attractiveness of TravelPlot Porto locations, the vast majority (16) agreed with the statement and only five responders neither agreed or disagreed.

Table 56

Dimensions of Experience - Esthetics

Esthetics	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not available
I felt a real sense of harmony throughout TravelPlot Porto	1	2	10	6	3	3
Just playing TravelPlot Porto was very pleasant	0	2	7	12	1	3
The locations of TravelPlot Porto were pretty interesting	0	2	6	10	3	4
The locations of TravelPlot Porto were very attractive	0	1	5	11	5	3
Total esthetics	1	7	28	39	12	13

Entertainment

Even though there were a higher number of responders (11) agreeing with the statement of TravelPlot Porto locations being amusing, there was also a high number (8) of responders not neither agreeing or disagreeing (see Table 57).

Most responders (10) didn't agree or disagree with TravelPlot Porto being captivating, only nine agreed.

The vast majority of responders (15) really enjoyed playing TravelPlot Porto and thought the locations were fun (12).

Table 57

Dimensions of Experience - Entertainment

Entertainment	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not available
Locations of TravelPlot Porto were amusing	1	2	8	7	4	3
TravelPlot Porto was captivating	1	2	10	6	3	3
I really enjoyed playing TravelPlot Porto	1	2	4	11	4	3
Locations of TravelPlot Porto were fun	1	1	7	10	2	4
Total entertainment	4	7	29	34	13	13

Escapism

The majority of responders didn't agree feeling having played a different character (8) or living in a different time and place (9) (see Table 58). This majority also didn't imagine being someone else (9) or having completely escaped from reality (10).

Table 58

Dimensions of Experience - Escapism

Escapism	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not available
I felt I played a different character	2	6	7	4	2	4
I felt like I was living in a different time or place	2	7	5	7	1	3
The experience here let me imagine being someone else	4	5	6	6	1	3
I completely escaped from reality	5	5	9	2	1	3
Total escapism	13	23	27	19	5	13

Most of responders considered moderately interesting (8) or very much interesting (5) their participation on TravelPlot Porto (see Table 59). The number was similar regarding how stimulating their participation on TravelPlot Porto was. Eight responders considered it moderate stimulating and there were four responders answering very much. The excitement on participating on TravelPlot Porto was mostly considered moderate (10). The majority of responders considered their participation on TravelPlot Porto enjoyable (16).

Table 59

Arousal

Arousal	Not at all	Somewhat	Slightly	Moderately	Very much	Not available
How interesting was your participation on TravelPlot Porto?	2	1	6	8	5	3
How stimulating was your participation on TravelPlot Porto?	2	1	7	8	4	3
How exciting was your participation on TravelPlot Porto?	2	1	7	10	2	3
How enjoyable was your participation on TravelPlot Porto?	1	2	3	12	4	3
Total arousal	7	5	23	38	15	12

In terms of memory, responders mostly agreed or strongly agreed on having wonderful memories about TravelPlot Porto (11), remembering many positive things about the project (14) and won't forgetting their experience on TravelPlot Porto (13) (see Table 60).

Table 60

Memory

Memory	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not available
I will have wonderful memories about TravelPlot Porto	1	2	8	6	5	3
I will remember many positive things about TravelPlot Porto	2	0	6	10	4	3
I won't forget my experience on TravelPlot Porto	1	2	6	9	4	3
Total memory	4	4	20	25	13	9

In the following answers, there wasn't data available from three responders.

The overall perceived quality of TravelPlot Porto was considered by three responders much better than expected, by seven responders better than expected, by three responders just as expected, by eight responders worse than expected and by one responder much worse than expected.

Many responders felt mostly satisfied having participated on TravelPlot Porto (12). One responder was completely satisfied while seven weren't neither satisfied or dissatisfied. One responder was completely dissatisfied and another was mostly dissatisfied.

The rating of TravelPlot Porto was good (5), very good (11) and excellent (4). One responder signal it was fair while another rated it as poor.

Most responders would recommend TravelPlot Porto to friends and family member (18). Only two responders were neutral and two others wouldn't recommend it.

The vast majority of responders would participate in another project similar to TravelPlot Porto (19) while only three responders wouldn't.

6.9 Aggregated results of UTAD, interviews and questionnaire

TravelPlot Porto Description

With 25 mentions, story was the most referred element of TravelPlot Porto. The gaming (14) aspect as well as the treasure hunt (19) were also important elements according to our sample. TravelPlot Porto was described as travel guide (17) that encompassed several monuments (11) and historical characters (6). It was freely (4) available and used new technologies (2). It was also a social responsibility (2) project and a cultural way to visit Porto.

TravelPlot Porto was described as a transmedia or multi-media project 21 times. The live events of the project were also mentioned five times, in particular the gastronomy and wine (8).

The most used adjectives to describe TravelPlot Porto were innovative (11), interesting (9) and different (6). It was also considered to be a good (3) and nice (3) project, useful (3), easy (3) or easy to use (1), simple (2) and clear (1). TravelPlot Porto was also depicted as being able to take the tourist on an emotional (2), captivating (1) and informative (1) journey. It's a modern (2) project with one of the best apps (2) that filled a gap in the app world (1). It is considered to be ambitious (1), bold (1), active (1), concise (1), of a great value to the city (1) and new (1). The app was described as having a clear map (1) and being amazing (1). There was one mention to the fact of the project being unfinished (1) and funny (1).

As for the outcome, TravelPlot Porto was mostly described as being fun (19) and an interactive way to see Porto, to gain knowledge (12) about the city by having interaction between other tourists and locals. It was a unique (8) way to discover (3) Porto, in a personalized (3) way. It aimed to be a thrilling (3), better (2), pleasant and fantastic (2)

experience. It helped tourists on their journey (1), being a good friend (1) and allowed the city to be explored on their own (1). It would be recommended (3).

TravelPlot Porto most liked elements

The most liked elements of TravelPlot Porto were the story element (21), followed by game/treasure hunt (13), the project's social responsibility (13) and being a free (8). TravelPlot Porto illustrations (6) were also appreciated along with the diversity of the locations (5) and information (4) it provided. The user interface app (5) was also cited as a most liked factor, the design (3) and its trailer (1). TravelPlot Porto narrative lines were indicated 4 times as a most liked element. Tourists also liked it being easy to use and explore (3). Other liked it having a goal in mind (2) and being guided (1). One tourist liked the fact it was simple (1) and another that it was made in Portugal (1).

Respondents really liked TravelPlot Porto being a transmedia project constituted by several platforms (16). The most liked platform was the app (12). Eight people specifically referred the app map. The print map (11) was the second most liked platform followed by the social media (6), the live events (3) and the videos (1).

The interactivity between platforms and people (18) was a highly liked element, followed by the project's originality (7) and flexibility (4) allowing for a tailored trip. The connection between culture and entertainment (3) was also a mentioned element, along with the fun (3) aspect and the possibility to share the experience with friends on the social networks (3). TravelPlot Porto was deemed to be a good experience (1) and an interesting way to visit the city (2). It served as a promotion at various levels such as monuments, gastronomy, amongst others (1).

TravelPlot Porto least liked elements

When asked which were the aspects least liked in TravelPlot Porto and the suggested changes, the most proposed improvement was the addition of new languages to the project (24), followed by the increase of the project's duration (10), more promotion (9), the addition of new cities (9) and operating systems (9). The addition of more contests (6) and games (4), new locations (6) and new story narratives lines (6) were also mentioned. Others proposed the use of augmented reality (4) and the possibility of leaving messages to other players (2) or listen to music while visiting the locations (2).

All of the following suggestions were mention once in the qualitative data: add bikes to the game, ability to download print map online, adding Foursquare, adding free live events, allow to add comments to the map, offer different points of view of the story and add a story trailer, add quick-response codes to the project and it's flyers, allow tourists to suggest different locations and vote, have users info, add virtual help and volunteers, add more publicity of restaurants and hotels, and lastly have a virtual treasure.

In terms of projects improvements, the biggest difficulty was the lack of free Wi-Fi throughout the city (7). Some tourists wanted to find the treasure (3), there were some problems filling in the questionnaire (3), to understand the objective of the app and the need of more explanation (2), improvement in the design (2), grammar of the text (2), the iPhone app size (2) which required to be connected to Wi-Fi in order to download and the lack of different schedules for the wine tours (2) which were a part of the live events of TravelPlot Porto. Other suggested improvements mentioned once were: the apps interface, turning the app simpler, improve the map and insert map options, have more participation from the project's partners, Peter's videos, have lighter illustrations of TravelPlot Porto story and finally having a finished experience.

Would you participate in a similar project?

Most of the 25 questionnaire respondents (19) would participate in a project similar to TravelPlot Porto. Three wouldn't participate again and three didn't answer the question.

As for the UTAD students, 36 out of 40 students would participate on a similar project to TravelPlot Porto in the future. Only one person wouldn't participate because he "likes to walk without a destination and discover the city without any kind of guidance or pre-defined objective." Another didn't answer the question and two would only participate if she "was in a group" or if he "did an adventurous trip, without planning because it stimulates the adventure spirit and will be able to know the most interesting places to visit in peculiar way". The principal reasons for this willingness are the interactivity of the project (12) and the fun factor (12), closely followed by the knowledge it provides (10) and it being a more interesting way to discover the city (9). The story factor is also one of the most mentions elements (8), followed by opportunity to know the locations (7), the project's innovation (6) and originality (4) were also cited along with the mobile application (5), the treasure hunt/game (4), the opportunity to know people (3) and to have a personalized (3) and simple (3) product. The transmedia aspect was also alluded by three people, along with several other adjectives: accessible (2), different (2), thrilling (2) and attractive (1). Some consider it to be an enriching experience (1), which motivates (1), offers an adventure (1) and is a trusted initiative (1). Others also refer this kind of projects save work (1) and avoid getting lost (1). Lastly the social responsibility and the fact of the project being free were also mention once.

Below is the summary of the three most referred elements mentioned on UTAD, Interviews and Questionnaire (see Table 61). Eight-five percent of respondents would participate in a similar project to TravelPlot Porto.

Table 61

Top Three Mentions on UTAD, Interviews and Questionnaire

TravelPlot Porto description	
Elements	Story (25), gaming (14) and treasure hunt (19)
Adjectives	Innovative (11), interesting (9) and different (6)
Outcome	Fun (19), knowledge (12) and unique (8)
TravelPlot Porto most liked elements	Story (21), interactivity (18) and transmedia project (16)
TravelPlot Porto least liked elements	New languages (24), increase of project duration (10), more promotion (9), new cities (9) and more operating systems (9)

7. Discussion

7. Discussion

In this chapter, the results previously presented, are discussed following the initial the research questions:

• Can transmedia storytelling transform tourist visits into more engaging experiences?

• What are the tourists' behaviors across the different platforms?

• What content do tourists create, share and how frequently?

• Which are the best analytic tools to measure location based transmedia storytelling projects?

7.1 Can transmedia storytelling transform touristic visits into more engaging experiences?

This discussion is limited because no published data regarding the measurement of experience on location based transmedia storytelling projects or the related work analysed during this investigation was discovered.

In the case study - TravelPlot Porto - experience was measured using Oh, Fiore and Jeoung's (2007) experience measuring scale.

The overall results revealed education and esthetics as the two strongest dimensions of TravelPlot Porto followed very closely by the entertainment dimension, which indicates this location based transmedia storytelling offered an opportunity for tourists to increase their knowledge and/or skills; allowed them to enjoy being in the destination environment; and occupied their attention by entertaining them.

The escapism dimension was the weakest dimension revealing tourists didn't feel like having played a different character and being completely immersed in the experience.

Overall the tourism experience on TravelPlot Porto was perceived as more of an absorbing experience by occupying the tourist attention and more of a passive participation

The overall satisfaction was positive, with the majority of responders willing to recommend TravelPlot Porto to their friends and family.

The willingness to participate in a location based transmedia storytelling project in the future was also confirmed by the vast majority of both questionnaire and UTAD students' responses.

7.2 How do tourists behave across the different platforms?

Like the previous research question, data on the tourists' behavior across different platforms was only available from the TravelPlot Porto pilot experience.

TravelPlot Porto audience demographics' – country/territory, language and genre -, as well as the engagement achieved in terms of visitors (new vs. returning), duration of visit, story and partners are described bellow.

7.2.1 TravelPlot Porto demographics

Country/territory. TravelPlot Porto reached 77 countries/territories. Portugal was the most represented country in all platforms, with the expectation of Peter's Pinterest account where the United States was the most represented country.

Nine countries constituted 92% of TravelPlot Porto aggregated audience (see Table 62).

Table 62

Aggregated TravelPlot Porto Countries

Country	Total	%
Portugal	6,343	74%
United Kingdom	476	6%
Spain	272	3%
United States	264	3%
Brazil	202	2%
Italy	89	1%
Netherlands	87	1%
Germany	81	1%
France	81	1%
Total	7,895	92%

The countries/territories data was retrieved from TravelPlot Porto's platforms: mobile application (visits), website (visits), Facebook (likes), Pinterest (likes), TravelPlot Porto and Peter's YouTube (views).

Genre. TravelPlot Porto's audience was almost evenly distributed between female (50%) and male (48%) (see Table 63). On Pinterest, there were accounts, which belonged to companies (2%) and couples (0%).

The genre data was retrieved from TravelPlot Porto's platforms: Facebook, Pinterest and TravelPlot Porto YouTube.

Table 63

Aggregated TravelPlot Porto Genre

Genre	%
Male	48%
Female	50%
Company	2%
Total	100%

Language. Portuguese was the most represented language in TravelPlot Porto (61%), followed by English (24%) and Spanish (5%) (see Table 64). Ten languages represented 99% of the TravelPlot Porto aggregated languages.

The language data was retrieved from TravelPlot Porto's platforms: mobile application, website and Facebook.

Table 64

Aggregated TravelPlot Porto Language

Language	Total	%
Portuguese	3,342	61%
English	1,320	24%
Spanish	254	5%
German	111	2%
French	95	2%
Italian	92	2%
Dutch	77	1%
Polish	50	1%
Chinese	29	1%
Russian	25	0%
Total	5,395	99%

TravelPlot Porto demographics findings support the vast reach location based transmedia storytelling projects can achieve. It also confirms reaching both male and female audiences. Despite this reach, Portugal is by far the most represented country and Portuguese the most represented language. This can be attributed to the inexistence of a promotion budget that would present TravelPlot Porto to an international audience.

7.2.2 TravelPlot Porto engagement

The visitors data and duration was retrieved from TravelPlot Porto's platforms: mobile application and website.

Returning visitor vs. new visitor. TravelPlot Porto website had 76% of new visitors against 24% of returning visitors. This matches the original objective of the website as a contact point with the project that linked to the other project platforms. The website has a static nature and wasn't updated, therefore not offering an incentive for users to come back.

The app had the almost opposite result where 74% of visitors were returning visitors and 26% were new visitors. These numbers also go in line with the initial objective of users downloading the app and then coming back to explore it's contents further, on location or even at home.

Duration. The mobile application had a higher pageview visit duration than the website revealing a bigger engagement in terms of platform, with 75% taking more than one minute in the apps visit, while on the website that number felt to 66% (see Table 65).

