



Instituto Politécnico de Tomar

**Escola Superior de Gestão de Tomar**

**Christopher John Harold Pratt**

**ROUTEING IN MILITARY TOURISM:  
GAMIFICATION AS AN IMPLEMENTATION  
PROPOSAL**

Dissertação de Mestrado

Orientado por:

Professor Doutor Luís Mota Figueira, Professor Coordenador, Instituto Politécnico de Tomar

Coorientado por:

Mestre João Pinto Coelho, Instituto Politécnico de Tomar

Dissertação apresentada ao Instituto Politécnico de Tomar para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Desenvolvimento de Produtos de Turismo Cultural



To Christine Copeland and Robert Thomas Pratt



# ABSTRACT

---

This dissertation approaches three main concepts, routeing applied to tourism, Military Tourism as a segment of Cultural Tourism and Gamification as a tool for tourist fruition, with the aim at establishing a link between them. Following a literature review from various authors in each of these areas, and after the establishment of a firm conceptual base, this project investigates the possible links between them. In this specific case the application of the benefits of gamification to promote the development of Military Tourism products and their organisation in military themed tourism routes. In conclusion this dissertation presents a guiding model explaining the use of different forms of game based technology to develop different Military Tourism products and how this tool can aid in the organisation in a Military Tourism Route.

**Keywords:** Tourism, Routeing in Tourism, Military Tourism, Gamification, Gamification in Tourism



# ACKNOWLEDGEMENTS

---

This dissertation in the field of Military Tourism and Routeing is the result of a combination of varied projects, ambitions and contributions from a series of different people, without whom it would have been impossible to accomplish. It is, therefore essential for me to express my gratitude to them, for their contribution to this dissertation.

Firstly, I wish to thank Professor Luís Mota Figueira, my thesis advisor, for the support provided from day one of my Higher Education journey. For all the knowledge provided within and outside the classroom, from our joint projects developed in CESPOGA (The Centre of Polytechnic Studies of Golegã) and more recently in L-Tour (The Tourism Laboratory of the Polytechnic Institute of Tomar), along with his individual works which allowed and substantiated much of my work. Thank you.

Special thanks are due to my co-advisor João Pinto Coelho, whose unconditional support and guidance day in and day out over the years made this whole project possible. Along with his leadership, management, advice, instruction, opportunities and friendship which made me an overall better student and tourism professional.

To my masters colleagues, and teachers who have accompanied me for the past five years, who have played a vital role in the process of understanding and following this topic with the informal support and camaraderie in the pursuit of my ambitions.

My friends and partner, Ana Filipa, for your relentless backing and understanding throughout this journey, without you I would never have even started, to you I extend my gratitude.

Last but by no means least to my Mother whose unconquerable positive attitude and support gave me the strength to carry out my convictions.

I thank you all.



**INDEX**

---

Introduction .....	1
Methodology .....	6
1 - Theoretical Definitions and Concepts .....	11
1.1 - Introduction.....	11
1.2 - Theoretical approach to Routeing.....	11
1.3 - Definition of Route .....	11
1.4 - Definition of Cultural Tourism .....	14
1.5 - Cultural Routes .....	17
1.6 - Military Tourism as a segment of Cultural Tourism .....	19
1.7 - Summary .....	20
2 - Theoretical approach to the process of Routeing development .....	23
2.1 - Introduction.....	23
2.2 - The importance of routeing.....	23
2.3 - Theories on route development.....	24
2.4 - Structure of routeing .....	30
2.5 - Analysis of Cultural Routes .....	32
2.6 - Summary .....	33
3 - Concept and Progression of Military Tourism in Portugal .....	35
3.1 - Introduction.....	35
3.2 - Conceptualization of Military Tourism .....	35
3.3 - Battlefield Tourism .....	37
3.4 - Thanatourism Tourism.....	38
3.5 - Military Tourism.....	39
3.6 - Military Tourism in Portugal .....	42

3.7 - Military Tourism Charter.....	44
3.8 - Military Tourism in the Portuguese Spotlight .....	48
3.9 - Summary.....	51
4 - The Fruits of Technology: Gamification and its application to Military Tourism in Portugal .....	53
4.1 - Introduction .....	53
4.2 - Technology as a tool.....	53
4.3 - Technology as a tool for Tourism development. ....	54
4.4 - Technology and Games .....	58
4.5 - Gamification .....	64
4.6 – Summary .....	66
5 – How can Gamification be applied to Tourism? .....	67
5.1 - Introduction .....	67
5.3 - Interpretation .....	73
5.2 - Gamification applied to Cultural Tourism.....	76
5.4 - Military Tourism resources in Portugal.....	76
5.5 - Gamification applied to the operationalization of Military Tourism .....	80
5.6 - Summary.....	84
6 - The application of Games to Military Tourism Products .....	85
6.1 - Introduction .....	85
6.2 - Routes, Military Tourism and Gamification.....	85
6.3 - Role Playing Games .....	86
6.4 - Real Time Strategy Games .....	88
6.5 - Location Based Games .....	90
6.6 - Challenge/Reward Games .....	93
6.7 - Social Media Games.....	94

6.8 - Augmented Reality .....	96
6.9 - Military Tourism Game Creation Model .....	96
6.10 – Summary .....	132
Conclusions .....	133
References .....	135
Annexes .....	143



## Index of Figures

---

1 Adapted, Quantitative Evaluation Of Tourism Activities Turismo De Portugal .....	2
2- Applied Methodology Adapted Santos (2012).....	9
3 Tourism Trends: Tourism, Culture And Cultural Routes Greg Richards 2011 .....	15
4 Adapted Coelho 2011 - Resulting Products Of Military Tourism .....	19
5 Adapted Figueira 2013 Main Resources Needed For Route Creation .....	25
6 A Successful Tourist Destination. Unwto Etc Handbook On Tourism Product Development .....	28
7 Adapted Figueira 2013 - Route Creation Process .....	29
8 Tower Poppies Installation - Tower Of London.....	37
9 Own Elaboration, The Military Tourism Segment.....	40
10 Visit To The Tancos Paratrooper School In “Jornal O Mirante” .....	43
11 Military Tourism In Pent .....	44
12 Military Tourism Charter Website .....	45
13 Own Creation - Military Tourism And Cultural Circuits Cntm .....	47
14 Signing Of The Cooperation Protocol Between National Defence Ministry And Ipt....	48
15 Military Tourism App - Rtp Pedro Oliveira Pinto, Pedro Amanajás .....	51
16 British Airways Mobile App .....	57
17 Street Museum App From London.....	58
18 The Game Diagram Jasper Juul 2003.....	59
19 Radoff, (2010), "History Of Social Games .....	63
20 Ireland Town Netizens Reach. Wtm Report 2011.....	69
21 Google Goggles .....	70
22 - Scvngr Location Based Game .....	72
23 Now Playing In Times Square.....	73
24 Army Units In Portugal. (Own Elaboration) .....	79
25 Clustering Of Military Units: (Own Elaboration) .....	80
26 Example Of Gamification Applied To Military Tourism (Own Elaboration).....	81
27 Augmented Reality Gladiator School Carnuntum.....	82
28 Portugal 1111 Rts Game In Visão .....	83
29 Assassins Creed Gameplay Image In Paris .....	87

30 Example Of Rpg.....	88
31 – Illustration Of The Iberian Peninsula, Rts Game Empire Total War, Ign.Com.....	89
32 Architecture Of Location Based Games - Avouris, & Yiannoutsou 2012.....	90
33 Location Based Game Applied To Military Museums .....	91
34 Example Of Military Tourism Challenge Source: Pratt.....	93
35 Pan And.Crotts Traffic Of Media Sites Versus Social Media Sites.....	94
36 Digital 3d Representation Of Unesco World Heritage Site Convento De Cristo, Tomar Source Google Earth.....	96