Table 65

TravelPlot Porto Visit Duration App vs. Website

Visit duration	App	Website
0-1 minute	25%	34%
+1-3 minutes	25%	18%
+3-10 minutes	25%	26%
+10 minutes	25%	22%
Total	100%	100%

Story. TravelPlot Porto story through the eyes of its protagonist Peter was followed actively by hundreds of people in his three social media channels.

The engagement on Peter's Pinterest and Twitter account was positive although it was initially hard to obtain.

On the Twitter account, there was a slow growth in the number of followers but towards the end, followers started engaging with Peter when he did a trip to Douro on August 24th. One follower tweeted "It's stunning, u gonna love it … enjoy!!!", while another tweeted "Wow beautiful!!! … thks 4 sharing, wish I could be there too, I'll be waiting for more pictures ☺".

Peter's Pinterest account also had a high activity with a considerable number of likes and reppins, but his YouTube channel wasn't able to engage its viewers, which can be attributed to the low quality of the video log. There was initially a group of media students involved in the project but that solution was not enough to ensure timely delivery and good quality of the videos. With more funding, this situation could have been different.

The vast majority of tourists didn't follow the story till the end. This was an expected outcome and contemplated in the experience design. TravelPlot Porto aimed to give an interesting and knowledge sightseeing, functioning as a tour guide where the tourists picked the points of interest they preferred according to their will, resources and available time. The journey is more important, than the player reaching the end of the game/story. This was also considered on The Roswell Experience design.

Partners

Live events. TravelPlot Porto had four live event partners (Cálem, DouroAzul, Vinhas d'Alho and Porto com Arte). Only one of these partners had registered sales connected to

TravelPlot Porto – Vinhas d'Alho. TravelPlot Porto menu, created for the project was successful in attracting 165 customers. There were no registered sales on three TravelPlot Porto live events – wine cellar tour ticket if TravelPlot Porto was mentioned (Calém), six bridges cruise ticket if TravelPlot Porto was mentioned (DouroAzul) and TravelPlot Porto basket (Porto com Arte) - but the results in terms of exposure and reach achieved in other platforms were positive.

App. On the app, DouroAzul and Cálem were amongst the twenty most viewed pages and Porto com Arte and DouroAzul were respectively the third and sixth most checked-in location.

Facebook

Impressions. On TravelPlot Porto Facebook, the two posts that achieved the highest number of impressions (1,438 and 1,363 impressions respectively) mentioned Porto com Arte and the fifth mentioned Cálem (1,234 impressions) (see Table 66).

Table 66

Partners' Highest Lifetime Post Total Impressions

Rank	Post message	Lifetime post total impressions
1	In the XIV century, Porto had become a center for commerce, full of Portuguese and foreign merchants. We are giving away a lavender Ach Brito Soap courtesy of Porto com Arte to the picture or post portraying Porto's commerce calling. The picture or post with the more likes until the 30th June wins!	1,438
2	Porto has always been a very resourceful city. According to the legend, in 1355, Porto's wall was covered with ships masts and sails to pretend that it was complete and trick D. Pedro I, which was ready to attack Porto. Upload the picture that shows Porto's resourcefulness. The picture with the most likes until the 7th of July wins a Porto com Arte notebook!	1,363
5	One of Porto's most famous weddings was the marriage of D. João I, king of Portugal and Philippa of Lancaster. This is a representation of that day. The first person to tell us where this picture was taken from until the 14th of July wins a Port Wine Bottle courtesy of Cálem!	1,234

Reach. Three posts mentioning TravelPlot Porto partners were amongst the ten posts which achieved the biggest reach: the fifth was a competition mentioning Cálem (382 unique users), the seventh a competition mentioning DouroAzul (360 unique users) and the ninth was a post mentioning the partner Porto e Norte de Portugal (356 unique users) (see Table 67).

Peter's Twitter. TravelPlot Porto partners were part of the story in a non-invasive way. The feedback received was positive. As an example is the following tweet and reply from Peter's Twitter account:

Peter: I'm drinking a special reserve #calem #portwine! I LOVE #portwine! I LOVE Douro!

Manuela: @PeterinPorto #calem, excellent choice…

Table 67

Partners' Highest Lifetime Post Total Reach

Rank	Post message	Lifetime post total reach
5	One of Porto's most famous weddings was the marriage of D. João I, king of Portugal and Philippa of Lancaster. This is a representation of that day. The first person to tell us where this picture was taken from until the 14th of July wins a Port Wine Bottle courtesy of Cálem!	382
7	Good morning! What a beautiful day to do the 6 bridges cruise! Be sure to mention TravelPlot Porto when you buy your ticket at DouroAzul so 1€ of your ticket can go towards "A Place for Joãozinho".	360
9	Good morning! Have you visited this brand new tourism interactive store at Porto's airport? Thank you Porto e Norte for all your support!	356

Peter's Pinterest. Two of TravelPlot Porto's partners were the fourth (Vinhas d'Alho) and fifth (Casa do Infante) far reaching board. The fourth and sixth most popular pin belonged to Vinhas d'Alho (see Table 68).

Table 68

Partners' Most popular Pins

Board / repins	Description	Pictures
Vinhas d'Alho (2 repins)	And then I had Francesinha, of course! It is a multilayered sandwich topped with melted cheese and spicy sauce. Inside are several based meat products such as cured ham, sausage and steak.	
Vinhas d'Alho (2 repins)	Prince Henry built a fleet in Porto which objective was to conquer Ceuta. To feed this endeavour, a lot of food was needed. An abnormal quantity of cattle was put down. Its meat was immediately cleaned, salted and taken to the interior of the ships. The guts had to stay behind since they spoiled quickly. According to the legend, Porto people had to learn how to cook with the guts since it was what was left behind after the departure of the ships. This is was they are known as "Tripeiros".	

Destinations. TravelPlot Porto was able to create awareness for Porto as a destination as well as promote it through all the projects impressions and stories created. For example many of Peter's Pinterest followers choose a combination of three words - Travel & Places & Spaces - as the name boards to repined Peter's pictures. This project was also able to arouse the desire to visit the locations portrayed in the story as it's evident from these two Peter's followers tweets: "I'm from Porto, know & love some of these places, but never bothered to visit certain places, after your pic's I'll change that ;)" or "your tweets are making me wanna go treasure hunting in Porto".

The data retrieved from TravelPlot Porto mobile application and website reveals a distinct user behavior which corroborates that each platform has its own purpose and use. In addition, the data collected from the protagonist social media channels, which revealed the audience interest in following TravelPlot Porto story, supports the long-term engagement that location based transmedia storytelling projects can achieve.

Finally, the data related to TravelPlot Porto partners indicates they were able to achieve high visibility due to the audience interaction accomplished and their desire to share the experience.

7.3 What content do tourists create, share and how frequently?

The table below describes the stories created by five TravelPlot Porto platforms, which include: check-ins, likes, shares/repins, comments and subscribers.

From its analyses, Facebook is by far the platform with the biggest number of stories created with 2,431 created stories (see Table 69).

Table 69

TravelPlot Porto Stories Created

Platforms	Check-ins	Likes	Shares/repins	Comments	Subscribers	Total
App	127	-	-	-	-	127
Facebook	-	2,049	231	151	-	2,431
Pinterest	-	101	72	2	-	175
YouTube TravelPlot Porto	-	8	8	-	-	16
YouTube Peter	-	9	1	2	5	17
Total	127	2,167	384	155	5	2,838

The audience didn't create new content that could be added to TravelPlot Porto storyworld. TravelPlot Porto audience had limited time in their leisure time and was mainly looking for important information on Porto. This finding supports the choice of a more passive experience since creating content is the most time consuming.

7.4 Which are the best analytic tools to measure location based transmedia storytelling projects?

A huge amount of data is generated from creating multiple platforms that cohesively form a single story. This information needs to be up-to-date and accessible to the various

teams according to their specific interest such as the creative teams to insure for example synchronized content or to the marketing team so they can enhance viewership and revenue through the analytics data gathered. Users also need feedback from each medium (Huerta, 2014).

A research on a model for transmedia metrics is currently underway at the Fontys Transmedia Storytelling Lab in Holland (personal communication, May 23, 2014). The objective of this investigation is to answer questions such as: how to calculate conversion and pathways, segmentation format feedback, audience participation, engaged loyalty and audience-created enhancement.

7.4.1 Location based transmedia storytelling audience engagement pyramid. Michel Reilhac (2011) discussed in his presentation *The birth of a language*, the changing audience structure where he divided audiences as spectators, participants and producers (Reilhac, 2011).

Based upon that division, a framework to measure a location based transmedia storytelling audience engagement is proposed (see Figure 56).

The audience of a location based transmedia storytelling project is divided into two categories: potential audience and engaged audience.

The potential audience measures the people that might or have seen any project content, therefore the visibility the project had in the market. It combines the estimated audience and the reached audience.

The engaged audience measures the people that have interacted with the project in some form. This interaction can be as a passive audience or as an active audience (participants and producers).
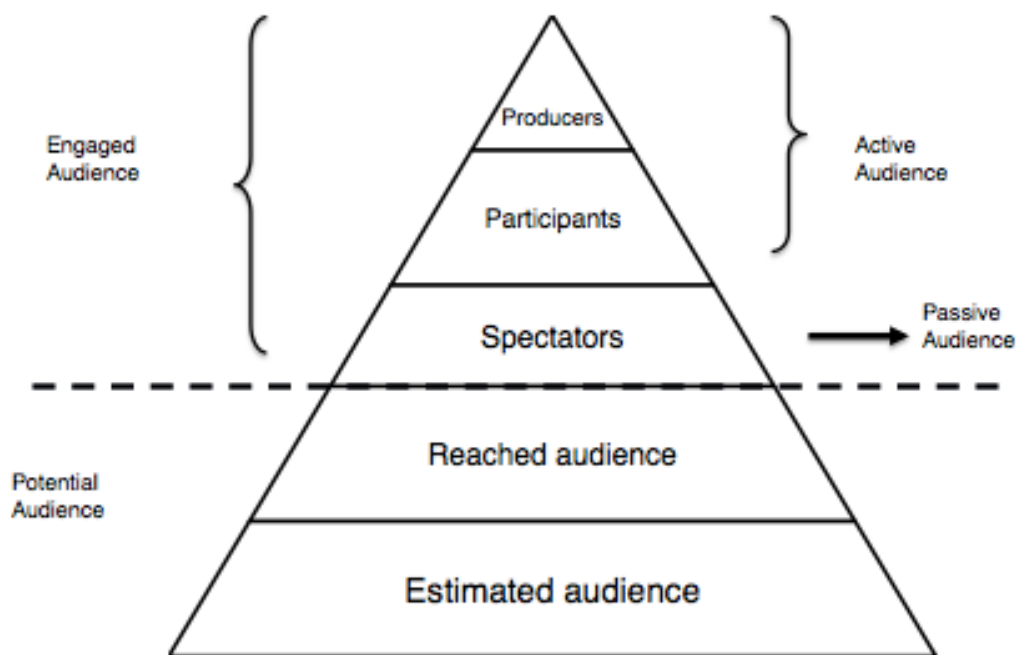
Figure 56. Location based transmedia storytelling audience engagement pyramid

The definition of each category of audience and examples of measures, which can be used for each type, is showed in Table 70.

Table 70

Audience Category Definition and Metrics

Audience	Definition	Metrics
Estimated audience	Estimated people who have seen any project content	Impressions
Reached audience	People who have seen any project content	Reach
Spectators	People who have made an initial interaction with any of the projects platforms	Download, visit, follow, view, purchase, registration
Participants	People who have created a story from the project	Share, like, comment, pageviews, rating, review, vote, download
Producers	People who have created a new project content, adding to the project storyworld	Photos, video, text and other generated user content

The engagement of the audience increases from the bottom to the top.

There are several limitations to this framework including not having in consideration the time spent, the effort taken by the users, the individual users journey or even the different levels of participation of transmedia storytelling (Halogen Filmshop, 2014).

With the metrics gathered from TravelPlot Porto experience, it's not possible to apply correctly this model due to the lack of several results and the different nature of the metrics in the various platforms used. However, with the metrics available, the following exploratory analysis is attempted (see Table 71).

The metrics used are related to users and not unique users, which means that a user can have several contacts or interactions with the TravelPlot Porto content. This option was taken since there is more available data regarding users, then unique users. The results risk being inflated but, in this specific case, several metrics are missing.

Table 71

TravelPlot Porto Location Based Transmedia Storytelling Audience Engagement Pyramid

Metrics

Audience	Metrics	Platforms	Results
Estimated audience	Impressions, visits, followers, views and menus	Facebook, TravelPlot Porto Twitter, Peter Twitter, app, website, Pinterest, YouTube TravelPlot Porto, YouTube Peter, print maps, restaurant menu	180,282
Reached audience	Reach	Facebook, TravelPlot Porto Twitter, Peter Twitter, app, website, Pinterest, YouTube TravelPlot Porto, YouTube Peter, print maps, restaurant menu	69,174
Spectators	Visits, fans, followers, views and menus	App, website, Facebook, TravelPlot Porto Twitter, Peter Twitter, Pinterest, YouTube TravelPlot Porto, YouTube Peter, print map, restaurant menu	10,988
Participants	Share, like, comments	Facebook TravelPlot Porto, Pinterest, TravelPlot Porto YouTube, Peter YouTube, app	2,766
Producers	-	-	0

TravelPlot Porto estimated audience

The estimated audience was calculated by adding the impressions of TravelPlot Porto that were available in three project platforms – Facebook, TravelPlot Porto Twitter and Peter Twitter - and the spectators from the other project platforms.

TravelPlot Porto estimated audience = Facebook daily impressions + TravelPlot Porto Twitter average impressions + Peter's Twitter average impressions + visits to the website + app downloads + Pinterest followers + views on TravelPlot Porto YouTube + Peter's YouTube + print maps distributed + number of menus sold

There were 180,282 people, which are estimated to have seen a TravelPlot Porto content featured in any of the project platforms. These people are not unique people. Some might have seen multiple content.

TravelPlot Porto reached audience

The reached audience was calculated by adding the reach of TravelPlot Porto that were available in three project platforms – Facebook, TravelPlot Porto Twitter and Peter Twitter and the spectators of the other platforms.

TravelPlot Porto reached audience = Facebook daily reach + TravelPlot Porto Twitter average reach + Peter's Twitter average reach + visits to the website + app downloads + Pinterest followers + views on TravelPlot Porto YouTube + Peter's YouTube + print maps distributed + number of menus sold

There were 69,174 people, which have seen a TravelPlot Porto content featured in any project platform. These people are not unique people. Some might have seen multiple content.

TravelPlot Porto spectators

TravelPlot Porto spectators = visits to the website + app downloads, TravelPlot Porto Twitter followers + Peter's Twitter followers + Pinterest followers + Facebook fans + views on TravelPlot Porto YouTube + views on Peter's YouTube + print maps distributed + number of menus sold

There were 10,988 people making an initial interaction with TravelPlot Porto's platforms.

TravelPlot Porto participants

TravelPlot Porto participants = Facebook's metric stories (comment, like and shares) + app (check-ins) + Pinterest (repins, likes and comments) + TravelPlot Porto YouTube (likes and shares) + Peter's YouTube (subscribers, likes, shares and comments)

There were 2,766 people who have created a story of TravelPlot Porto.