## **Index of Tables**

1 Cross Referencing Of Routeing Concepts, (Own Elaboration).....	12
2 Adapted Ignarra 2003 - Table Of Natural Resources .....	29
3 Adapted Ignarra 2003 - Table Of Cultural Resources .....	30
4 Military Tourism Game Development Model: Own Creation .....	131



## **List of Abbreviations**

APP – Mobile Application

CESPOGA – Centro de Estudos Politécnicos da Golegã

DOD – Department of Defence (USA)

DOT – Department of Transport (USA)

ETC – European Travel Commission

GDP – Gross Domestic Product

ICT - Information and Communication Technology

MMORPG – Massively Multiplayer Online Games

NASA – National Aeronautics Space Association (USA)

OECD - Organisation for Economic Cooperation and Development

PDA – Personal Digital Assistant

PENT – National Strategic Tourism Plan

RPG – Role Playing Games

UNESCO - United Nations Educational Scientific Cultural Organization

UNWTO – United Nations World Tourism Organization



## Introduction

---

According to the UNWTO (United Nations World Tourism Organization) Tourism Highlights 2015 (2015) edition the current world tourism market is characterized by an ever-increasing number of destinations worldwide, with a registered overall greater investment in tourism. This investment has led to a continued expansion and diversification of the tourism industry over the past six decades, making it now responsible for <sup>1</sup>10% of the world's GDP (Gross Domestic Product) and employing one in eleven people accounting for 30% of the world's services exports. According to the UNWTO "Today, the business volume of tourism equals or even surpasses that of oil exports, food products or automobiles. Tourism has become one of the major players in international commerce, and represents at the same time one of the main income sources for many developing countries. This growth goes hand in hand with an increasing diversification and competition among destinations." International Tourist arrivals increased by 4.3% in 2014 reaching a total of 1133 Million after Topping the 1 Billion Mark in 2012. International tourist arrivals in Europe welcomed 15 million more tourists in 2014 (+3%), reaching a total of 582 million arrivals. Tourism receipts grew by 4% in real terms, reaching US\$ 509 billion (euro 383 billion). These are robust results for the world's most visited region, which accounts for 51% of all international arrivals and 41% of receipts and comprises many of the world's largest and most mature destinations. The region's growth was driven largely by Southern and Mediterranean Europe (+7%) and Northern Europe (+6%).

This increase and dispersion of destinations forces them to bet on a greater specialization in certain fields, quality and diversification of what there is on offer to guarantee their economic sustainability.

---

<sup>1</sup> See Annex 1



*1 Adapted, Quantitative evaluation of tourism activities Turismo de Portugal*

The quantitative evaluation of tourism activities and analysis of results, impacts and predictions, released by the official Portuguese tourism board states that between January 2015 and August 2015 tourism has witnessed a major growth. There has been an 8.2% growth in the number of guests, counting with 11.887.4 thousand guests, a 6.4% rise in the number of beds rented translated in 34.080.4 thousand beds resulting in an overall rise of 10.8% in receipts, namely 7.612.1 million euros.

To accompany this growth of the tourism market, the Portuguese government through the ministry of economy has drawn up a National Strategic Tourism Plan (PENT) in which ten strategic products to guide tourism professionals are identified. One of these ten product axis is to reinforce religious and cultural circuits segmenting them to general and themed branches. Meaning there are various niche markets which have appeared and are strongly related to the regional territory valuing the local assets such as classified heritage by United Nations Educational Scientific Cultural Organization (UNESCO), artistic heritage, military heritage, scientific and industrial heritage among others. It is relevant to compose itineraries that add value and integrate this heritage incentivising the creation of tourism experiences which qualify and diversify supply. <sup>2</sup>Recently national Tourism strategy has been defined by “Turismo 2020” document in which five principles are drawn up with the objective of making Portugal the most agile and dynamic destination in Europe.

<sup>2</sup> See Annex 2

From the means of transport to the hotel, the museum, the restaurant the attraction, these sub-products consumed by the tourist during the consumption of the global product of visitation, thus proving the composite nature of the tourist activity.

Briedenhann & Wickens (2004) state that the “(...) clustering of activities (...) and the development of rural tourism routes, stimulate entrepreneurial opportunity, providing a diverse range of optional activities and securing businesses in less developed rural areas”. (p.72).

Routeing is, fundamentally, the organization of sub-products and consequential creation of Routes as to appreciate territories, making them more attractive, competitive and economically, socially and culturally profitable.

According to Figueira (2013, p. 27) the process of routeing is, therefore an instrument for appreciation of territories having special importance in the tourist use of traditional heritage.

Cultural Heritage is, according to Portuguese law, (107/2001), all assets who have born witness to civilization or culture with relevant cultural interest and deserve special protection and appreciation.

Cultural Tourism is, according to Jafari (2000, p. 125), ”the commercialized manifestation of the human desire to see how others live (...) in their authentic environment and to view the physical manifestations of their lives as expressed in arts and crafts, music, literature, dance, food, and drink.”

Portugal’s Tourism 2020 plan states that sociocultural and demographic tendencies are leading us towards an evolution and change in tastes, needs and preferences, meaning that interest for cultural tourism and specific segmented programs for different publics are on the rise.

Therefore, the increase of tourist arrivals in Europe allied with the increase and dispersion of destinations has lead countries like Portugal to draw up a National Strategic Tourism Plan (PENT) to accompany the growth of the tourism market. One of the PENT’s axis is on the reinforcement of religious and cultural circuits namely in military heritage. Routeing is, fundamentally, the organization of sub-products and consequential creation of Routes, Circuits and Itineraries to improve territories, making them more attractive,

competitive and economically, socially and culturally profitable. UNESCO, World Heritage List, and Bloom Consulting show us that countries with a higher number of UNESCO heritage sites tend to be searched far more often online, granting more visibility. Jafari (2000, p.126) identifies “the demand for cultural tourism as the commercialized manifestation of the human desire to see how others live(...) as expressed in arts and crafts, music, literature, dance, food, and drink”. Routeing is the organization of these sub-products, arts and crafts, music, literature, dance, food, and drink, and consequential creation of routes circuits and itineraries making them more attractive and profitable. This dissertation focuses on a segment of cultural tourism, Military Tourism, and establishes the importance of this segment in Portugal. Following a literature review of the works of various authors to define Military Tourism, and the analysis of the progression of this segment within the Portuguese tourism strategy, a review of the collected data from the National Military Tourism Charter is carried out to identify the next step in the establishment of this segment. The use of Gamification as a tool to implement Military Tourism products is discussed and various forms of games are investigated in terms of their applicability to different Military Tourism products.



## Methodology

---

The type of exploration adopted for this research dissertation follows an explanatory method following other authors in the fields of Cultural Tourism, Military Tourism, Routeing and Gamification.

Following the examination for other authors, the conceptual study begins finding different concepts from various different areas and cross referencing these to achieve a viable hypothesis for the initial doubts.

This dissertation follows Quivy & Campenhoudt (2008) methodology in which three acts are in play sub divided into seven steps:

Firstly through the act of rupture by Quivy & Campenhoudt (2008), a process in which all preconceptions that could have been brought into the dissertation must be reevaluated. Although by this stage there is a great deal of “theoretical” baggage on the subject these perceived ideas carry with them a great number of traps. It is, therefore, fundamental to put these preconceived concepts to the test through three steps.

Step 1 - with an initial question of **whether or not Gamification can be a lever to stimulate visitation to historical and military heritage in Portugal, and consequently promote the establishment of Military Tourism Routes?** Discussing the possibility of reutilizing military assets for tourist fruition through the use of new game models.

Starting from a base of generic knowledge of how Military Tourism can qualify as a segment of cultural tourism by means of routeing (the creation of routes circuits and itineraries) on a perspective of integrated management of heritage and available routes.

Step 2 - the exploratory phase in which a literature review was conducted on various authors within the areas of cultural tourism, routeing, product development, Military Tourism and Gamification. Along with an investigation into current trends within Portugal and among the leading tourism markets in these subjects.