Producers

There wasn't any content produced which expanded the storyworld of TravelPlot Porto.

TravelPlot Porto engaged audience

The previous data shows TravelPlot Porto engaged audience followed the 80/20 rule (see literature review chapter) (see Figure 57).

In TravelPlot Porto there were no producers of new content to the storyworld. This can be explain by the specificity of the target audience (tourists) - their limited time, not having access to all platforms, not being able to travel to Porto, technical limitations like the lack of free Wi-Fi but this doesn't mean users won't advocate the project as it was showed by the qualitative data from this study.
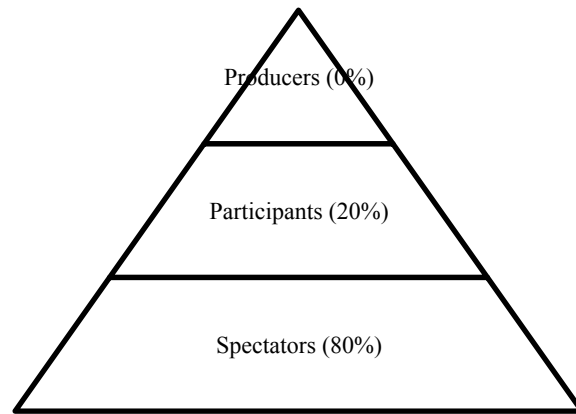
Figure 57. TravelPlot Porto engaged audience

In terms of potential audience of TravelPlot Porto, there was an estimated audience of 72% versus a reached audience of 28% (see Figure 58).
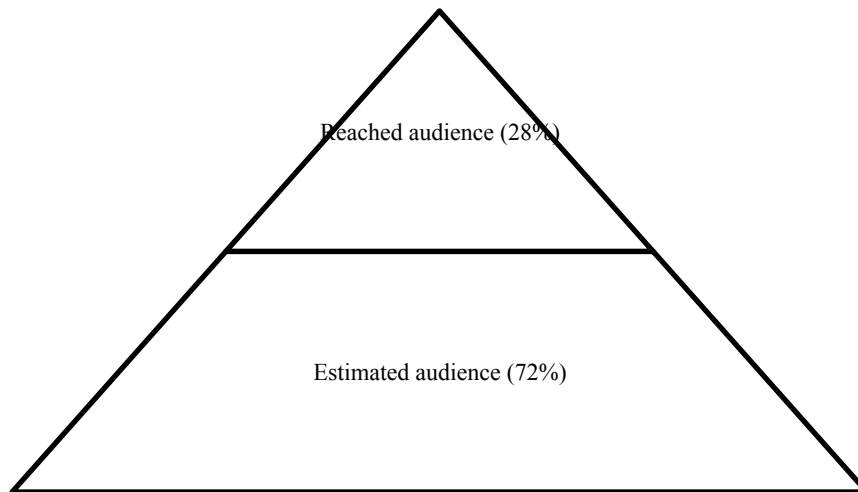
Figure 58. TravelPlot Porto potential audience

The overall results indicate 263,210 people, which are estimated or have contacted with any content from TravelPlot Porto. The potential audience represented 95% - estimated

audience (180,282), reached audience (69,174); while 5% was the actual audience -

spectators (10,988), participants (2,766) and producers (0) (see Figure 59).
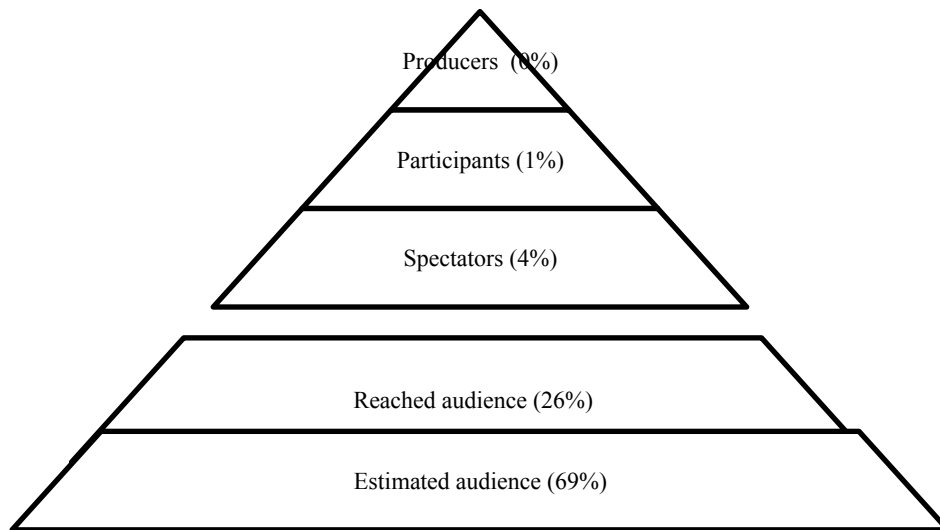
Figure 59. TravelPlot Porto audience engagement pyramid

7.5 Limitations of TravelPlot Porto implementation

Several extrinsic and intrinsic factors conditioned TravelPlot Porto implementation.

Extrinsic Factors

- Lack of free Wi-Fi – even though it was at the tourism offices tourists had the privileged

  contact with TravelPlot Porto through its map and flyer, they were unable to download

  the free application because inside the tourism offices there was no free Wi-Fi. This was

  not expected at the time when the trial was designed. Also, there were a number of hot

spots in town where free Wi-Fi was available, but tourists were not informed about them. To use the check-in button on the iPhone/android application, it was required Internet. Tourists weren't willing to incur in roaming costs;

- Transmedia storytelling concept – when TravelPlot Porto was launched, the term transmedia storytelling wasn't a mainstream concept, particularly in the tourism industry. This made the understanding/communication of the project extremely hard since audience and press couldn't understand the project and categorize it.

Intrinsic Factors

The main intrinsic factor was the shoestring budget available for this trial, which has limited the implementation in several aspects:

- Team – TravelPlot Porto team was extremely limited taking into account the project's size and complexity, not allowing the development of important features;
- Community engagement – a full time community manager was necessary to increase the engagement on all social networks of the project;
- Promotion – TravelPlot Porto was a new brand in the market. There was no budget for advertising, especially in the social networks;
- Technology/language – with a higher budget, it would be possible to do a more interactive website and app as well as add other languages to the project;
- Platforms metrics – only free tools were used to measure social media;
- Game dynamics – the reward system was limited. It wasn't possible to keep score of each participant or to develop different levels of the game;

- Duration of the project – if the project had run longer, the projects' fan base could have grown.

- Content – higher quality content could have been created, namely videos.

Despite these multiple constrains, the impact of TravelPlot Porto surpassed the initial objectives. Almost two years after the end of TravelPlot Porto, on July 30, 2014, this project continues to gain audience in some platforms (see Table 72). The data reveals the relevance and attraction this experience maintains. It indicates that participating in this project is more important than its end. It also shows the potential for its pilot expansion.

Table 72

TravelPlot Porto Platforms 2012 vs 2014

Platforms	2012	2014
App	950 downloads	3548 downloads
Website	3159 visits	7582 visits
YouTube TravelPlot Porto	1701 views	3084 views
YouTube Peter	912 views	2150 views
Facebook	403 fans	619 fans
Twitter TravelPlot Porto	422 fans	422 fans
Twitter Peter	266 fans	206 fans
Pinterest	510 followers	712 followers
Maps	2500 maps	2500 maps
Menus (restaurant)	165 menus	165 menus

7.6 Best practices for location based transmedia storytelling applied to tourism

After reviewing the main findings on this discussion chapter, a set of challenges and lessons learned on designing location based transmedia storytelling projects are presented. The biggest difficulties and advantages are also mentioned.

Amongst the specific challenges in designing a location based transmedia storytelling for tourism, are:

- The coordination of the tourist journey - before, during and after their travel - different stages, and how the different platforms could match each stage;

- The amount of historical and cultural information present in the overall project should be comprehensive but its quantity needs to be thought out according to each platform;

- The time tourists are willing to commit to activities in their leisure time;

- The connectivity required.

From this research, several lessons were learned which can improve the design of future location based transmedia storytelling projects, namely:

- The entry barrier to the project ought to be low;

- The platforms should be consistent amongst each other and with the overall project;

- A freemium model, where part of the content is free, will allows the audience to get to know the project and be initially envolved;

- Several platforms can reach a higher number of people and different target groups;

- Information should be available on different devices, anywhere and at any time;

- Different audience engagement styles ought to be present;

- The design must match the main tourists observed behavior and their specific habits;

- For the audience, the journey is more important than reaching the end of the overall story, however the reward mechanism is vital to balance the flow of challenge and success;

- Audience desires interaction with fictional story characters and other members of the audience;

- Even though it is a location based project, the audience must still be able to engage with a part of the project;

- Social media is very important to interact and engage with the audience, despite taking a lot of effort and time;

- Destinations have the opportunity to share their culture and story in a more engaging way through these type of projects;

- If tourists interact with the project before arriving to the location, they could stay longer or make plans to include the project in their travel. The project should be part of the destinations marketing efforts;

- Partners need to be involved with audience acquisition;

- It takes time to build an audience;

- The deliver of an experience should be seeked out;

- The goals and priorities of each project are fundamental to reach conclusions of its success. The specific goals and its audience are key to realize the most relevant metrics to be used as well as the goals to be reached.

The biggest advantages in this type of projects are the multiple ways to reach consumers. Location based transmedia storytelling can create personalized experiences and various degrees of engagement. It can also incite the desire of future travel, consolidate the present desire or even continue the travel experience tourists had.

The biggest disadvantages in location based transmedia storytelling projects are time it is required to produce the content and build brand awareness, the budget required to create and manage all of the platforms, and the multidisciplinary team needed to tackle the different fronts.

8. Conclusion

8. Conclusion

The main aim of this research was to understand the impact of applying transmedia storytelling in tourism, particularly its advantages and disadvantages and to identify the best practices.

A review on the three research fields directly intertwined with this investigation was undertaken - transmedia storytelling, games and tourism – as well as an analysis of related work. Transmedia storytelling section main focus was on story, the current audience behavior, transmedia design and audience measurement. The game section centered on location-based games, gamification and games in tourism. The tourism section focused on the current tourism behavior, the impact of story and experience in tourism, and the role technology plays in this industry. Various related work was also analysed.

The research design of this investigation was comprised by the design and implementation of a location based transmedia storytelling experience – TravelPlot Porto and an overall analysis of related work.

This research findings indicate location based transmedia storytelling can transform travellers experience into a more engaging one. Storytelling adds a new level of entertainment that can differentiate touristic locations by creating stories involving local heritage and local service operators. Tourists are able to experience points of interests in an interesting way through tasks related to their sightseeing experience. A well-imagined story can also be used to openly disseminate users experience over the social networks contributing to attract visitors from the web. Social media plays a relevant role in engaging and reaching various types of audience.

Location based transmedia storytelling takes advantage of destination's complex and rich story world, providing various ways to reach different consumers and make them part of the story destination. It creates the desire to travel to that specific destination, consolidates the present desire or even continues the travel experience tourists had at the destination.

Location based transmedia storytelling can also create personalized experiences and various degrees of engagement according to the goals of each tourist.

These projects have a constantly evolving nature. There isn't a formula. Each project has to be suitable to the particular story, audience, resources and context.

Various shortcomings described in section 8.2, prevented a more comprehensive answers to the research questions. However, the overall research work was positive and provided the first insights into combining transmedia storytelling and tourism.

8.1 Final considerations

We live in very exciting times with technology continuing to evolve to a point where eventually computers will become invisible and most of the devices will be connected to the internet. Our travel experiences are changing with new travel mobile applications and features for wearables debuting regularly. The immersive content journey has already begun. Augmented reality and virtual reality technology are offering new ways to experience travel and destinations through devices such as Microsoft HoloLens and Oculus Rift but the human touch and authenticity of the in-person experience should continue to be relevant in our future society. Michio Kaku, on his book *Physics of the future: how science will shape human destiny and our daily lives by the year 2100*, described the *Cave Man Principle* where humans are likely to carry on thinking like its ancestors. According to genetic and fossil

evidences, there haven't been deep changes on our brains and personalities, "whenever there is a conflict between modern technology and the desires of our primitive ancestors, these primitive desires win each time" (Kaku, 2012, p.13). Therefore, despite all the technology and different ways to communicate, storytelling will remain to be one of the aspect that define us as human beings and a privileged way to share information and offer experiences.

8.2 Research Limitations

This investigation had various limitations, which prevented a more complete analysis, namely:

- The difficulty to circumscribe transmedia storytelling research field, since it is a convergence of several disciplines;

- The scarcity of theoretical background on transmedia storytelling;

- The shortness of published information on transmedia storytelling case studies, particularly applied to tourism;

- The lack of conventions in transmedia storytelling, which are still in the process of being set;

- TravelPlot Porto results have to be generalized with great care since there was a specific design location and timing to suit the city of Porto;

- The inexistency of a content management / publishing system on TravelPlot Porto, which limited the content publication and engagement;

- No aggregate metrics report was available, limiting the data retrieved from this pilot and subsequent analysis;

- Designing and implementing an extremely ambitious experience giving the time, team and budget allocated;

- Engagement was limited in social media due the lack of a dedicated community manager; and on other platforms such as the mobile application and website, they had to be more of a static nature;

- The social media strategy could have been more carefully thought out and implemented, conditioning the full effectiveness of the social media;

- No testing phase was possible. This could have been very useful to prevent errors;

- The initial release of only one operating system (iOS) and only a couple of weeks later the Android operating system conditioned the outcome;

- The original plan to organize a focus group didn't prove to be viable since there was no way to know if the audience following TravelPlot Porto was going to be at the end of TravelPlot Porto story (the discovery of the treasure at the wine cellars). In order to minimize the lack of this data, besides resorting to written interviews to Portuguese students, a set of interviews was conducted in a hostel. Despite being the biggest hostel in Porto, this collection of data took place in the lowest touristic season (winter) and the numbers of interviews obtained were limited.

8.3 Future Work

This investigation was a useful starting point. Further investigation is required to develop a richer theoretical background.

One direction for future research is the creation of new metrics for location based transmedia storytelling that alongside with the more traditional metrics, explore dimensions

such as the degree of information seeking, the duration of the content consumption, the degree of audience content creation and interaction amongst each other, on how many platforms is the audience following the story, the degree of the discover or learning and the effect it has on purchase behaviors.

The development of new location based transmedia storytelling case studies set in other contexts, running for a longer time period, using different platforms, the existence of a promotion budget such as a social media advertising campaign to raise the project brand awareness, interact and engage with the audience both online and off-line (on site) in order to a deeper involvement of participants, the testing of different reward mechanics, free Wi-Fi; will contribute to a set of conventions and best practices on location based transmedia storytelling.

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Appendices

APPENDIX 1

TravelPlot Porto best practice example for destinations

Figure 60. TravelPlot Porto best practice example for destinations by Digital Tourism Think

Tank in Best Practice Report: Gamification in Tourism 2014

APPENDIX 2

TravelPlot Porto story

Introduction

A long time ago in ancient Greece, twelve powerful Gods lived in mount Olympus. Amongst them was Dionysus, the youngest of them all. Unlike the rest of the Gods, which feasted on ambrosia and nectar, Dionysus fell in love with the vine. From his best grapevine he made a small, flattened cup with two handles. This cup was his most precious possession. It held the magic of wine.