During the course of this step of the dissertation much information was attained from the works of Figueira, Coelho, Richards, Burke, Costa, Egger, Bulencea and Csapó, authors who specialize in the areas of Cultural Tourism, Military Tourism, Routeing and Gamification, along

with statistical data and tourism trends from the UNWTO documents and online sources such as tourism websites of specific countries and businesses.

The following two steps are part of the second act. Following the act of rupture in which the conceptual system is analysed comes the act of constructing explanatory propositions to the previous issues, and from there on defining a study plan. Without this theoretical construction valid experimentation cannot exist.

Step 3 – Is based on the exploration of the collected information and the discussion of different aspects of the proposed problems. For example through the exploration of collected information about cultural tourism, Military Tourism and routeing what possibilities arise from the comparison of each of them and relations between each subject?

Following Step 3 – Of Quivy & Campenhoudt's methodology this dissertation seeks to make use of the information retrieved from the Military Tourism Charter Report. This report based on contributions collected from the [www.turismomilitar.ipt.pt](http://www.turismomilitar.ipt.pt) website from the 16<sup>th</sup> of December to the 28<sup>th</sup> of February, was designed to instigate the participation of different entities and the general community in the structuring of a common proposal for Military Tourism. The information retrieved from this report was based on, as defined by Bhattacharjee (2012), a self-administered mail survey where a large number of people answer an equal questionnaire at their convenience.

Step 4 – The construction of the analysis model which will consider a means of achieving answers to our starting questions is an important part of the research process. It is comprised firstly of the literature review of exploratory observations and the construction of key concepts and important hypothesis along with interesting relations between them. Ultimately the analysis model is constructed throughout the research process. In this dissertation the analysis model is based on the study of various concepts, their interrelation and concluding hypothesis.

Thirdly and finally is the act of verification. A proposition can only be allowed scientific status when it is verified by facts. This test of facts is called verification or experimentation.

Step 5 – Observation encompasses a series of operations through which the analysis model (comprised of concepts and hypothesis) is put to the test confronted with observable data. Observation can be considered as an intermediate stage between the construction of concepts and hypothesis and the verification and or experimentation of these proposals.

In this step the application of gamification models to the tourism industry in other countries is investigated allowing us to ascertain whether or not gamification is a feasible tool to develop Military Tourism products.

Step 6 – During the information analysis step the collected information is verified to establish whether it is in fact related to the proposed hypothesis. In other words, this step checks whether the observed results correspond to the expected results during the construction act. Along with an interpretation of unexpected facts and review of hypothesis so that the conclusions the dissertation can supply suggestions and improvements to the analysis model and to guide future research in this area. This step will count with statistical data retrieved from projects developed by the reviewed authors which offer proven data.

Step 7 – The conclusions, the final step of the research process and often the first thing to be read.

This step requires special care, for it must be very clear on the explanation of the whole process of study, offering an in depth retrospective of the main lines of research, adopted during the work. A presentation of the research stepping stones from various different sources which led to the hypothesis and correlations achieved during research, and finally the presentation of practical considerations attained with the conclusion of the project and further suggestions for future research in this area of study.

Therefore the methodological process of this dissertation can be explained in the following graph:

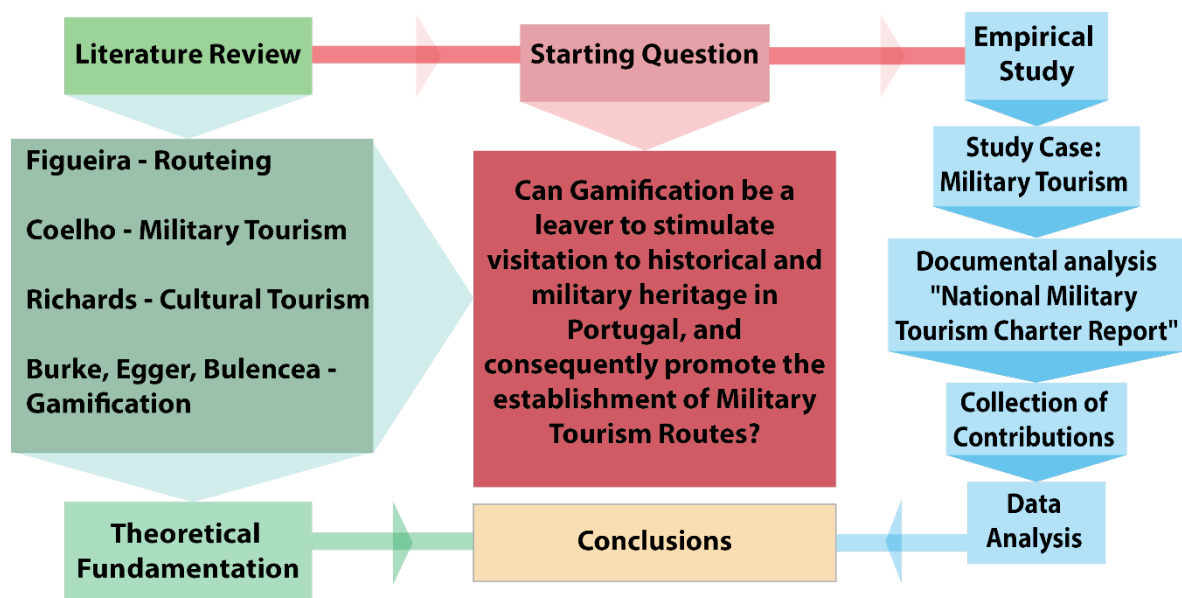
To answer our starting question a literature review was carried out in the various fields which come within reach of this research, namely Routeing, Military and Cultural Tourism, Gamification, among various others. Bhattacharjee (2012) considers this step as a three fold process. Initially, finding out what is the current state of knowledge in the area of enquiry, secondly identifying key authors, articles, theories and findings within this area, and thirdly identifying the gaps currently existing in that particular research area. Reviewed literature can later be summarized in the form of tables or structured in an organized framework such as concept matrix. This Literature review is the basis for theoretical fundamentation, granting:

- Logical consistency: “(e.g., a theory assumes rationality, but some constructs represent non-rational concepts), then the theory is a poor theory.” (Bhattacharjee 2012)

- Explanatory power: How well does a given theory explain or predict reality?
- Falsifiability: Ensuring that the theory is potentially disprovable if empirical data does not match with theoretical propositions.

Allied to this theoretical fundamentation and empirical study which makes use of the relatively new concept of Military Tourism discussed by various authors and researched specifically by a team of researchers, counting with professors from various universities, military personnel, and political powers. This research culminated in the National Military Tourism Charter Report” which provides crucial data from a collection of contributions.

The conclusions drawn from this research can then be formulated from these two pillars in an attempt to answer our starting question.



2- Applied methodology adapted Santos (2012)

The choice of this methodology applying gamification to the Military Tourism segment allows future researchers to substitute this segment for another of their choosing permitting him or her to utilize this model in other areas of tourism such as marketing research, local development or even territorial development.



# 1 - Theoretical Definitions and Concepts

---

## 1.1 - Introduction

This first chapter will focus on explaining the concepts of routes, routeing, cultural tourism and Military Tourism, through the analysis of different specialist author's perspectives on the subject.

Following this conceptual explanation this first chapter seeks to explain the importance of these concepts through practical examples from various different information sources and the impact of these concepts on the tourism industry founded with credible sources and statistics.

## 1.2 - Theoretical approach to Routeing

To understand routeing and its appearance in tourism circles we must dissect the word and comprehend its etymology. Routeing comes from the noun route, which according to thesaurus.com can be considered as the act of sending someone along a path, to direct, to transmit, to guide.