One day, Dionysus became mad and wandered through various parts of the earth. The goddess Rhea cured him, but before he went home, he taught mankind the cultivation of the vine. During his time on earth, he had a son with a mortal called Cyrus, to whom he gave his cup and the responsibility to protect it. If the cup fell in the wrong hands, all earth's wine would be destroyed.

Dionysus cup stayed protected by Cyrus and his descendants for hundreds of years, at Bacchus Temple, Dionysus Roman name. The eldest of the children was the cup's guardian, who wore a wooden necklace with a grape, around the neck.

Chapter 1 – The Romans (79 B.C.)

War broke out. It wasn't safe for the cup to remain at Bacchus Temple anymore. The guardian of the cup flees to Hispania (Iberian Peninsula).

In 79 B.C the cup finally reaches Cale (Porto), by the hands of Perpena, the roman soldier. From then onwards, the protector of the cup would be known has Cale. Each Cale, on

a specific date would draw himself in front of several locations. One of these locations was the true location of the cup. Most of the drawings didn't make it to the present day, others were destroyed when the original building was demolished and replaced by the drawing of the new construction.

The oldest drawing dates from the Romans times.

(1A) Casa do Infante (Interior) (Historical Building/Museum) - Remains of a roman building from the IV century B.C. was found in Casa do Infante. (Tues-Sun 10:00-13:00/14:00-17:30 Closed Mon and Holidays) – Free Wi Fi except inside Museum.

Chapter 2 – Commerce Treaty (1353)

By 1353, Porto had become a centre for the commerce of wine, cereals, wax, honey, cattle, wood and cloths. It was a thriving city, full of Portuguese and foreign merchants, a true melting pot. Afonso Martins Alho is the present Cale.

Afonso IV, King of Portugal, made Afonso Martins Alho, one of his ambassadors. His mission was to go to England and negotiate a commercial treaty between Portugal and England. The protection of the cup passes to the next Cale; his daughter Ana Alho Gonçalves. Afonso gave his daughter a device he made. This device read the unique frequency that Bacchus's cup emanates. In case it got lost, through this device, it could be found again.

A year later a commerce treaty valid for 50 years, unlike the usual 40 years, is reached; holding both commercial and security interests. Afonso Martins Alho returned home having succeeded in reinforcing the alliance between Portugal and England. His skillful negotiation is still remembered today by the Portuguese saying: "You are clever as a Alho".

Four drawings dated from 1353 were found:

(2A) Sé (Exterior/Cathedral) – It is the most important church of the city. Its construction started on the XII century and the city grew around it. It's built of granite. In the north tower, there is a representation of a ship; symbolizing the city's maritime calling. In the south tower, there are measurements engraved in the stone, which were used to measure cloth when the city's market took place.

(3) Torre da Rua de D. Pedro Pitões (Historical Building) – This medieval tower was discovered during demolitions in the fourties. It was reconstructed 15 metres from its original position. It's an example of a tower house where the high clergy and rich bourgeoisies of Porto used to live. These constructions were made of stone. They usually had five floors with specific functions; for instance, the highest floor had the bedrooms and the kitchen, below was the space dedicated to meals and leisure, then the shop and office, the servants' quarters, pantry and the cellar. The openings of the house were narrow and ended with battlements. It functioned has a defence fortress of its habitants and respective properties.

(4) Torre da Rua de Baixo (Historical Building) – It is one of the most ancient medieval buildings in the city. It dates from the XIII century. The house has five floors. The outside steps lead to the entrance, which was very common in those days.

(5) Porta de Sant'Ana (Landmark) – It was one of the four entrances of the old Porto wall. It was built in the XIII century and held a Saint Anna image; grandmother of Jesus. Before childbirth, women used to pray to Saint Anna and ask for a safe birthing experience. In return they would leave oil, wax and even money was on offer. The city was just a few steps up from this. This door was demolished in 1821. The original image now sits at Museu de Arte Sacra.

Chapter 3 – D. Pedro I attacks (1355)

Three years later, Bacchus cup had to be moved away quickly by Ana Alho Gonçalves. D. Pedro, Afonso's IV son, had become madly in love with Inês de Castro, a Galician girl with close family ties to the Castile Kingdom. This romance put Portugal's sovereignty at risk becoming a state affair. In the past, Afonso IV had been forced to fight with his father because of his half brother. He didn't want the same to happen with his legitimate grandson D. Fernando, son of D. Pedro.

In 1355, D. Afonso IV finally ordered Inês' murder. D. Pedro, blind with rage, sets off to destroy his father kingdom and revenge his lover death. He destroyed everything in his way. The next city on his way was Porto. The attack was imminent. People were panicking. Porto was a city of merchants, farmers and sailors. Not a city of warriors. The protecting wall around the city isn't even finished! How can the city resist to D. Pedro's rage? According to the legend, the parts of the wall that weren't finished were covered with the ships masts and sails, to pretend the wall was complete and trick D. Pedro. The truth however should be closer to two facts: D. Pedro's good relationship with Porto and his mother, D. Beatriz, persuasion through several letters trying to bring him back to reason.

After sixteen days of siege, D. Pedro calls off the attack. Not long, the negotiations ended and an agreement with his father was reached. Father and son ruled together for two years. A full pardon to those that sided with D. Pedro is granted but immediately after his father's death, D. Pedro goes after Inês murderers. One had escaped to France. The other two were killed and their heart ripped from their bodies. D. Pedro confessed to his subjects, he had married Inês in secret. She was in fact the Queen of Portugal and makes them kiss the dead Queen's hand.

D. Pedro refused to marry again, clamming that Inês was his true love. He had several girlfriends though. One of them was Teresa. She gave birth to João de Aviz, which would later on become the next king of Portugal.

D. Pedro and Inês are buried next to each other, together until the end of the world in Alcobaça Monastery.

Three drawings dated from 1355 were found:

(6) Muralha Fernandina (Landmark) – This new wall was the replacement to the first medieval wall that had become too small for a thriving city. It took almost 40 years to finish it. It ended up being 2,2 meters thick, 6,6 meters in height and having a length of 3400 meters. It had 17 doors and wickets. D. Afonso IV started its construction but it was D. Fernando that finished it in 1370. That is why it's called Muralha Fernandina.

(7) Casa da Rua da Reboleira nº55 (Historical Building) – The architecture of this building belongs to the late Middle Ages period. It is one of the biggest buildings in the area, with different period elements namely medieval structures from the XIV century and floor gothic portals.

(8) Postigo de Carvão (Landmark) – Coal wicket was named this way because it was here that the coal entered the city and stayed deposited at Taurina fountain, an ancient fountain that no longer exists.

Chapter 4 – D. João I Marriage (1387)

D. Pedro's son, D. Fernando, died leaving his daughter, D. Beatriz, married to Juan I of Castile. She was his only descendent. Portugal independency is at risk again. João de Aviz, half-brother of D. Fernando, is the main opposition. Even though most of the north supports D. Beatriz, Porto supports João de Aviz.

Juan I of Castile departures to conquer Lisbon while Compostela archbishop is in charge of conquering Porto. The wall of Porto is now finished. Porto's army didn't want to wait and left the city's wall. Joining them were the Lisbon soldiers, which had just disembarked in Porto. An army of 6800 soldiers met the archbishop's army. The archbishop got scared and called the retreat. The casualties weren't big. They had been defeated by the element of surprise.

In 1385, João de Aviz became D. João I, king of Portugal and two years later married Philippa of Lancaster in Porto.

Porto cleaned up for this very special occasion. Flowers and fine herbs were everywhere. The boats are decorated with pennons. D. João I rode a white horse covered with golden cloths. By his side was his bride. They both had golden crowns covered with precious stones and pearls. Music announced the procession. The biggest celebration party took place at Largo de São Domingos where, in a stage built for the special occasion, noble fights and games occurred in honour of the wedding.

D. João I and Philippa remained married for 28 years and had 8 sons. This marriage renewed the Treaty of Windsor, which is nowadays, the oldest diplomatic alliance in the world that is still enforced.

Aires Gonçalves de Figueiredo, son of Ana Alho Gonçalves, became the next Cale.

Three drawings dated from 1387 were found:

(9) Estátua do Porto (Statue) – Porto is represented in this statue has a warrior. It's sculptured in a neoclassic style. The warrior is vigilant, supported by a spear and a shield. The first known statue dates from 1293. It was made of stone and was located near Sé. The present statue dates from 1725. In 1816, the city arms were added to the statue. After several locations, it presently remains next to Sé.

(10) Ruína Medieval da Casa da Câmara (Historical Building) – The original tower is from the XIV century. It was where Porto senate sessions took place. Due to its frail wooden construction, the tower collapsed. In 1443, a new stone tower was built. This building is popularly known as the "House of the 24" after the 24 representatives of twelve different crafts. It was in this tower that they got ready for processions and sometimes even held meetings. The inferior part of the tower stills remains today after a ferocious fire destroyed it in 1875. Following Fernando Távora's project, a famous Portuguese architect, the tower was restored in 2000.

(11) Estação de São Bento (Historical Building/Train Station) – The Convent São Bento da Avé-Maria was demolished to allow the construction space needed for this station. That is why the station carries the São Bento name. Even though in 1896, trains were already arriving to this location, no station existed yet. The first granite stone was laid 4 years later. Blue and white tiles where added to the interior of the station in 1915, which represent some of Portugal's historic moments including D. João I marriage with D. Philippa and Ceuta's conquest in 1415.

Chapter 5 – Departure to Ceuta (1415)

Infante D. Henrique, son of D. João I and D. Philippa, came back to Porto after being born and baptized there. His father had given him a secret mission. He was to build a fleet in Porto that together with the fleet being built in Lisbon by his brother would conquer Ceuta's port, the gateway between the Mediterranean and the Atlantic. In order to succeed, D. Henrique's military expedition had to remain a secret until the last minute.

To feed this endeavour, a lot of food was needed. An abnormal quantity of cattle was put down. Its meat was immediately cleaned, salted and taken to the interior of the ships. The guts had to stay behind since they spoiled quickly. According to the legend, Porto people had

to learn how to cook with the guts since it was what was left behind after the departure of the ships. This is was they are known as "Tripeiros".

Aires Gonçalves de Figueiredo, now an old soldier, dressed in a full armour presented to duty and embarks to Ceuta. His son, Rodrigo Silva de Figueiredo, became the next Cale.

No one knows exactly how many ships left in 1415 but some say they were more than 50 ships. A month later, the Portuguese fleet arrived to Ceuta, conquering it. This was the kick-starter for the Portuguese discoveries.

Six drawings dated from 1415 were found:

(1B) Casa do Infante (Exterior) (Historical Building/Museum) – In 1325, the king Afonso IV orders the construction of a customs house to collect the taxes from the goods circulating in Porto. The building served to store merchandise and as lodgement of royal officers.

The tradition says that Prince Henry, the Navigator was born in this house in 1394. During the celebration of the 500th anniversary of his birth, a neo-gothic plate was added to the façade of the building to remember this event. That's why it is called "Casa do Infante" – Prince's House.

(12) Monumento ao Infante D. Henrique (Statue) – Its construction started in 1864 but it was only inaugurated in 1900. Infante D. Henrique is dressed as a warrior. His right arm points beyond the sea. Next to him is earth's globe. At the bottom of the statue are two different sets of figures. One has Victory riding two warhorses and two tritons; the other is a female figure that symbolises the faith in the discoveries.

(13) Bandeirinha da Saúde (Landmark) – Bandeirinha da Saúde sits on a column, situated next to the Mermaid Palace (Palácio das Sereias), named after the two mermaids surrounding the blazon. All ships that entered Douro's sandbank had to stop in front of this

flag for a health inspection. This flag used to be made of cloth but is now represented in metal.

(14) Torre do Palácio dos Terenas (Historical Building) – The Tower was incorporated by Terenas Palace built in the XVIII century. However it's popular name remains Pedro Sem tower. According to the legend Pedro Sem was a very wealthy and greedy merchant which lived in that Tower. On his wedding day, he invited the guests to watch his ships arriving to Douro estuary completely full of merchandise. Arrogantly he exclaimed that now not even God could prevent his ships from arriving safely. God heard him and transformed that beautiful blue-sky day into a huge storm. All Pedro Sem ships sunk right before his eyes. At the same time, a thunderbolt hit the tower and started a fire. Pedro Sem lost all his wealth and was forced to beg in the streets until the rest of his life. His was famous for saying "Give something to Pedro Sem that used to have a lot and now has nothing."

(15) Monumento aos Tripeiros (Statue) – As part of the 500th anniversary of Infante D. Henrique death, this bronze monument honours Porto people (Tripeiros) which according to legend gave their meat to the ships leaving for Ceuta and were left with the guts of the animals creating the traditional meal "Tripas à Moda do Porto". On the statue stonewall are the sea routes and on the back is the transcription of "Capítulos Gerais da Cidade do Porto nas Cortes de 1436".

(16) Farol de S. Miguel, o Anjo (Historical Building) – It's the oldest lighthouse in Portugal. The bishop D. Miguel da Silva ordered its construction in 1527 to help navigation. The maintenance of the lighthouse was achieved by taxes charged to those who entered Douro. Below the window facing the river, is the Latin sentence "I wish you come back safe and sound".

Chapter 6 – Ponte das Barcas' Disaster (1809)

Porto's second French invasion, particularly Ponte das Barcas disaster, was one of the darkest pages of Porto's history. On March 29th 1809, there was a 12 km defensive line around the city. General Soult, the leader of the French army, sends three emissaries with a surrender proposition. They never came back with an answer being all murder by the population. Porto was surrounded.

At Vila Nova de Gaia was the Portuguese and English army, lead by Wellington Duke, firing desperately towards Ribeira streets. They started aiming lower and lower, hitting French soldiers but also civilians. Panic was set. Hundreds of people tried to cross over to Vila Nova de Gaia but the bridge collapsed. Some say the gangplanks gave in to the crowds' weight but the probably cause should be the removal of the gangplanks in the centre of the bridge by the Portuguese army that wished to create obstacles to protect the retreat and slow down the enemy's progress. The bridge should have been entirely destroyed before the population arrived but there was no time.

Francisco Gama Pereira, the current Cale was amongst this crowd. Even though he couldn't leave Porto because of the cup, he needed to save his two daughters: Ana Pereira Silva and Joaquina Pereira Silva. In the mist of the confusion, Ana the oldest of the two, got lost. She was dragged by the crowd and managed to cross the bridge just before it collapsed. A British couple saw this 5 year old crying and took her with them to England.

Dozens of people tried to cross the river by boat but French soldiers opened fire and killed their occupants. The French troops also cut off the escape by land. On Penafiel road, the cavalry chased those trying to escape from that route.

Despite Porto's resistance, it shortly felt into the hands of the French. Three days of looting, rapes and murderers followed.

Francisco was hit with two bullets and taken into the hospital. He and Joaquina remained in Porto. The cup was in extreme danger during this period. Francisco lost his necklace but the device was safe.

There is no exact number of how many people died on those invasions. According to French propaganda, the death toll reached thousands of people.