## 1.3 - Definition of Route

According to Cambridge Dictionaries Online: Routing, also known as routeing, in the area of Information Technology is the process of sending information from one computer system to another, in transport routeing is the process of creating a particular path for vehicles to travel, or for an oil or gas pipeline to follow.

**The Oxford English Dictionary** defines Route as:

- A way or course taken in getting from a starting point to a destination.
- A line of a road, path, railway...

**The Oxford English Dictionary** goes on to define the verb Routeing or routing as the action of sending or directing along a specified course: as in all lines of communication were routed through London.

*1 Cross referencing of Routeing concepts, (own elaboration)*

	Route	Routeing
Etymology (thesaurus.com)	<i>The act of sending someone along a path, to direct, to transmit, to guide.</i>	
Cambridge Dictionary	<p><b>Information Technology</b> “the process of sending information from one computer system to another”</p> <p><b>Transport</b> “the process of creating a particular path for vehicles to travel, or for an oil or gas pipeline to follow”</p>	
Oxford English Dictionary	<p><i>-A way or course taken in getting from a starting point to a destination.</i></p> <p><i>-A line of a road, path, railway etc...</i></p>	<i>“action of sending or directing along a specified course: as in all lines of communication were routed through London”.</i>

There is a visible link between these three sources which attempt to define routeing and routes: the words “sending, path, start and destination” appear repeatedly. Therefore there is an idea of a guided movement of people or information between points along a certain premeditated path.

Although the expression of taking the “scenic route” is well known to the English speaking community as the act of choosing an often longer and more enjoyable path between two points, there is no actual word in English for the act of creating tourism routes.

In Portugal until very recently there was no word for this action either, until another Portuguese speaking country, the ministry of tourism in Brazil brought an answer to this problem in the form of «Roteirização». The Brazilian ministry of tourism states that “routeing is one of their strategies to diversify tourism supply and structure destinations”

<sup>3</sup>The Brazilian Portuguese word, «Roteirização», is the act of “creating a route, a detailed description of a journey or work related movement.”

<sup>4</sup>The **Infopedia Dictionary Online** defines *Roteirização* as the act of writing a route (a detailed description of a trip or itinerary; a book containing all details of an important journey; a description of all maritime and geographical accidents necessary to plan a trip; indication of streets distances of a region or country) or script,

*Roteirização* is now acknowledged in Portugal, and in the words of Figueira (2013, p.23) it can be defined as the process of taking advantage of available resources and transforming them into tourism attractions, followed by their presentation-interpretation to the tourism market, following current supply.

Figueira (2013) goes on to define *Roteirização* as the Conception, experimentation and evaluation of routes, aiming to create or reinforce the flux of tourists. Amplifying each customer’s experience and satisfaction as he consumes routes generating institutional, territorial, entrepreneurial and individual wealth.

It is in short, a tool to achieve territorial appreciation with special importance when linked with the tourist “appropriation” of traditional heritage.

Tourism trends have over the decades led to a change in the standard mass tourism experience, a more individualistic flexible and meaningful experience. These tourists have varied motivations including ecological uniqueness, special adventure opportunities and cultural attractions. Briedenhann & Wickens (2004), also state that this trend presents a unique opportunity for local operators to manage economies of scope by establishing networks of different services, organized to maximize opportunities and offering a greater range of activities.

Richards (2011, p. 4), follows this train of thought by stating that the IPK trend study (2009) points to ‘the importance of co-operation through public-private partnerships, but also partnerships between different sectors of the industry (such as airlines, hospitality groups, tour operators, niche market associations, etc) Leisure, tourism and work are increasingly being mixed. Pilgrimage becomes a form of tourism, tourists become pilgrims, popular culture

---

<sup>3</sup> <http://www.dicio.com.br/roteirizacao/>

<sup>4</sup> <http://www.infopedia.pt/dicionarios/lingua-portuguesa/roteirizacao>

becomes high culture, and vice versa. Holidays are becoming increasingly bound up with other activities. The number of hybrid arrangements offered will grow, e.g., hotels that merge with clinics, academies or museums, vacation clubs that also operate handicraft workshops, tower blocks with wellness resorts, cruise liners with temporary jobs.

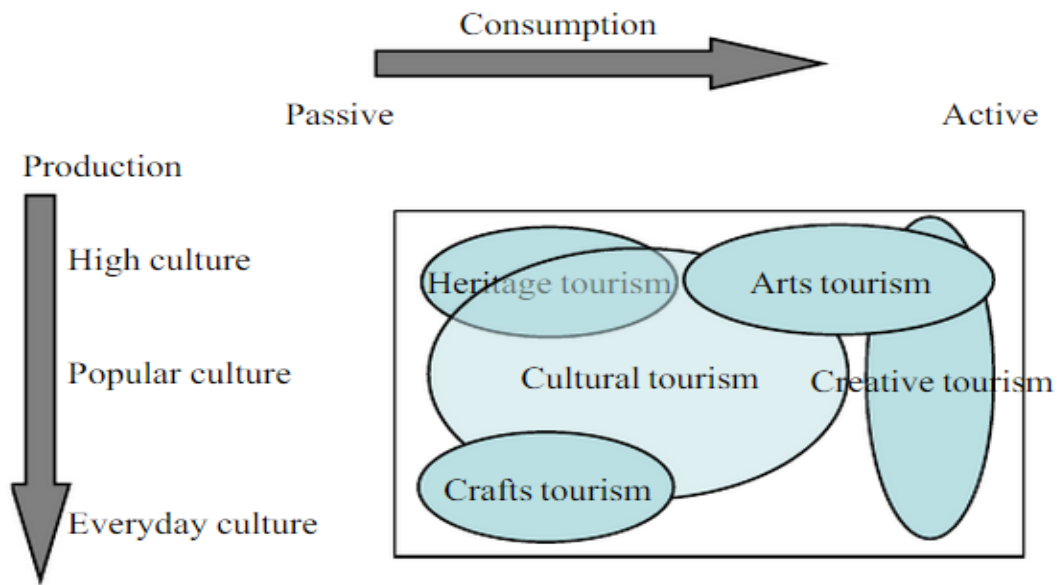
When considering these arrangements, and the current trend for a more competitive and organised supply along with a greater demand for cultural experiences, we find ourselves considering the current economic importance of cultural tourism, and how the development of cultural tourism routes can be of importance.

#### **1.4 - Definition of Cultural Tourism**

Mckercher and Chan, (2005) in Issac (2008) state that “The term cultural tourism is used in place of the more accurate but less glamorous term tourists who visit cultural sites and attraction. Calling someone a cultural tourist, places the pursuit of the cultural tourism at the heart of the travel decision and destination choice, whereas the more benign term a tourist who visited an activity or a site that is suggestive of a cultural tourism at some time during their trip, for example someone who visited a museum at some time during his or her trip, describes behaviour without making any inferences about its underlying cause.” (p.24).

The United Nations World Tourism Organisation defines cultural tourism as: “All movements of persons might be included in the definition because they satisfy the human need for diversity, tending to raise the cultural level of the individual and giving rise to new knowledge, experience and encounters. (broad definition). Movements of persons for essentially cultural motivations such as study tours, performing arts and cultural tours, travel to festivals and other cultural events, visits to sites and monuments. (narrow definition).” (UNWTO)

Therefore it is evident that, through narrower or broader definitions, in simpler or more complex definitions that Cultural Tourism can be considered as the movement of people motivated by cultural attractions ranging from museums, cultural events sites or monuments.



3 *Tourism trends: Tourism, culture and cultural routes* Greg Richards 2011

Cultural Tourism has become an attractive alternative to mass tourism, and it has been identified as a form of tourism which adds value to territories. In fact local residents have certainly benefited from this form of tourism. This became evident following a study put forward by Greg Richards in Barcelona in 2014. When inquired, 90% of residents identified Cultural Tourism as the form of Tourism they would prefer to develop. Back in 2006 benefits such as increased local incomes and support for local cultural institutions were attributed to the development of cultural tourism.

Su & Teo (2009, p.27) define heritage tourism as a type of tourism that “is centred on what we have inherited, which can mean anything from historic buildings, to art works, to beautiful scenery”.

The OECD’s (Organisation for Economic Cooperation and Development) report on *The Impact of culture on Tourism* (2009) identified the main drivers for the development of culture and tourism:

- Valorising and preserving heritage;

- Economic development and employment;
- Physical and economic regeneration;
- Strengthening and/or diversifying tourism;
- Retaining population; and
- Developing cultural understanding.

Richards (2013), states that “Culture and tourism were two of the major growth industries of the 20th century, and towards the end of the century the combination of these two sectors into ‘cultural tourism’ had become one of the most desirable development options for countries and regions around the world.” (p. 297).

Csapó (2012) identifies heritage tourism as a new phenomenon which links cultural tourism and a traditional form of tourism dating back to ancient times. This form of tourism has once again risen up as one of the modern trends of tourism from 1990s but especially in the 21st century (p.211).

There has been a veritable explosion of courses in areas such as languages, gastronomy, art and photography in recent years, driven not only by high demand for creative skills, but also by a growing number of creative producers who have started to service this market OECD, (2014).

Richards (2011) identifies the main drivers of cultural tourism as popular or everyday culture of the destination, intangible heritage alongside museums and monuments, arts, growth of creative tourism and overall wider horizons regarding what can be considered as cultural consumption.

Figueira and Baptista, (2015) explanation of the principles of the international cultural tourism charter (ICOMOS, 1999), stating:

1 - National and international tourism is one of the main vehicles of cultural exchange. The safeguard of cultural heritage should offer responsible opportunities for receiving communities to offer other communities an easier comprehension and fruition of heritage and culture.

2 – The relationship between heritage groups and tourism is dynamic and should overcome conflicts between the values of these two concepts. This relationship should be managed with a long term perspective for the benefit of current and future generations.

3 – The appreciation of heritage groups must assure visitors of an enriching and pleasant experience.

4 – The receiving communities and local population should participate in Tourism appreciation of heritage sites.

5 – Tourism and safeguard of cultural heritage activities should be beneficial to receiving communities.

6 – Tourism promotional programs must protect and appreciate cultural and natural heritage.

## **1.5 - Cultural Routes**

Csapó (2012) defends the use of cultural thematic routes, stating that they can be organised on the basis of a wide range of themes and types: spiritual, - industrial, - artistic, - gastronomic, - architectural, - linguistic, - vernacular, - minority. This can be beneficial because it appears as an answer to the previously presented information by Greg Richards which identified the main drivers of cultural tourism.

Berki & Csapó, (2008) also identified a series of benefits of thematic routing in cultural tourism that contribute to supply development, such as:

- They can be created with a relatively small investment;
- Are able to diversify the tourism supply both timely and spatially;
- They are able to utilize unexploited resources; and
- A new demand group can be captivated to the given attraction.

And can also motivate local entrepreneurs, support investments and developments concerning buildings, infrastructures and human resources, settling of related services, which can also be used by the local residents, income increase due to the increasing tourism flow, and as a result of the above mentioned benefits increase in employment. (p. 2)

Berki et al (2008, p.3) also state that another key factor to forming a themed route is the area's attractions structure. The development of the attraction structure depends on the external and internal factors. The features of the geographical – natural – social – economic – infrastructural – environment effects basically affect the appearance and structure of the tourism attractions.

Puczkó & Rátz, (as cited in Berki & Csapó, 2008, p.4) argued that based on the geographical area of the route it is possible to distinguish local/settlement, regional, national and international routes. However the decisive factor is the reputation and appeal of the central site.

Berki & Csapó, (2008) support the theory that themed routes may exist on existing roads or be created for the purpose of the route so as to create a network organisation of the actors connected to the topic. At the attractions with existing itineraries the route itself can take over the central role and travelling itself will be the source of the travel experience. (p.4).

Briedenhann & Wickens (2004, p. 72), tell us that the potential of tourism routes has long been realized in developed countries. In 1964 a Council of Europe working group mooted the idea of a series of European Cultural Routes, with the prime objectives of raising awareness to European culture through travel, setting up networks for cultural tourism, and utilising European cultural heritage as a means of stimulating social, economic and cultural development, thus improving the quality of life of local people. The idea however only came to fruition in 1980 with the establishment of the Santiago de Compostela Pilgrim Ways (Council of Europe, 2002) this effort is focused on maximising individual spending, and providing products and experiences that act as an incentive to tourists to stay longer and return on repeat visits.

At a smaller scale and with a national example, Figueira (2013, p, 145) from the *Manual de Elaboração de Roteiros de Turismo Cultural* (Manual for the creation of cultural tourism routes), identifies the “Rota do Fresco” a fresco painting route which states that since its creation it has had a social, economic, and heritage preservation return, giving the previously depressed territory a positive image.

## 1.6 - Military Tourism as a segment of Cultural Tourism

Considering that Cultural Tourism has a vital role to play in the tourism industry, what weight do cultural tourism sub-segments possess, such as Military Tourism-

“(...) currently consumer satisfaction is managed only through the effective segmentation and a great variety of supply, for this, attractions must be projected for specific segments (...)” WTO, (2001) in Coelho (2011).

This dissertation intends to apply all the benefits of routing presented above in cultural tourism, to a new segment of Cultural Tourism which has been discussed over the past years in national forums, Military Tourism.

Coelho (2011), Military Tourism as a segment of Cultural Tourism can be considered as an appropriation of tourist resources namely of historical and military character, following a process of transformation of these attractions and presented under different forms of attractions with a variety of inherent possibilities.



4 Adapted Coelho 2011 - Resulting products of Military Tourism

<sup>5</sup>Military Tourism resources may be transformed into a series of products ranging from didactic and pedagogical activities concerning Portuguese military history, interpretation, events, activities, visitation and social events with military servicemen.

Alberto Coelho (2015) The General Director of resources at the Portuguese Defence Ministry affirmed at the <sup>6</sup>ceremony for the establishment of the Military Tourism Association that Military Tourism gives depth to Portuguese heritage and communicates that heritage overseas attracting visitors to cultural activities.

Álvaro Covões (2015) president of the Military Tourism association in an interview to the <sup>7</sup>Expresso Newspaper on the 21<sup>st</sup> of August stated that Portugal is going through a growth phase in terms of tourist numbers, however he admits there is a lack of contents to satisfy demand. There is military “equipment” owned by municipalities or armed forces which are no longer in use and can be reused. Equipment such as the Bugio fort in carcavelos Covões states that these military buildings are not fantasy castles the kind read about in fairy tales but real castles with history which we need to make use of and show off.

## 1.7 - Summary

In short this chapter identified a route as a way or course of getting from one starting point to a final destination. The Oxford English Dictionary defines routeing as sending or directing along a specified course. Briedenhann, J.& Wickens, E. (2004) tell us that the potential of tourism routes has long been realized. However to address the application of routeing to cultural tourism, first it was necessary to define this concept. Following research into the theories of various authors it is possible to arrive at a number of definitions for cultural tourism, namely: Cultural Tourism as defined by the UNWTO is the movement of people which search for cultural motives to visit a destination, such as study tours, performing arts and cultural tours. The OECD goes on to substantiate the importance of cultural tourism in a report which identifies this segment as one of the main drivers for the development of culture and tourism. Within cultural tourism, Coelho (2010) identifies Military Tourism as a sub segment which can be considered to have a variety of inherent possibilities. Coelho’s convictions are then grounded

---

<sup>5</sup> See annex 3

<sup>6</sup> <http://www.defesa.pt/Paginas/turismomilitarlançamentoporto.aspx>

<sup>7</sup> <http://expresso.sapo.pt/economia/2015-08-21-Anda-comigo-ver-os-canhoes>

by Alberto Coelho (2015) the General Director of resources at the Portuguese Ministry of Defence affirming that Military Tourism gives depth to Portuguese heritage and communicates that heritage overseas attracting visitors to cultural activities. Álvaro Covões president of the Military Tourism Association (2015) backs Coelho's (2010) convictions stating that there is military "equipment" owned by municipalities or armed forces which are no longer in use and can be reused.