Nine drawings dated from 1809 where found:

(2B) Sé (Interior / Silver Altar) (Cathedral) – The Cathedral was full of people praying, wiping and mourning the dead. On the left of the mor chapel was a silver Altar weighing more than 566kg. It had taken more than 50 years to build this Portuguese jewellery masterpiece. According to the legend, an old sacristan painted the altar with stucco, to hide the true nature of the Altar. In another version, the preservation of the Altar was negotiated during the first French invasion. A very rich and devoted lady offered to pay the Altar value in money. Some of the silver pieces of the altar were still robbed and later replaced by others of inferior quality. (Apr, May, Jun, Oct Daily 09:00-12:30/ 14:30-19:00 Jul-Sep Mon-Sat 9:00-19:00 Sun 9:00-12:30/ 14:30-19:00 Nov-Mar Daily 09:00-12:30/ 14:30-18:00)

(17) Monumento aos Heróis da Guerra Peninsular (Statue) – The Peninsular War took place between 1808 and 1814, opposing Portugal, England and Spain to France lead by the ruthless Napoleon. Portugal was invaded three times but was able to defeat Napoleon each time. The constructions of this monument started in 1909. The pedestal is 45m in height. On the base, the Portuguese artillery is represented along with some British soldiers in movement. In front of the monument, there's a feminine element present, holding the national flag in her left hand and a sword on the right hand. Below are the city arms and on top is a lion (the symbol of the English flag sent to support the Portuguese soldiers) crashing an eagle (the symbol of Napoleon's empire).

(18) Hospital de Santo António (Historical Building/Hospital) - The first stone was set on 1770. The hospital was originally planed by John Carr to be built with bricks but the Portuguese builders ended up using granite which increase its construction time and cost. Even though there were three different phases of construction, the hospital was never finished.

(19) Palácio das Carrancas (Historical Building/Museum) – Carrancas was Manuel and Isidro Castro nickname. These two rich brothers ordered the construction of this neoclassic palace so it could became their residence and factory. They were the only producers of gold and silver gallons in the north of Portugal. During the French invasion, this palace became the headquarters of General Soult and Wellington Duke. Later on, it also became the headquarters of D. Pedro IV, during Porto's Siege. It finally was transformed into a public museum (Museu Soares dos Reis), the first public Portuguese museum.

(20) Igreja dos Terceiros de S. Francisco (Church) - Built in a neoclassic style, its construction started in 1795. On the first level are the statues of humility and penitence. On the second level are the statues of hope, faith and charity.

(21) Alminhas da Ponte (Landmark) – It represents the tragedy of Ponte das Barcas disaster. It was built in 1897 but even nowadays locals light candles in memory of those who perished. It's located next to the first Ribeira arc. These stone arcs used to provide passage to the city. Today some have been occupied by shops.

(22) Monumento evocativo do desastre da Ponte das Barcas (Landmark) – Its located on the same place where the original Ponte das Barcas was. It represents the old docks where the boats were tied to form the bridge. There is an identically representation on Gaia's side. It's a sculpture by Souto Moura, winner of the Pritzker 2011 award.

(23) Ponte Pênsil (Landmark) – This suspension bridge was intended to celebrate the coronation of D. Maria II but it was only finished two years later, in 1843. Its inauguration

had to be postponed because on that day, there was a flood. The population was more interested in using it than attending the announced party so they started to use the bridge right way. It was the first metallic bridge in Portugal. Its pillars are 150m in height and 6m in wide. With the objective of replacing Ponte das Barcas, it stayed open for 45 years. Nowadays only its pillars and ruins of the military house remain. A toll was mandatory for those wishing to cross the bridge.

(24) Mosteiro da Serra do Pilar (Church) – Started to be built in 1537, this monastery was occupied by Portuguese and English troops to attack the French during Napoleon's invasion.

Chapter 7 – Porto's Siege (1832)

D. Pedro IV of Portugal (D. Pedro I of Brazil) was nine when the French invaded Portugal for the first time in 1807. He escaped to Brazil, Portugal's largest and wealthiest colony. In 1822, he was proclaimed Brazil's emperor, now an independent constitutional monarchy.

Only in 1832 he returned to Portugal, to fight his brother, D. Miguel who had removed D. Pedro's IV daughter Maria da Glória from the throne. After gathering support from Britain, Spain and France, he disembarked at Mindelo beach and headed to Porto, making it his headquarters. Contrary to what had been foreseen, D. Pedro IV and his liberal army were besieged by the royalist forces of his brother.

The siege of Porto had begun. All men between the age of 18 and 50 were invited to enlist. Some battalions were named after their soldier's neighbourhood like Cedofeita and Bonfim. Others were named after their professions. There was even an academic battalion were famous Portuguese writers were enlisted such Almeida Garrett, Alexandre Herculano, amongst other. Women were also essential in this battle. They were at the front lines giving

water, food and gunpowder to the soldiers. Some were at the hospital taking care of the wounded. Others stayed at home, sewing up uniforms and making food. Some were even considered for soldiers due to their relevant service.

The living conditions inside the city got worse with the passing of time. Cholera had arrived on board of Solignac's boat. Corpses rotted onboard. There was no hygiene. Hunger was set.

For over a year, Porto stood strong until D. Miguel lost the battle in Lisbon and renounced all claims to Portugal's throne, agreeing to go to exile. Only due to Porto's resistance was the victory of the liberal cause possible.

D. Pedro IV soon died of tuberculosis. He's final act was to put his daughter back to the throne. In recognition of Porto's resistance, D. Pedro IV named the city Invicta (never conquered) and gave his heart to Porto while his remains returned to Brazil in 1972. Joaquina Pereira Silva was the present Cale, in place of her disappeared sister Ana.

Three drawings dated from 1832 were found:

(25) Igreja de Santa Clara (Church) – This church was part of a monastery founded by D. João I in 1416, a year after D. Philippa's death. The nuns asked for its construction so they could have a safe home inside Porto's walls. The building of this monastery was also one of D. Philippa Lencastre's last wishes. The church was built in the Gothic-Manueline style. Its interior is covered in a dazzling gilded woodwork.

(26) Monumento a D. Pedro IV (Statue) – This bronze statue was started in 1862. It is 10m in height. In his right hand, D. Pedro IV of Portugal (D. Pedro I of Brazil) is holding the constitution. On the pedestal are Porto city arms and house of Bragança arms. His disembarkment at Mindelo and the offering of his heart to the city are also portrait at the pedestal.

(27) Castelo do Queijo (Historical Building) - Also called Forte de São Francisco Xavier do Queijo was initially drawn in 1561 but only one hundred years later was its construction started. It holds the royal shield on top of the bridge. Royalist troops lead by D. Miguel made it their headquarters during Porto's siege.

There is this drawing without a date but it derived from circa 1832:

(38) Igreja da Nossa Senhora da Lapa (Church) – It was in this church that D. Pedro IV of Portugal (D. Pedro I of Brazil) used to attend Sunday mass celebrated by his private chaplain during Porto's siege. Built in 1756, there lays D. Pedro IV heart in a granite mausoleum, which arrived to Porto in 1835. On that year, the ship "Jorge IV" docked at Douro's sandbank with D. Pedro IV heart on board. There was a line of troops from the river until the church. Thousands of people dressed in black and holding torches were present. This scene is represented at D. Pedro IV monument (26). The parade didn't have any luxury or royal pump but lots of tears. Porto's mayor, who represents the city, now holds the keys to the heart, which are located at his office in Porto's city hall.

Chapter 8 – Port Wine (1865)

Port wine has been produced in Douro region for centuries but it was from the XVI century onwards that it assumed an increased importance powered by the advances in the wine producing techniques and the increased demand from the European countries.

The first reference to Port Wine dates back to 1675, in a shipping document to Holland. Around this period, Port Wine began to dominate the British market, which was reinforced by the Methuen Treaty. The number of British wine merchants grew and the wine reflected the English tastes, which were for a darker, stronger, sweater with higher alcohol content wine.

In 1756, the Douro wine region was formally market out, becoming the first modern demarcated region in the world. This demarcation set contemporary practices such as the inventory and classification of the vineyards and their respective wines according to the region. Institutional mechanisms for controlling and certifying the product were created, supported by a vast legislative framework.

Joaquina Pereira Silva died without living an heir. For the first time, the bloodline to protect the Cale is lost. Joaquina trusts António Alves Cálem to be the cup's guardian. In 1859, António founds Porto Cálem, which was solely dedicated to export wine to Brazil in exchange of exotic woods through its own fleet of caravels. He proved to be an excellent guardian by keeping the cup's safe and adding a treasure in Brazilian gold coins to the cup.

Three drawings dated from 1865 were found:

(28) Casa da Feitoria (Historical Building) – This factory house was meant to be the meeting place for the English businessmen living in Porto. Projected by John Whitehead, English consul, it was built in a in a neo-Palladian style, taking five years to be build (1785-1790).

(29) Casa da Rua da Reboleira nº59 (Historical Building) – The contract for this house was signed in 1688. First a family house, in 1837 it became the offices of Port Wine exporters and later on in 1862 an English hotel. This hotel had a round table at 5pm, a.k.a. the famous "5 p.m. teatime".

(30) Barco Rabelo (DouroAzul) (Boat) – It might have its origins on the V century when the suebi lived in Douro region. In the XVII century, Rabelo's boat grew bigger. The production of Port Wine grew and the need to transport it grew with it. These square sail boats could hold 50, 60 or even more barrels but the regular boat carried between 30 and 45 because this seemed to be the ideal number of barrels to avoid problems. At one point, 3000 Rabelo boats navigated down the river. There was a river code with the characteristics of the

boats and river routes. With the appearance of the railroad, the transportation of Port Wine by Rabelo boats diminished but only ended in the 60s because of the rivers dams and the tanker trucks. Presently you can still come aboard a modified Rabelo boat and do a cruise, which will take you to the 6 Porto bridges. Make sure you ask DouroAzul for the extra location when you do this cruise. (Everyday 9:45-13:00/15:00-17:45)

(31) Ponte D. Luís I (Bridge) – Designed by Teófilo Seyrig, Gustave Eiffel partner, this two-deck bridge aimed to substitute the suspension bridge. It was inaugurated in 1886 and became the longest arch bridge in the world with an arc of 172m instead of Ponte D. Maria Pia arc with 160m. More than 3 million kg of iron was needed to build D. Luís I bridge.

There is one drawing without a date but it derives from circa 1865:

(39) Ponte D. Maria Pia (Bridge) – Designed by Gustave Eiffel, this railway's iron architecture was the cheapest proposition from the 1875 international competition. At the time, it was the longest arch bridge in the world (160m). When the bridge was still being finished, Maria Adelaide Lopes, Eiffel lady companion, went to the site and crossed the bridge by amazement and fear of those watching. Soon after this "audacious feat", has it was called by the press at the time, the royal family inaugurated D. Maria Pia Bridge.

Chapter 9 – Present (2012)

The week-long festivities to celebrate Saint John are on their way. It's a joyful and lively celebration - embodied by the colourful plastic hammers waved by revelers. Peter arrives in Porto for the first time, in a search of Porto's hidden treasure. No one seems to know anything about it until he meets Miguel at a local restaurant. During their conversation Miguel realises that Peter is descended from the lost bloodline of the Cale, a descendent from Ana Pereira Silva - the little girl who had been rescued by the British during the Ponte das Barcas' disaster.

Suddenly, Miguel sees Filipe, a tall and sinister man. In panic, Miguel tries to look for a way out. He gives Peter the box he had with him, and tells him "You are the Cale now. You must protect the treasure. Don't let it fall into Filipe's hands." Miguel runs out the door with Filipe in hot pursuit.

Peter returns to his room and opens the box. It is filled with old drawings and notes, from different periods of time, but all with a common denominator: a particular necklace.

Peter grabs Porto's city map and starts drawing 9 different coloured routes, which correspond to possible treasure locations. He also programs his smartphone with the frequency that was on one of the notes.

Kevin, Peter's little brother, wants to come immediately to Porto but Peter won't allow it. It is too dangerous right now. He will keep Kevin updated through his weekly video log. He will also rely on other tourists and locals to help him through his twitter and pinterest account.

Six drawings dated from 2012 were found:

(32) Chafariz da Rua de São João (Fountain) – Located at Ribeira square, its construction started in 1783. It aimed to replace an existent fountain. It is three stores high and has Portugal's shield on it. The original image from the fountain disappeared and was replaced in 2000 with a statue of Saint John the Baptist made by João Cutileiro, a famous Portuguese sculpture.

(33) Mercado do Bolhão (Market) – The construction of this market started in 1851. It was named after the Bolhão Fountain, which used to be situated nearby. It's one of the most famous markets in Porto. In here you can find mainly fresh products like vegetables, meat, fish and flowers.

(34) Muro dos Bacalhoeiros, Casa nº 114 (Building) – It was here that Gomes de Sá was born, among the big codfish warehouse, hence the name of the wall. He loved to cook codfish cakes to share with his friends. One day he got fed up of always doing the same codfish cakes and decided to do a different recipe, using the same ingredients. He never imagined the success this new dish would have. Years later he lost his codfish warehouse in a fire. In misery, he sold the only thing that was still his, the recipe of his dish where all the details of making the dish were present.

(35) Vinhas d'Alho (Restaurant) – In front of the restaurant is an original hoop used by the codfish boats to dock at Ribeira. Inside you can taste "Bacalhau à Gomes de Sá", "Francesinha" and "Tripas à Moda do Porto" among other specialties at the TravelPlot Menu. (Every Day 12:00-15:00/18:30-23:00) – Free Wi-Fi

(36) Porto com Arte (Souvenir Shop/Wine Shop/Art Gallery) – Is located behind the Cardosas Palace. This granite palace started being built in XVIII. It belonged to a rich bourgeois nicknamed Cardoso. He had two daughters, which were very sought by all the bachelors at the time. Inside this shop you can see on the third floor the Showroom Doteviris Design. On the second floor is the art gallery and on the first floor is the wine shop and tasting area. At the shop's entrance are countless Portuguese souvenirs, including the TravelPlot Porto basket. Inside TravelPlot Porto basket you'll find the indication of an extra location. (Mon-Tues 10:00-14:00/15:00-24:00 Fri-Sat 10:00-14:00/15:00-2:00 Closed Sun and Holidays) – Free Wi-Fi

(37) Cálem (Wine Cellar) – Is located at Vila Nova de Gaia which has the best temperature and humidity conditions for the cellars because of the cold northeast winds. The location of Wine Cellars in Vila Nova de Gaia, dates back to a few centuries back, when the King D. Afonso III ordered the creation of a new town. The objective was to charge taxes to the merchandise arriving from the interior of the country and from Douro River. This way the

disembarkment taxes were paid to the crown instead of the bishop has it happened at Porto. Daily tours explaining Port Wine history take place inside this cellar. At the end of the tour there is a Port tasting. Be sure to ask Cálem for the extra location. (Mon-Sat 10:00-19:00, Sun 10:00-18:00)

Three drawings without a date but they should probably also be from 2012:

(40) Jardins do Palácio de Cristal (Garden) – The Cristal Palace gardens were the privileged stage to the social and cultural events. Two important exhibitions took place there: the International Exhibition in 1865 and the colonial Exhibition in 1934. The statues at the entrance of the garden represent the four seasons of the year. It's rich in exotic plans and large trees, along with a small tower.