## **2 - Theoretical approach to the process of Routeing development**

---

### **2.1 - Introduction**

This second chapter analyses in greater depth the concept of routeing. By approaching the importance of their creation, the benefits they bring and the stages of the establishment process necessary for their optimal functionality this chapter seeks to offer a more in depth understanding of the route creation process and aim. To fully understand routeing chapter 2 goes on to analyse what routes consist of and the necessary components for their structuring process using as an example two cultural tourism routes, an international “Santiago de Compostela”, and a national smaller scale route «Rota do Fresco».

### **2.2 - The importance of routeing**

Tourism routes promise to bring together a variety of activities and attractions under a unified theme and thus stimulate entrepreneurial opportunities through the development of ancillary products and services. Greffe (1994) & Gunn (1979) & Fagence (1991) & Lew (1991) & Miossec (1977) & Long Et Al (1990) & Getz & Page (1997) as cited in Meyer (2004, p.3)

Signoretti, A., Paradedá, R., Câmara, M. G., & Signoretti, G. L. A. M. (2014, P.3) state that Tourism routes have become fundamental in the organisation and commercialization of tourism as a product.

Csapó (2013) (p. 215) states that the forming of the thematic routes can be reckoned among the methods of the thematic supply development. Furthermore, he defends that thematic route creations come with many benefits, such as a relatively low starting investment, diverse tourism demand both timely and spatially and use of unexploited resources.

The thematic routes – according to Puckó & Rátz (2000) in Berki & Csapó, (2008) – are tourism products which row up natural or manmade attractions accessible by different transport forms around a chosen topic or theme.

Berki & Csapó, (2008, p.2) state that more recently the number of routes has increased along with the forms of cooperation, evolving from loose networks to increasingly stronger networks, fruit of long-term co-ordination practice.

According to the UNWTO, (2015) in 2014 France was the world leader in international tourism arrivals with 84 million tourists. However, it came in 4th in terms of international tourism receipts with US\$ 55 billion. Spain is the current European leader in tourism receipts with US\$ 65 billion in 2014, and 3rd in arrivals with 65 million overnight visitors second only to the United States worldwide.

Considering Tourism as a tertiary industry, which, as any industry aims to generate the maximum profit possible, then Spain can, for this reason, be considered as an example to follow. Although Spain is not the most attractive country in Europe, not even among the top three, it is the country which maximises its profits, making the most, economically, out of each tourist who visits it.

<sup>8</sup>When visiting the Spanish Tourism <sup>9</sup>website, one of the main products on supply are tourism routes. It is evident that there is a great investment in tourism routes in Spain with a meticulous segmentation, counting with urban routes, cultural routes, nature routes, themed routes, and routes around villages, within each of these categories a great many different circuits exist following a certain theme or geography.

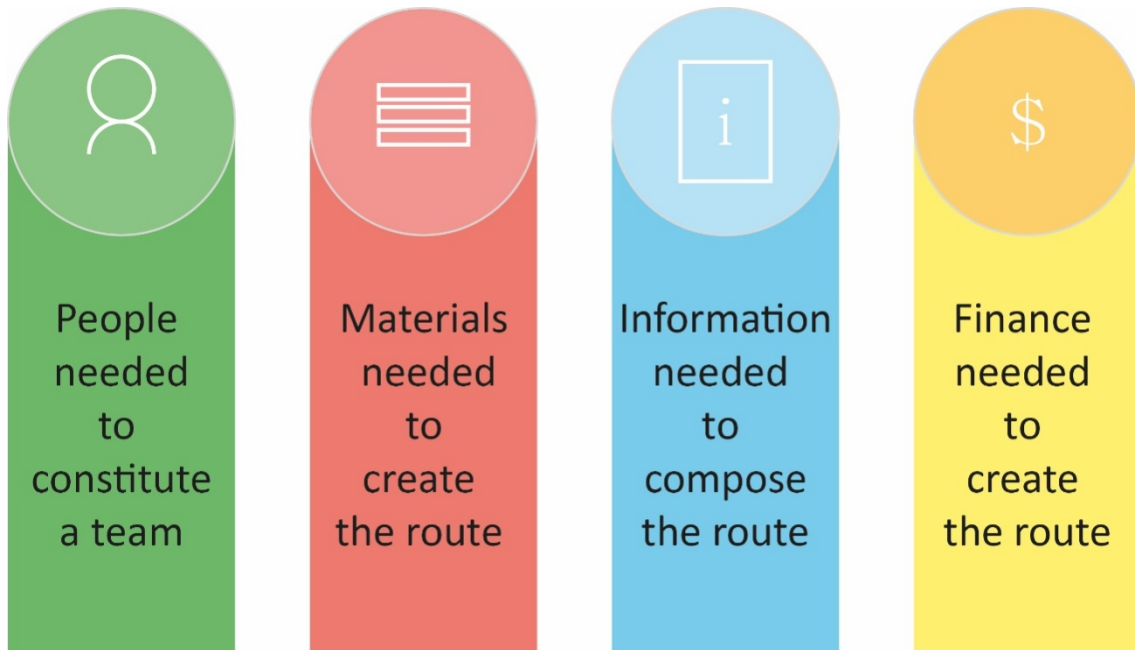
### **2.3 - Theories on route development**

Figueira (2013, p.110) wrote a manual on routeing in cultural tourism and, in his research, he was able to identify four main resources necessary to create a route:

---

<sup>8</sup> See annex 4

<sup>9</sup> <http://www.spain.info>



5 Adapted Figueira 2013 Main resources needed for route creation

**-People:** to constitute a team (coordinators, managers, tourism technicians, representatives of various business agencies, local development agencies...);

**-Materials:** such as equipment, consumables, computer programs, installations and other materials needed to create a route;

**-Information:** during the data acquisition phase, or field work. This is necessary for the construction of guides, manuals and other edited products on various different platforms;

**-Finance:** financial support from strategic partnerships, through international, national or local sponsorships and the commercialization of circuits and itineraries and promotional materials whose design adds to an enjoyable supplementary purchasing experience.

Figueira (2013) (p.112) goes on to state in his manual that the structuring of routes implies:

-A sketch, based on the concrete theme of the route which motivates its creation, where the route “developer” selects a clear and objective theme for the desired route later justifying its creation, explaining what needs it proposes to fulfil in a determined territory.

-The values and priorities, defined by the organisers.

Identifying the most important factors of the route that deserve to be highlighted, and describing the most important attractions that should be included.

-The correlation of the route with the current tourism demand.

Determining whether or not there is a market for the proposed route.

-The possibility of the route being modified or adapted according to the demand's fluctuations.

Taking into consideration the fluctuation of tourist demand: can the designed route be flexible to adjust to the market, making it sustainable in the long run?

-Capacity to receive retroactive information on the levels of tourist satisfaction.

Making sure that there is a plan structure in place to monitor the full functionality of the route and that it is fulfilling its initial purpose. Leading to possible improvements.

-Can the route be considered as a productive link of the tourism value chain?

Analysing the route and the network of actors involved in it to maximise the development of local economy and stimulate optimal generation of wealth for all.

-Can the management of the route be adapted to the internal and external variables?

Calculating all the variables which may have an impact on the route, i.e. internal and external variables, with positive or negative effects.

Figueira (2013) explains that this process must be followed out in more detail by the following steps:

- Categorising available resources with tourist interest and, including other passible resources which could circumstantially or definitely integrate tourism supply.

In the words of Gregory (as cited in Jafari 2000, p. 506) a theory which dates back to the eighties, states that “resources are not, they become”, Jafari (2000, p. 506) defines resources, as human, cultural and natural, “something which has an instrumental and possibly, monetary value in economic development (...) a resource is valuable only because it produces wealth.” Almost any object through a process of transformation may be designated as having some quality which differentiates it from others permitting it to reach the status of tourism attraction.

- In the study case of this dissertation, the inclusion of the Templar Castle of Tomar and Convent of Christ in central Portugal, in a themed route is a strong resource and already possesses tourist attraction properties, together with the region's defensive line of castles and with other events such as a Templar Festival in Tomar this route has a strong theme and all the potential to become a reality.

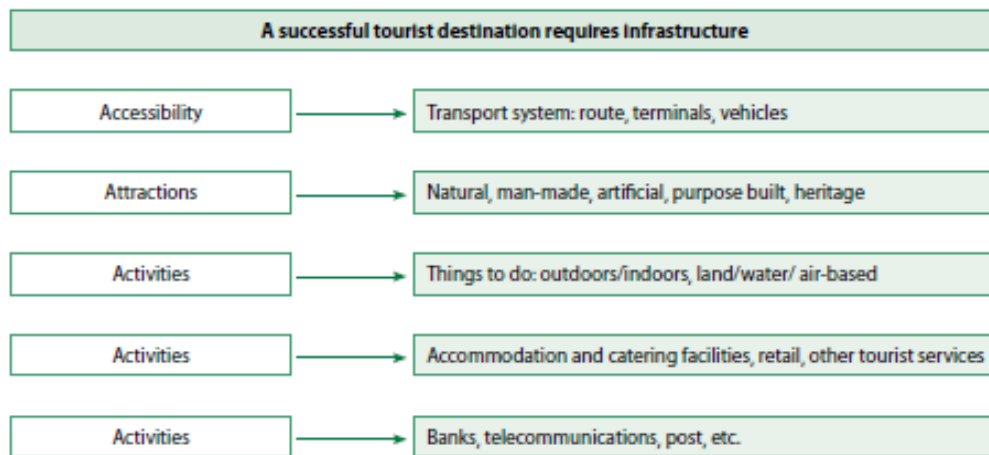
- Creating other attractions designed for the desired route, such as events pertaining to the defined characteristics of tourism products for a specific destination.

- For example creating tours and events within the Templar theme to complement the existing resources on offer.

- And finally in the process of drawing up a route in itself the creation of products supported on this database i.e. Routes, Itineraries, and Circuits.

- A Route is comprised of a main axis with adjoining complementary branches;
- Traversed over a determined time;
- With its own theme or linked to another route;
- Organised within a very objective geography and organised in a determined direction;
- Consumed along a certain path, following a certain theme with a variety of attractions and activities which enrich the overall tourism product; and
- Finally the route is designed to give way to local circuits linked by local and or regional itineraries.

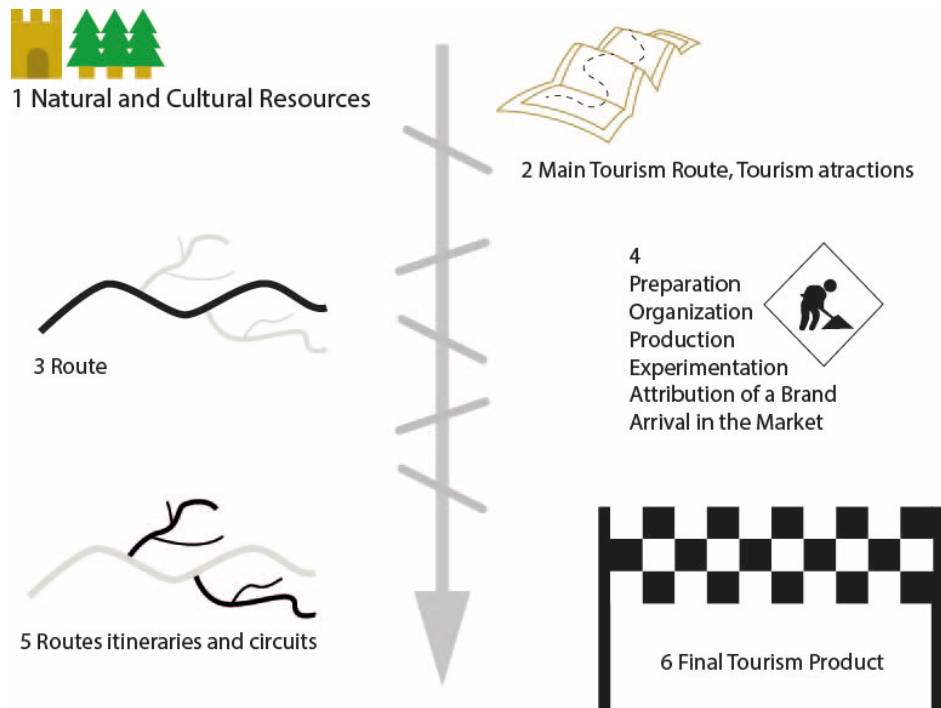
Figueira (2013) presents the example of the Romanic route of Vale do Sousa a route that is structured on articulated points which originated a tourism heritage course based on 21 elements, from monasteries, churches, bridges, towers and memorials. Divided between the Northern course and the Southern course, which can be considered as two separate itineraries counting with twenty one tourism interest points between them.



6 A successful tourist destination. UNWTO ETC Handbook on Tourism Product Development

The handbook on Tourism Product Development by the UNWTO and ETC states that a successful tourist destination requires infrastructure

1. It requires accessibility, a transport system, routes, terminals and vehicles. In accordance with Ignarra (2003, p.71) who states that transport systems are a part of the basic infrastructure and are a fundamental element for making tourism activities viable;
2. Attractions/Resources, Natural, manmade, artificial, purpose built and heritage. Ignarra (2003, p.21) identifies attractions as tourism resources which constitute the raw materials of the tourism product such as can be divided between cultural and natural;
3. Activities, things to do, outdoors or indoors, land based, water based or air based;
4. Accommodation and catering facilities, retail, and other tourism services;
5. Banks, telecommunications, postal services or as Ignarra (2003, 69) states urban services, support which serves all residents in any given territory and not only for tourists or in other words specialized commerce for purposes other than the tourism industry.



7 Adapted Figueira 2013 - Route creation process

Figueira (2013) identifies a tourism route as a tourism product, and describes its creation process.

The first step of the process is the identification of all natural and cultural resources that can be used during the product development stage, resources which can be transformed and used for tourist fruition.

Natural resources as defined by Ignarra (2003, p.14) involve a series of natural elements, such as climate terrain and fauna and flora, i.e. elements which are not man made:

Air	Flora	Natural Beauties
Climate	Fauna	Provision of Potable water
Geography	Water masses	Sanitary Services
Terrain	Beaches	

2 Adapted Ignarra 2003 - Table of natural resources

Cultural resources as defined by Igarra (2003, p.14) encompass all elements which involve the cultural manifestation of the people of a determined territory:

Architectural Heritage	Gastronomical Heritage	Habits and Customs
------------------------	------------------------	--------------------

Museums	Handicrafts	Music
Museums	Literature	Local Culture
Folklore	Languages	Events

3 Adapted Ignarra 2003 - Table of cultural resources

Secondly, mapped information with easy and accessible information on locations, detailed descriptions of natural and cultural attractions, indication of access routes, detailed information of commercial services and available accommodation, presentation of different catering options and transport, other goods and services and key indications.

Thirdly the preparation of tourism routes under a determined theme which make use of information collected in the previous two steps to create a coherent course feasible to be sold to the tourist. This route requires a series of other secondary steps to be considered as a viable consumable product.

Preparation

Sorting

Production

Experimentation

Brand Attribution

Market Positioning

This fourth step encompasses the organisation of contents in a homogeneous group which allows for the breakup into subgroups within a logic of identity and brand image.