(41) Parque da Cidade (Garden) – this was one of the places where the codfish used to dry in Porto. It is the biggest urban park in the country with 83 hectares.

(42) Câmara Municipal do Porto (City Hall) – Winemaking is represented at the city hall façade. Inside the history of Porto comes alive with sculptures, paintings and even the keys to unlock the mausoleum of D. Pedro IV of Portugal (D. Pedro I of Brazil) heart. From the tower, the whole of Porto can be seen. It's one of the best city views.

Finale TravelPlot Porto

Peter already went through 36 locations and nothing. There are still six drawings that don't have a date on them. He goes to those six locations. Nothing!

Peter is arriving to the Cálem trying to see if he can get access to some of António Alves Cálem old documents, maybe there is something in there. At the hall, his smartphone starts to make a sound. Could it be the treasure? The signal is getting stronger and stronger. An old barrel is in front of him. Peter opens it. Inside are the cup and the gold coins. He can't

believe it. Filipe enters. He has finally cached Peter and the treasure. The treasure it's finally his. Filipe tries to kill Peter but is stopped by the tourists and locals.

Peter is now the present Cale, the protector of Bacchus cup. The gold coins goes towards the construction of the new pediatric wing at Hospital de São João, a project that Peter meet in Porto.

The rest of the world continues to enjoy Port Wine and making it, the perfect companion for all the important moments of their lives.

Map story - Porto's city arms

The city arms crest represents the DNA of a city. Curious to uncover it, Peter studied Porto's heraldry and this is what he discovered:

Porto's first official crest dates from 1012. Its represented by two castles with Nossa Senhora da Vandoma holding Jesus in the middle and the Latin words Civitas Virginis (City of the Virgin).

A second modification to the city crest took place in 1813. Porto had won the war against the French. Two arms were added to the top of the two towers. One holding a flag with the royal shield and on the other arm a sword surrounded by a Lauren crown.

In 1833 because of Porto's behavior during Porto's siege, D. Pedro IV of Portugal (D. Pedro I of Brazil) adds the ducal crown to Porto's shield as well as the motto "Old, very noble, always loyal and unconquered city of Porto". Surrounding the shield is the necklace of Ordem da Torre e Espada, do Valor, Lealdade e Mérito.

The shield is also composed by four squares. On the first and forth square are Portugal's city arms and on the second and third square are the old Porto city arms. All squares are joined by a golden heart, the heart that D. Pedro IV of Portugal gave to the city.

From that date onwards, the second child of Portugal's kings would be called duke or duchess of Porto.

The last change happened in 1940, which continues to have most of the elements from the previous city arms. The motto and necklace still surround the shield. The ducal crown is still present. Inside is the Vandoma gate represented by the two towers and Nossa Senhora da Vandoma holding baby Jesus.

Website story - Saint John festival

Saint John's festival is celebrated throughout Europe and in Brazil, but it is in Porto that it has more expression, adherence and spontaneity. Saint John is a genuine celebration with roots in a popular tradition.

In June the Saint John celebrations take place in Porto, the peak of the celebrations is the night of 23rd to 24th of June. Its origins date back to the pagan celebrations of summer solstice, but it has subsequently been transferred into Christian religion, associated to the date when supposedly Saint John the Baptist was born, the 24th June.

This festivity is named after Saint John the Baptist, Jesus Christ's cousin, who is often depicted as a child playing with a lamb or an adult dressed with mutton fur.

Saint John's festival in Porto, with similar aspects to modernity, was born in the end of XIV century and soon became Porto's major street festival. It was a saint day, with compulsory mass. It was also a popular festivity, with music, dances, traditional food, wood arcs and small flags, bonfires in the yards and streets and fireworks. Finally, on the 21st of January 1911, the 24th June also became local holiday.

Nowadays, Saint John's festival is a joyful and lively celebration gathering locals and visitors, in a spirit of happiness and equality. Saint John is also patron saint of lovers.

Hearing

Saint John's festival is the sound of people in the street.

In Saint John's night, people go out to the streets to celebrate, forming 'rusgas'. 'Rusga' is a spontaneous march of people in groups, singing and dancing, towards a festival or fair – religious or profane. Nowadays, 'rusgas' are also a contest, taking place annually in avenue Aliados, where each civil parish of Porto competes with its 'rusga'.

It's a local costume to make popular quatrains in this festival. The quatrains were originally destined to be sung in 'rusgas' and are inspired in pagan elements (water, dew, bonfires, plants), in the fidelity to the roots in neighborhood and friendly communion and in love intentions or joy aspirations.

Colored play plastic hammers are a recent invention of Saint John and are employed to hit the heads of passers, making a characteristic noise. The plastic hammers were created in the 60's in an academic celebration called 'Queima das Fitas'; however it was in Saint John's Festival that they were popularized. Often the hammers are used as a substitute of the leek and other aromatic herbs.

Seeing

Inspired in summer solstice, Saint John festival relates to rituals connected with the sun.

Fireworks are another symbol of Saint John's festival. In ancient times, it was believed that bombs scared demons on Saint John's night.

Nowadays, the fireworks are a very appreciated spectacle, and people meet at midnight in Douro's banks to see them.

Another typical custom is to launch small hot air balloons made with papers of several colors. Basically, launching the balloons is a form of communication with the stars, the good

entities that live in the skies. The balloons often have inscriptions praising the saints of devotion and, if the balloon goes up without problem, their wishes will come true, otherwise, it's a sign of bad luck. The tradition also says that the balloon takes the requests of men to Saint John.

Smelling

Several aromatic plants and herbs are used in Saint John's celebrations, because they have 'magical' properties. It's the case of rosemary, leek, fennel, clover, camomile, citron tree, pennyroyal, salvia, foxglove, orpin, rue, laurel and artichoke. These plants have properties that protect from the 'evil eye' and are prophylactic.

The cult of flowers and plants comes from Antiquity, when gods' statues, poets, heroes and dead were crowned with flowers or leaves of laurel, oak or olive tree.

Sweet basil is another typical plant in Saint John and it's used to offer to the beloved ones. Sweet basils must be smelled with the hand, and are sold in ornamented pots and with a popular quatrain about the Festival, the Saint or lubricous intentions.

The leek is the main symbol of Saint John's festival. To give the leek to smell is a sign of fraternity. The leek is believed to keep away bad entities. It's also a reminiscent of old phallic cults. The leek, like other plants, is used for therapeutic purposes, to ensure happy loves or a soon marriage, to close successful businesses or to protect from the 'evil eye'.

Tasting

Saint John's festival typical cuisine includes bread with butter, barbecued sardines, 'farturas' and Saint John's cake.

The sardine, which is very common in contemporary Saint John, was a Lisbon tradition and replaced Porto's tradition of eating lamb.

'Farturas' are a fried pastry with sugar and cinnamon of Arab origin and which came from Lisbon in the 50's of the XX century.

Finally, Saint John's cake is a delicacy made with cake mass similar to King Cake, but with different types of nuts. Saint John's cake was extinct, but was recently reintroduced.

Touching

Besides the cult of fire, Saint John's festival also includes the cult of water. Water relates to Christ's baptism; thus the virtues of water are closely related to Saint John's cult.

There are still places where the water of Saint John is preserved for several days, or even one year, so it will be used in "blessings and medicines" and to prepare yeast.

'Cascatas' are a Porto tradition of the 19th century and their origin is probably the crib. The Portuguese word 'cascata' means 'cascade' and indeed 'cascatas' are representations of sceneries where the element water is strongly present (waterfalls, rivers, etc.). Saint John the Baptist is another mandatory presence in a 'cascata'. These small sceneries also include elements as stones, moss, tiny houses and reconstruction of typical places in Porto and painted clay figures – the 'mascates' - representing people, professions and animals.

'Cascatas' are made in every quiet corner, by groups of people showing their creativity or by children who, in turn of their modest 'cascatas', organise a public collection for the Saint. The 'cascata' in Fontainhas is the only 'cascata' that is an altar outside the churches and where people worship and pray.

APPENDIX 3

TravelPlot Porto selected press

Television

Figure 61. RTP 1 – Jornal da Tarde, June 26, 2012

Tec@Net

Primeira Emissão: 24 Jun 2012
Duração: 17m
Classificação:

Tec@net é um programa sobre novidades da net produzido pela RTP e com apresentação e produção de Alexandre Brito e Daniel Catalão. Conheça as novidades da net!

Figure 62. RTP – Tec@Net, June 24, 2012

Figure 63. Porto Canal – Territórios, July 1, 2012

Figure 64. Porto Canal – Porto Alive, June 21, 2012

Printed newspapers and magazine

Figure 65. Público, June 22, 2012

FAXINFORME	GRANDE PORTO	CLIPPING	Tiragem: 300.000
			Área: 581cm²/ 51%
Data: 29.06.2012	Tipo: Jornal Nacional Semanal	Secção: Nacional FOTO	Cores: 4 Cores Pág:40

Este é o Peter,
o herói do TravelPlot

Projecto inédito resulta de uma
investigação para tese de doutoramento
da Faculdade de Engenharia da UP

Turistas vão procurar tesouro escondido há dois mil anos

O TravelPlot só foi apresentado há uma semana e Soraia Ferreira já recebeu um convite para ir a Nova Iorque mostrar o seu projecto. Um guia interactivo do Porto, com uma caça ao tesouro pelo meio, para trazer mais gente a visitar a Invicta

Ana Caridade
ana.caridade@grandeportoonline.com

Figure 66. Grande Porto, June 29, 2012

Figure 67. A Bola, June 22, 2012

Destak Porto

22-06-2012

Tiragem: 135000	Pág: 11
Pais: Portugal	Cores: Cor
Period.: Diária	Área: 18,71 x 17,16 cm²
Âmbito: Informação Geral	Corte: 1 de 1

LAZER Guia Intercativo convida turistas a conhecer o Porto através de um desafio

Caça ao tesouro na Invicta

Serviço mostra gastronomia e monumentos.
Guia não convencional tem 42 localizações.

RAQUEL MADUREIRA
rmadureira@destak.pt

Uma tese de doutoramento da Faculdade de Engenharia da Universidade do Porto serviu de base para criar o TravelPlot Porto, um guia turístico interactivo pelo qual os turistas exploram o Porto através de uma caça ao tesouro.

Fazer um cruzeiro pelas pontes do rio Douro ou degustar francesinhas, tripas à moda do Porto ou Bacalhau à Gomes de Sá não apenas algumas das condições do jogo interactivo para que o turista ganhe o tesouro escondido no Porto.

Os turistas que chegarem ao final da visita à Invicta, vencendo todas as provas, ganharão a «taça de Baco», que contém as propriedades mágicas do vinho, e «moedas de ouro» que Portugal ganhava na época dos Descobrimentos
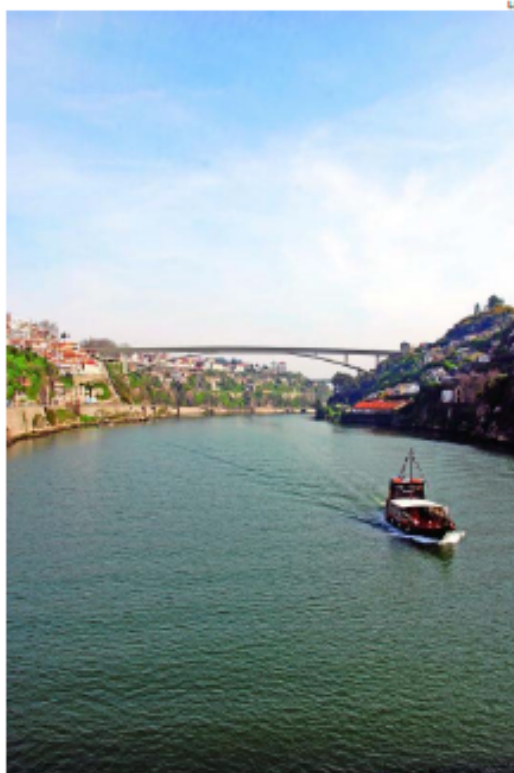
Cruzeiro pelas pontes do rio Douro é uma das opções disponíveis

pela venda de vinho do Porto, explica Soraia Ferreira, mentora do guia turístico que aposta na «transmedia» (várias plataformas media).

«O TravelPlot é um guia turístico não convencional, ou seja, através de uma caça ao tesouro estamos a convidar as pessoas a conhecerem a cidade do Porto, não só os seus monumentos, mas também a sua gastronomia, o vinho do

●●●●
Acesso através de redes sociais como o Twitter ou Facebook, aplicação para iPhone e através do Website

Porto ou o rio Douro através do cruzeiro», acrescenta.

O guia apresenta 42 localizações, como a Casa do Infante, Mercado do Bolhão, monumento aos tripeiros ou monumento evocativo do desastre da Ponte das Barcas, e tem um protagonista – o Peter – que anda à procura do tesouro, e o antagonista Filipe, referência ao domínio dos Filipes.

Figure 68. Destak Porto, June 22, 2012

FAXINFORME	CLIPPING	Tiragem: 40.000
	metro	Área: 183cm²/ 19%
Data: 22.06.2012	Tipo: Jornal Nacional Diário Secção: Nacional FOTO	Cores: 4 Cores Pág: 3

Em busca de um tesouro

◯ **Guia turístico interativo explora o Porto através de caça ao tesouro**
◯ **Serviço dá a conhecer a cidade**

Uma tese de doutoramento da Faculdade de Engenharia da Universidade do Porto serviu de base para criar o TravelPlot Porto, um guia turístico interativo pelo qual os turistas exploram o Porto através de uma caça ao tesouro.

Fazer um cruzeiro pelas pontes do Douro ou degustar francesinhas, tripas à moda do Porto ou Bacalhau à Gomes de Sá são apenas algumas das condições do jogo interativo para que o turista ganhe o tesouro escondido no Porto.

Quem chegar ao fim da visita ao Porto, ganha a "taça de Baco", que contém as propriedades mágicas do vinho, e "moedas de ouro" que Portugal ganhava nos Descobrimentos pela venda do vinho do Porto.

Redes sociais

Turistas têm acesso ao serviço através de redes sociais como o Twitter ou Facebook, aplicação para iPhone ou através do Website oficial.

▶ Rio Douro é dado a conhecer no TravelPlot Porto

Figure 69. Metro Porto, June 22, 2012

Turismo

Descobrir o Porto através de um jogo

Uma tese de doutoramento da Faculdade de Engenharia da Universidade do Porto serviu de base para criar o "TravelPlot Porto", um guia turístico interactivo pelo qual os turistas exploram o Porto através de uma caça ao tesouro.

Fazer um cruzeiro pelas pontes do Rio Douro ou degustar francesinhas, tripas à moda do Porto ou Bacalhau à Gomes de Sá são apenas algumas das condições do jogo interativo para que o turista ganhe o tesouro escondido no Porto.

Os turistas que chegarem ao final da visita ao Porto, vencendo todas as provas, ganham a "taça de Baco", que contém as propriedades mágicas do vinho, e "moedas de ouro" que Portugal ganhava na época dos Descobrimentos pela venda de vinho do Porto, explicou Soraia Ferreira, mentora do guia turístico que aposta na "transmedia" (várias plataformas media).

"O 'TravelPlot' é um guia turístico não convencional, ou seja, através de uma caça ao tesouro estamos a convidar as pessoas a conhecerem a cidade do Porto, não só os seus monumentos, mas também a sua gastronomia, o vinho do Porto ou o Rio Douro através do cruzeiro", explicou a mentora do projecto, cuja caça ao tesouro arrancou no domingo.

O "TravelPlot Porto" nasceu há três anos no âmbito de uma tese de doutoramento em "Media Digital" da Faculdade de Engenharia da Universidade do Porto e tem também um cariz de "responsabilidade social", com parte das receitas do tesouro a reverter para a construção da ala pediátrica do Hospital de S. João, acrescentou Soraia Ferreira, na cerimónia de apresentação do projecto, que decorreu hoje, em Gaia.

Os turistas podem ter acesso ao serviço TravelPlot Porto através de redes sociais como o Twitter ou Facebook, aplicação para iPhone, um mapa convencional ou através do *website*.

O guia apresenta 42 localizações, como a Casa do Infante, Mercado do Bolhão, Monumento aos Tripeiros ou monumento evocativo do desastre da Ponte das Barcas, e tem um protagonista, Peter, que anda à procura do tesouro, e um antagonista, Filipe, referência ao domínio dos Filipes.

Figure 70. Página 1, June 21, 2012

38 INTERPRETAR

TravelPlot Porto: caça ao tesouro na cidade Invicta

Texto: Marina Bertoncello
Fotografia: Ana Pereira.

Se passear pelo Porto já é divertido, imagine conhecer e redescobrir cada canto histórico da cidade invicta através de um jogo de caça ao tesouro. O TravelPlot Porto é um guia turístico interativo que permite aos turistas explorar a história do Porto, os monumentos e personagens históricas, com uma dinâmica de jogo incorporada, que utiliza diversas plataformas de forma a melhorar as experiências dos utilizadores.

A ideia surgiu há três anos e ganhou vida nas mãos de Soraia Ferreira, estudante do Programa Doutoral em Media Digitais da FEUP, que afirma que "a caça ao tesouro é um tipo de narrativa com que toda a gente está familiarizada pelo que permite entender a história rapidamente". A tese intitulada "Location Based Transmedia Storytelling: Enhancing the Tourism Experience" está a ser desenvolvida sob a orientação de Artur Pimenta Alves, professor do Departamento de Engenharia Eletrotécnica e de Computadores da FEUP e Célia Quico, professora da Universidade Lusófona de Humanidades e Tecnologias.

O TravelPlot Porto é composto por nove capítulos e 42 locais para escolha, em que a personagem Peter, um turista inglês, tem a missão de salvar o vinho do Porto. Para o êxito desta tarefa, terá de descobrir a localização da taça de Baco e o restante tesouro escondido pelos Café, em várias localizações da cidade do Porto ao longo dos séculos. Isto antes que Filipe, um ex-elemento dos Café, possa fazer o mesmo. Só com a ajuda dos habitantes locais e restantes turistas é que esta missão poderá ser bem-sucedida. Ao mergulhar nesta aventura, os turistas podem optar por visitar os locais mais próximos, sítios que estão incluídos no mesmo capítulo da história, ou visitar os lugares seguindo a ordem cronológica da história.

O guia utiliza multiplataformas, como uma aplicação para iPhone, um site, um mapa, eventos ao vivo e redes sociais (YouTube, Twitter e Pinterest). Em apenas um mês após o seu lançamento, a caça ao tesouro do TravelPlot Porto tornou-se um evento mundial. Nas várias plataformas deste projeto existem utilizadores de seis continentes, de países como o Reino Unido, Espanha, Noruega, Brasil, Estados Unidos, Canadá, Argentina, Moçambique, Japão, Rússia, entre muitos outros. De forma a alargar o número de plataformas, a aplicação ganhou recentemente uma versão em formato Android - disponível gratuitamente para download no Google Play (Android Market).

É com base nos novos média que os turistas vão encontrar as possíveis localizações e viver experiências únicas, como fazer um cruzeiro pelo rio Douro e saborear os vinhos e as delícias gastronómicas disponibilizadas pelos parceiros associados ao projeto. O TravelPlot Porto associou-se também à iniciativa "Um Lugar Pró Joãozinho", que pretende ser uma referência para a saúde dos jovens. Assim, os parceiros DouroAzul, Vinhos d'Alho e Porto com Arte, contribuem para esta campanha com a doação de 1 €, apurado nas compras específicas relacionadas com o TravelPlot Porto.

De acordo com Soraia Ferreira é difícil escolher apenas um lugar preferido no Porto, embora não hesite muito na altura de escolher alguns dos pontos principais da cidade: a frente marítima (Foz) e a zona da ribeira. E para a autora deste projeto inovador e interativo, o maior tesouro da cidade são "as pessoas". ●

www.travelplot.com

Figure 71. Revista Engenharia nº51, FEUP

Online newspapers, newsletter and blogs

Figure 72. Porto 24, June 21, 2012

TravelPlot Porto está disponível para Android

23 de Julho de 2012 por Tiago da Cunha Esteves

A aplicação TravelPlot Porto Android já se encontra disponível gratuitamente para download no 'Google Play' (Android Market), depois de somar utilizadores dos seis continentes, de países como o Reino Unido, Espanha, Noruega, Brasil, Estados Unidos, Canadá, Argentina, Moçambique, Japão, Rússia, entre outros.

Composta por várias plataformas, como uma aplicação gratuita para iPhone, um site, um mapa, eventos ao vivo e redes sociais (YouTube, Twitter e Pinterest), esta assume-se como uma nova forma de conhecer a 'Cidade Invicta', para melhorar a experiência do turista.

"Os turistas são convidados a exploram a história do Porto, os seus monumentos, bem como as suas personagens históricas. Através dos nossos parceiros, os turistas vivem experiências únicas como fazer um cruzeiro no Douro, provar os vinhos ou as delícias gastronómicas da cidade. É um guia turístico não convencional", pode ler-se, numa nota divulgada.

Este projecto, da autoria de Soraia Ferreira, faz parte da investigação de doutoramento intitulada "Location Based Transmedia Storytelling: Enhancing the Tourism Experience", realizada na Universidade do Porto.

Figure 73. Publituris, July 23, 2012

Immersive Storytelling:
StoryCode is a community hub, lab and creative consultancy for emerging and established cross-platform and immersive storytellers.

Immersive Media Dispatch: July 2012

TravelPlot - Location-Based Treasure Hunt

Check out TravelPlot, a hybrid geo-locational narrative based treasure hunt. Peter, an English tourist, is on a mission to save Port Wine. In order to succeed, he will have to find the location of Bacchus's cup and the remaining hidden treasure through out the centuries by the Cale.

Only with the help of the tourists and locals can Peter be successful. With the support of new media, participants will find the possible locations where the treasure is hidden, through an iPhone app, map or website, while real live events and social networks will enable interactions between all.

travelplot.com

Figure 74. Storycode Newsletter, July 2012

Figure 75. Transmedia Camp, June 19, 2012

transmediaNT

Inspiration from the cultural industries Twitterverse • In search of Territory 2030 today.

| Home | Digital Storytelling | Bio | Design Links | Projection |

Tuesday, June 19, 2012

TravelPlot

Frequent visitors to this blog will recognise a mildly obsessive interest in audio guides... so it won't surprise you to see this article here. Thanks to Gary Hayes.

TravelPlot Porto is composed by several platforms such as an iPhone app, a Website, a Map, Live Events and Social Networks (YouTube, Twitter and Pinterest). All of these platforms are free with the exception of the live events.

The objective of TravelPlot Porto is to give tourists a personalized and engaging trip to Porto by getting to know its stories. With 9 story chapters and 42 locations to choose from, tourists will find locations for their particular taste and interest. They can opt to visit the locations near them, the locations that belong to the same chapter of the story, or even check the locations according to the story's chronologic order.

TravelPlot Porto is also a social responsibility project supporting "A Place for Joãozinho" which aims to become a reference for health for young people. The partners DouroAzul, Vinhas d'Alho and Porto com Arte, will donate 1€ of specific related purchases to TravelPlot Porto to "A Place for Joãozinho".
Homepage | TravelPlot

Figure 76. Transmedia NT, June 19, 2012

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TravelPlot Porto: The treasure hunt has begun!

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Interdisciplinary research, education and capacity building in advanced digital media

9 Jul 2012

TravelPlot Porto is a fun and engaging way to visit Porto, where for the first time tourists get to experience this beautiful city while trying to locate a hidden treasure.

This project was created by Soraia Ferreira as part of her PhD investigation in Digital Media at University of Porto. Her thesis entitled Location Based Transmedia storytelling: Enhancing the Tourism Experience is being supervised by Artur Pimenta Alves, professor at Porto University and Célia Quico, professor at Universidade Lusófona de Humanidades e Tecnologias.

TravelPlot Porto is a new interactive project for tourists to explore Porto's history, monuments and historical characters. It's an unconventional tour guide with game dynamics incorporated, which uses several platforms to enhance tourists' experiences.

Companies across Porto have signed up to this multiplatform storytelling by offering special products that allow tourists to experience Porto's sights, wine and gastronomical delights.

TravelPlot Porto is composed by several platforms such as an iPhone/Android app, a Website, a Map, Live Events and Social Networks (YouTube, Twitter and Pinterest). All of these platforms are free with the exception of the live events.

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Figure 77. UTAustin I Portugal, July 9, 2012

Figure 78. Visit Portugal Blog, June 29, 2012

Guia interativo revela o Porto em caça ao tesouro

Fazer um cruzeiro pelo Rio Douro, degustar francesinhas, tripas à moda do Porto ou Bacalhau à Gomes de Sá são apenas alguns dos desafios que o novo guia interativo da cidade Invicta propõem aos utilizadores. Lançado esta semana, o TravelPlot já está a seduzir turistas de várias partes do mundo.

Os "viajantes" que chegarem ao final desta caça ao tesouro interativa da cidade do Porto, vencendo todas as provas, ganham a taça de Baco, que contém as propriedades mágicas do vinho, e moedas de ouro que Portugal ganhava na época dos Descobrimentos pela venda de vinho do Porto, explicou a mentora do projeto, Soraia Ferreira, na cerimónia de apresentação do projeto, que decorreu esta semana, em Gaia, a bordo de um barco rabelo

"O 'TravelPlot' é um guia turístico não convencional, ou seja, através de uma caça ao tesouro estamos a convidar as pessoas a conhecerem a cidade do Porto, não só os seus monumentos, mas também a sua gastronomia, o vinho do Porto ou o Rio Douro através do cruzeiro", acrescentou a responsável.

TravelPlot Porto apoia ala pediátrica do Hospital de S. João

O TravelPlot Porto nasceu há três anos no âmbito de uma tese de doutoramento em "Media Digital" da Faculdade de Engenharia da Universidade do Porto e tem também um cariz de responsabilidade social, com parte das receitas do tesouro a reverter para a construção da ala pediátrica do Hospital de S. João.

O guia turístico interativo apresenta 42 localizações, como por exemplo a Casa do Infante, Mercado do Bolhão, Monumento aos Tripeiros ou Monumento evocativo do desastre da Ponte das Barcas, e tem um protagonista -- o Peter -- que anda à procura do tesouro, e um antagonista "Filipe", referência ao domínio dos Filipes.

Os turistas podem ter acesso ao serviço TravelPlot Porto através de redes sociais como o Twitter ou Facebook, aplicação para iPhone, um mapa convencional ou através do site oficial do guia interativo.

A resposta internacional tem sido muito positiva, designadamente na rede do Twitter onde o TravelPlot tem seguidores de todo o mundo. E o caráter inovador da aplicação já chamou a atenção no estrangeiro: "Tivemos agora um convite para ir a Nova Iorque apresentar o projeto", adianta Soraia Ferreira.

Clique AQUI para visitar o Facebook do projeto e AQUI para aceder ao site.

Figure 79. Boas Notícias, June 22, 2012

Figure 80. As Bloguettes do Ensino, July 1, 2012

Centro de [Estudos] Estudos Euro [Rexionais] Regionais
GALICIA [GALIZA] NORTE DE PORTUGAL

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Año 2010 »
Año 2011 »
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Febrero »
Marzo »
Abril »
Mayo »
Junio »
Julio »
Agosto »
Septiembre »
Octubre »
Noviembre »
Diciembre »

Noticia   **Enviar a un amigo**

Oficina CEER
25-06-2012
DOUTORAMENTO NA FEUP CRIA GUIA TURÍSTICO INOVADOR

Peter Smith, cidadão inglês em visita à cidade do Porto, vê-se a braços com a missão de salvar o vinho do Porto. Para desempenhar esta tarefa, Peter terá que descobrir a localização da taça de Baco e outros tesouros. Este é o ponto de partida do TravelPlot Porto, um guia turístico interactivo nascido de uma tese de doutoramento em "Media Digital" apresentada por Soraia Ferreira na Faculdade de Engenharia da U.Porto (FEUP) e que se assume como pioneiro no uso do conceito de "transmedia" (o uso de diversas plataformas) no turismo.

No TravelPlot Porto, os turistas são convidados a conhecer a beleza e a história da cidade através da realização de uma "caça ao tesouro", na qual têm que realizar provas (como por exemplo, degustar uma francesinha ou as típicas "tripas à moda do Porto") e visitar locais, angariando as "moedas de ouro" que desbloqueiam a "taça de Baco".

"O TravelPlot é um guia turístico não convencional, ou seja, através de uma caça ao tesouro estamos a convidar as pessoas a conhecerem a cidade do Porto, não só os seus monumentos, mas também a sua gastronomia, o vinho do Porto ou o Rio Douro através do cruzeiro", afirmou a mentora do projecto, Soraia Ferreira, em declarações à imprensa durante a apresentação do projecto.

O guia turístico interactivo apresenta 42 localizações, como por exemplo a Casa do Infante, Mercado do Bolhão, Monumento aos Tripeiros ou Monumento evocativo do desastre da Ponte das Barcas. Os turistas

podem ter acesso ao serviço TravelPlot Porto através de redes sociais como o Twitter ou Facebook, aplicação para iPhone, um mapa convencional ou através do site:

http://noticias.up.pt/catalogo_noticias.php?ID=10204

Figure 81. Centro De [Estudios] Estudos Euro [Rexionais] Regionais Galicia [Galiza]. Norte

De Portugal, June 25, 2012

Cidadão do Planeta

Uma câmera na mão e um roteiro na cabeça.

Cidade do Porto cria experiência interativa de turismo

Munidos com tablets ou smartphones, visitantes da cidade do Porto podem conhecê-la através de uma busca ao tesouro.

Olha que bacana!

A cidade do Porto criou uma experiência diferente para os turistas que pretendem visitar a cidade. De maneira lúdica, trazendo uma caça ao tesouro que usa as novas mídias como plataforma, os viajantes podem conhecer os pontos marcantes locais e participar de uma aventura.

A proposta é chamada **TravelPlot Porto**, um guia turístico com dinâmica de *game*, utilizando algumas plataformas que melhoram a experiência do turismo, detalhando monumentos históricos e personagens marcantes que por ali passaram.

Este aplicativo de Iphone reúne elementos como gráficos e textos, ambos categorizados em um mapa da cidade. São incluídas ainda informações trazidas de redes sociais como You Tube, Twitter e Pinterest, tudo de graça. A única opção paga é a participação em alguns eventos oferecidos por patrocinadores.

Toda a informação está dividida em 9 capítulos, com 42 locais para escolha do turista.

Figure 82. Cidadão do Planeta, June 29, 2012

_ A +

TravelPlot Porto: caça ao tesouro na cidade invicta

Se passear pelo Porto já é divertido, imagine conhecer e redescobrir cada canto histórico da cidade Invicta através de um jogo de caça ao tesouro... O TravelPlot Porto é um guia turístico interativo que permite aos turistas explorar a história do Porto, os monumentos e personagens históricas, com uma dinâmica de jogo incorporada, que utiliza diversas plataformas de forma a melhorar as experiências dos utilizadores.

A ideia que surgiu há três anos ganhou vida nas mãos de Soraia Ferreira, estudante do Programa Doutoral em Media Digitais da FEUP, que afirma que "a caça ao tesouro é um tipo de narrativa com que toda a gente está familiarizada pelo que permite entender a história rapidamente". A tese, intitulada "Location Based Transmedia Storytelling: Enhancing the Tourism Experience", está a ser desenvolvida sob a orientação de Artur Pimenta Alves, professor do Departamento de Engenharia Eletrotécnica e de Computadores da FEUP e Célia Quico, professora da Universidade Lusófona de Humanidades e Tecnologias.

O TravelPlot Porto é composto por nove capítulos e 42 locais para escolha, em que a personagem Peter, um turista inglês, tem a missão de salvar o vinho do Porto. Para o êxito desta tarefa, ele terá de descobrir a localização da taça de Baco e o restante tesouro escondido pelos Cale, em várias localizações da cidade do Porto ao longo dos séculos. Isto antes que Filipe, um ex-elemento dos Cale, possa fazer o mesmo. Só com a ajuda dos locais e restantes turistas é que esta missão poderá ser bem-sucedida.
Ao mergulhar nesta aventura, os turistas podem optar por visitar os locais mais próximos, locais que estão incluídos no mesmo capítulo da história, ou visitar os lugares de acordo com a ordem cronológica da história.

O guia utiliza multiplataformas, como uma aplicação para iPhone, um site, um mapa, eventos ao vivo e redes sociais (YouTube, Twitter e Pinterest). Todas estas plataformas são gratuitas com a exceção dos eventos ao vivo. E é com base nos novos media que os turistas vão encontrar as possíveis localizações e viver experiências únicas, como fazer um cruzeiro pelo rio Douro e saborear os vinhos e as delícias gastronómicas disponibilizados pelos parceiros associados ao projeto. O TravelPlot Porto associou-se também à iniciativa "Um Lugar Pró Joãozinho", que pretende ser uma referência para a saúde dos jovens. Assim, os parceiros DouroAzul, Vinhas d'Alho e Porto com Arte, contribuem para esta campanha com a doação de 1 €, apurado nas compras específicas relacionadas com o TravelPlot Porto.

De acordo com Soraia Ferreira é difícil escolher apenas um lugar preferido no Porto, embora não hesite muito na altura de escolher alguns dos pontos principais da cidade: a frente marítima (Foz) e a zona da ribeira. E para a autora deste projeto inovador e interativo, o maior tesouro da cidade são "as pessoas".

Mais informações:
www.travelplot.com
www.facebook.com/travelplot
www.twitter.com/travelplot

03/07/2012

Figure 83. ADN FEUP, July 3, 2012

low cost portugal

VIAJAR VIVER GRÁTIS PROMOÇÕES DICAS COMUNIDADE VIDEO R

COMPRAR PARQUEAMENTO   RESERVAR HOTEL   COMPRAR VOO   OFERTAS LOW COST   SOBRE   CON

trivago | O Comparador de Preços de Hotéis

Cidade

Check-in Sex, 25/07/2014
Check-out Do, 27/07/2014
Quarto Duplo

Pesc

TravelPlot Porto – guia turistico interativo grátis

AdChoices ▷   ► Carro porto   ► Porto faro   ► Porto porto   ► Turismo

Like 3   Tweet 7   Pin it   Share 2

O TravelPlot é um projeto inovador de promoção turística. O **Porto** foi o destino escolhido para iniciar esta plataforma interativa, que envolve as pessoas na história, monumentos e personagens históricas de determinada cidade.

Trata-se de um guia turístico que incorpora uma dinâmica de jogo, fator cada vez mais utilizado por marcas nas suas estratégias de marketing em plataformas digitais.

Tem uma forte presença em redes sociais (YouTube, Twitter e Pinterest) e parte de uma aplicação gratuita para iPhone.

É um projeto português. A autora Soraia Ferreira, realiza doutoramento em Location Based Transmedia Storytelling: Enhancing the Tourism Experience na Universidade do Porto.

ida & volta

Figure 84. Low Cost Portugal, July 9, 2012

APPENDIX 4

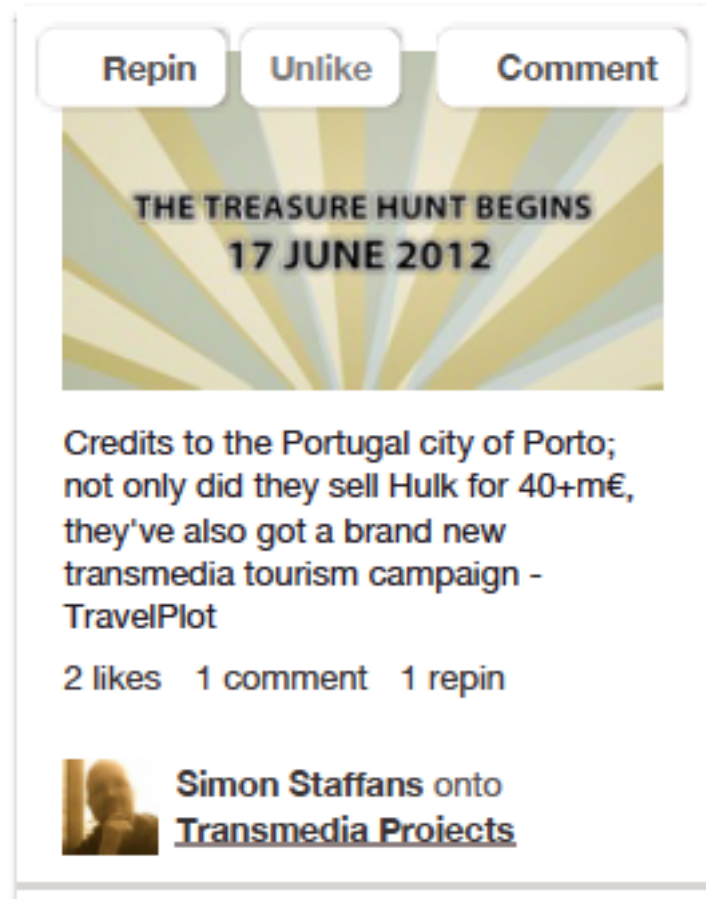**TravelPlot Porto social media feedback**

Figure 85. Simon Staffans, Finland **-** Content developer. Cross media, transmedia, social

media, brand integration etc. Television, online, mobile. Consulting, developing, lecturing

Figure 86. Gary Hayes, Australia - Multiplatform Producer (ex BBC/ABC), Director

MUVEDesign & StoryLabs, AR & Virtual Worlds

Figure 87. Beata Zemanek, Edinburgh **-** Transmedia / experience designer. Current research
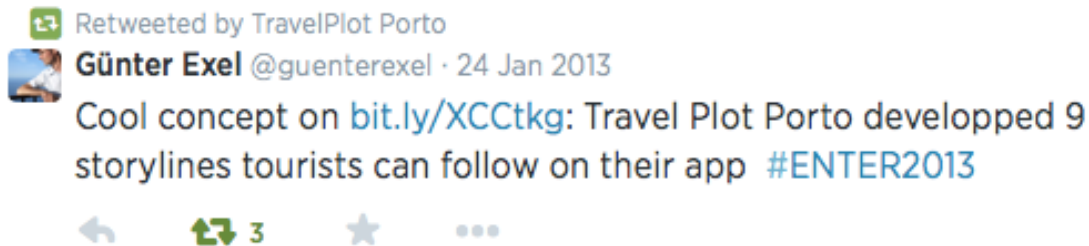
student.

Figure 88. Günter Exel, Austria - Marketing- & Social Media Consultant

Figure 89. Margaret Doyle, Canada **-** Writer, storyteller, instructor, helps business' 'find their

story', creator of Transmedia campaigns.

Figure 90. Pellervo Kokkonen, Savonlinna **-** Director of Tourism Development in Savonlinna

APPENDIX 5

TravelPlot Porto questionnaire

Part I - Introduction

This questionnaire is part of the investigation entitled Location Based Transmedia storytelling: Enhancing the Tourism Experience, which aims to understand the impact of using transmedia storytelling techniques applied to tourism.

Taking this survey should take about 6-10 minutes.

This questionnaire is anonymous therefore ensuring its confidentiality.

We don't foresee any harm as a consequence of participating in this questionnaire.

The responses will be saved in a file in order to be analyzed but there will not be a way to identify you, except for the last question of the questionnaire, which expressly asks.

We are giving away 140 prizes as a thank you for filling out this questionnaire on our website or app. The list of prizes can be found at www.travelplot.com

Thank you very much for your participation!

Part II – Engagement

Q1 – Is this your first visit to Porto?

Yes __   No __   Not applicable __

If no, how many times have you been to Porto before?

1 ___   2 ___   3 or more___   I live in Porto __

Q2 – How many days are you going to stay in Porto?

1 ___   2 ___   3 or more___   I live in Porto __

Q3 – Please check if you are visiting Porto on leisure or business.

Leisure __   Business __   Not applicable __

Q4 – Did you know about TravelPlot Porto before arriving to Porto?

Yes __   No__   Not applicable __

If yes, how?

Internet __ Friends Recommendation __ Other _____

Q5 – Why did you want to play TravelPlot Porto?

Fun__   New Experience __   Adventure__   Free__   Story__

Other _____

Q6 – Did you share online your participation on TravelPlot Porto?

Yes__   No__

If yes, which social media did you use?

Facebook __   Twitter __   Google+__   Foursquare__   Flickr__

Pinterest __ Other_____

Q7 – What would you tell your friends about TravelPlot Porto; not whether you liked it or not, but how would you <u>describe</u> it to them using single words?

_____

Q8 – What did you especially <u>like</u> about TravelPlot Porto? (Describe below using single words)

1 _____

2 _____

3 _____

Q9 – What, if anything, did you especially <u>dislike</u> about TravelPlot Porto? (Describe below using single words)

1 _____

2 _____

3 _____

Part III – Platforms

Q11 - How important are the following sources of information when you plan your holiday?

Internet

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Family and Friends

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Travel Books

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Magazines

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Brochures/Flyers

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Newspapers

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Tourism Office

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Television

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Radio

Very Unimportant _   Unimportant _   Neutral _   Important _   Very Important_

Q12 - What websites did you use to find information about Porto?

Virtual communities (e.g. TripAdvisor) __

Travel guidebook sites (e.g. Lonely Planet) __

Online travel agency (e.g. Expedia) __

Search engines or portals (e.g. Google) __

Tourism destination websites (e.g. oportonity city) __

Meta-travel search engines (e.g. Kayak) __

Company sites (e.g. Thomas Cook) __

Not Applicable __

Q13 - Did you download any app or digital travel guidebook for your trip to Porto before .drarriving?

Yes __   No __   Not Applicable __

Q14 – Please check all the platforms of TravelPlot Porto you have used?

Webpage

iPhone __

Android __

Map __

Twitter Peter __

YouTube Peter __

Pinterest Peter __

Twitter TravelPlot Porto __

Facebook TravelPlot Porto __

Wine Cellar (Cálem) __

Douro Cruise (DouroAzul) __

Restaurant (Vinhas d'Alho) __

Souvenier Shop (Porto com Arte) __

Special event __

Q15 – Which platform was the most useful for you?

Webpage

iPhone __

Android __

Map __

Twitter Peter __

YouTube Peter __

Pinterest Peter __

Twitter TravelPlot Porto __

Facebook TravelPlot Porto __

Wine Cellar (Cálem) __

Douro Cruise (DouroAzul) __

Restaurant (Vinhas d'Alho) __

Souvenier Shop (Porto com Arte) __

Special event __

Why? _____

Part IV – Experience

Q16 - Do you agree with the following statements?

Education

Playing TravelPlot Porto has made me more knowledgeable

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

I learned a lot from TravelPlot Porto

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

TravelPlot Porto stimulated my curiosity to learn new things

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

TravelPlot Porto was a real learning experience

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

Esthetics

I felt a real sense of harmony throughout TravelPlot Porto

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

Just playing TravelPlot Porto was very pleasant

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

The locations of TravelPlot Porto were pretty interesting

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

The locations of TravelPlot Porto were very attractive

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

Entertainment

Locations of TravelPlot Porto were amusing

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

TravelPlot Porto was captivating

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

I really enjoyed playing TravelPlot Porto

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

Locations of TravelPlot Porto were fun

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

Escapism

I felt I played a different character

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

I felt like I was living in a different time or place

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

The experience here let me imagine being someone else

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

I completely escaped from reality

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

Q17 - Please rate the following questions:

How interesting was your participation on TravelPlot Porto?

not at all __   somewhat __   slightly __   moderately __ very much __

How stimulating was your participation on TravelPlot Porto?

not at all __   somewhat __   slightly __   moderately __ very much __

How exciting was your participation on TravelPlot Porto?

not at all __   somewhat __   slightly __   moderately __ very much __

How enjoyable was your participation on TravelPlot Porto?

not at all __   somewhat __   slightly __   moderately __ very much __

Q18 - Do you agree with the following statements?

I will have wonderful memories about TravelPlot Porto.

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

I will remember many positive things about TravelPlot Porto.

Strongly disagree __   Disagree __   Neither agree or disagree __   Agree__   Strongly agree __

I won't forget my experience on TravelPlot Porto.

Strongly disagree __ Disagree __ Neither agree or disagree __ Agree__ Strongly agree __

Q19 – What is your overall perceived quality of TravelPlot Porto?

Much better than expected __ better than expected __ Just as expected __ worse than expected __ much worse than expected __

Q20 – What is your overall satisfaction of having participated on TravelPlot Porto?

completely dissatisfied __   mostly dissatisfied __   neither satisfied or dissatisfied __ mostly satisfied __ completely satisfied __

Q21 – How would you rate TravelPlot Porto?

Poor__   Fair __   Good __   Very Good __   Excellent __

Q22 - How likely is that you would recommend this project to friends and family members?

Extremely unlikely _   unlikely _   neutral_   likely_   extremely likely_

Q23 – Would you participate in another project similar to TravelPlot Porto?

Yes __   No __

Part V – Basic Information

Q24 – Please check whether you are male or female.

Male __   Female __

Q25 – Year of birth

_____

Q26 - Please indicate your highest degree of education/qualification.

Less than High School __

High School __

Professional education __

Completed graduate degree __

Q27 - What is your occupation?

_____

Q28 – Country of origin

_____

Part VI – Conclusion

We are giving away 140 prizes. In case you wish to have a change to win one of these prizes,

please write your email below:

_____

You can find the list of prizes at www.travelplot.com

For more information regarding this study please contact:

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Thank you very much for your participation!