The fifth step contemplates the integration of other activities indoors and outdoors, accommodation and catering facilities, retail other tourism services and other services outside the tourism sector organised in Circuits and Itineraries.

## 2.4 - Structure of routeing

Figueira (2013) defined, itinerary as a course, described in more or less detail joining points of tourist interest of a path, specifying all points of passage, sustained on relating

activities with contents to be discovered. A path comprised by the supply of goods and services, which can be traversed on foot or with any other means of transportation

Whereas a circuit is defined as a combined trip along a determined course which can, allied with other circuits, originate an itinerary. A trip in which various operators supply various services within a package tour. A program with themed segments which interlink; a circular course travelled by foot or on any other means of transport of medium short duration at an established price with all information regarding pricing, timetables and activities.

Therefore the route creation process is centred on the logic of the constitution of tourist routes. The main element is the principal Route, whose function is to serve as a database. It is essential to have a credible database with confirmed data that can be used in diverse situations of tourism activities, and naturally is of utmost importance in the practical organization of visits to a territory where the need for quality is a main factor for differentiation.

Route database is a descriptive component of variable depth, depending on the desired complexity, which approaches a determined territorial context or theme, counting with the following objects:

- All possible cultural and tourist points;

- Any information relating to the location and timetables of activities, public or private institutions which, placed along the route, directly or indirectly serve the final product consumption, including accommodation references, health services, financial and safety services, commercial establishments and other providers of goods and services.

From this database the tourist selects what he or she intends to extract from the experience by choosing visitable attractions, characterised by various elements, from the nucleus of the experience (the motive for visitation), the surrounding location, the narrative of the trip, the story to be told, the physical course or route and complementary elements to be enjoyed Figueira (2013).

Among all these activities an array of services are available even if these are not directly linked to the tourism industry these indirectly participate to its development. Services such as transportation, public safety and security, which exist for the benefit of the local community however serve the tourism industry. This link between these products can be planned in a circuit

which defines an itinerary which if linked to other itineraries under a central theme can originate a route. Figueira (2013)

## 2.5 - Analysis of Cultural Routes

Csapó (2013) goes on to identify cultural tourism routes as the most important of thematic routes, “the first cultural routes were introduced by the Council of Europe in 1987. This cooperation of the Council started first with ten cultural routes marking the stages in Europe’s development, realising that Europe’s cultural routes cross over and link the local, the regional and the international level as well”. (p.216).

<sup>10</sup>Meyer (2004, p. 5) tells us the story of the 1980s Santiago de Compostela Pilgrims Way, a cultural tourism route which contains seventeen different themed routes spreading all over Europe to arrive at a final destination in Northern Spain. The 2002 Council of Europe defines the concept of European cultural route as a “route crossing one or two countries or regions, organised around a scheme whose historical, artistic or social interest is patently European. The route must be based on a number of highlights, with places particularly rich in historical association”. (Council Of Europe, 2002). The program with over 2,000 partners is based on a multilateral cooperation involving a chain of projects and information sharing networks monitored and coordinated by the European Institute of Cultural Routes.

Meyer (2004) states that “The initial Santiago de Compostela Route was designed merely to get pilgrims to their final destination in northern Spain, however this has since been supplemented with a network of local regional itineraries, constituting a single route or a number of geographically separated routes linked under a single theme and the same history within Europe, for example Silk and Baroque; networks of towns or sites with a shared past, a shared historical approach or shared implementation characteristics like the Hanseatic cities, Cities of Discovery or Parks and Gardens; local itineraries as examples of ways of perceiving the mutual influences which run through European history. An initiative like the Wenceslas route in Luxembourg provides a voyage through time and space” (p.6).

It is evident that routeing operates at multiple levels, geographically or by theme, they may be organised at a macro scale counting on a vast expanse of terrain crossing borders under

---

<sup>10</sup> See Annex 5

a single theme, and later organised in various sub groups with micro scales and subdivided in smaller themes under the same banner.

At a smaller scale and with a national example, Figueira (2013 p. 147) *Manual de Elaboração de Roteiros de Turismo Cultural* (Manual for the creation of cultural tourism routes), identifies the «Rota do Fresco» a fresco painting route which states that since its creation it has had a Social, Economic, and heritage preservation return, giving the previously depressed territory a positive image.

Tung & Ritchie (as cited in Chandralal & Valenzuela 2013, p.177) state that the central role of tourism planners is to ‘Facilitate the development of an environment (i.e., the destination) that enhances the likelihood that tourists can create their own memorable tourism experiences.

## **2.6 - Summary**

At the end of this chapter it is plausible to conclude that routes have an important role to play in the tourism system bringing together a wide range of activities under one particular theme. Not only do routes have a role to play but are beneficial to territories. The process of route creation according to Mayer, (2004, p. 5) is, in short, the rowing up natural and manmade attractions which are accessible by different forms of transportation. Csapó, (2013, p. 215) states that measures should be taken to create new routes defending that for a general low starting investment, routes reach out to a diversified demand, making use of available natural and manmade resources-attractions. Following the research from various authors it became evident that this creation process was a little more complex and it was possible to establish the existence of three main pillars for route creation and a surrounding structure, to certify the route’s sustainability. Along with five necessary steps for their development:

1<sup>st</sup> – Identifying of all natural and cultural resources passible to be used during the product development stage.

2<sup>nd</sup> – Mapping information easily and accessibly on location, with detailed descriptions of natural and cultural attractions, indication of access routes, detailed information of commercial services and available accommodation...

3<sup>rd</sup> – Preparing tourism routes under a determined theme which make use of information collected over the previous two steps to create a coherent course.

4<sup>th</sup> – Organizing contents in homogeneous groups which allow for the breakup into subgroups within a logic of identity and brand image.

5<sup>th</sup> – Integrating other activities indoors and outdoors, accommodation and catering facilities, retail other tourism services and other services outside the tourism sector organised in Circuits and Itineraries.

This chapter closes with a brief view of existing cultural Tourism routes, such as the Santiago de Compostela in Spain and the Rota do Fresco in Portugal.

## **3 - Concept and Progression of Military Tourism in Portugal**

---

### **3.1 - Introduction**

This third chapter explains the concept of Military Tourism by deconstructing it and, explaining the concept of tourism, along with the definition of military and the association of the military aspect to the tourism experience separately.

To properly differentiate the Military Tourism segment from similar existing segments, chapter three goes on to define these segments, such as battlefield tourism and thanatourism through a literary review.

Chapter three concludes by recognising Military Tourism's influence in Portugal and through the discussion of the research work developed by Coelho over the past year chapter three explains what Military Tourism resources actually consist of and how the initiative has developed in the country over the past few years.

### **3.2 - Conceptualization of Military Tourism**

When defining Military Tourism we must first seek to deconstruct the concept and explain it through a process of reconstruction.

Tourism as defined by Jafari (2000, p. 585), is a multisector industry and a truly multidisciplinary field of study.

From the sixties Tourism has been studied based on its economic contribution while presently there has been an effort to define it and treat it as a whole, whether as an industry or as a phenomena or both.

More recently as studied from a more holistic point of view tourism is defined as the study of man away from his usual habitat and the tourist system and networks, studying where the tourist comes from, where he is going to and the dialectic relationships which arise from this movement of people. This view extends far beyond the previous trade-oriented notions of tourism devised solely to collect data on tourist arrivals, departures, and expenditures. This more holistic view accommodates a more systemic study of tourism of all its parts, its interconnected structures and functions as well as other forces relating to it.

The **Oxford English Dictionary** defines Military as anything relating to soldiers, arms, war or to the armed forces (Army, Navy, Air force).

The correlation between Wars and Tourism may at first be difficult to establish, however they are as Smith (1998, p. 202) states, “key cultural time markers for society”.

Smith, (1996, p. 248) tell us that “...despite the horrors of death and destruction...the memorabilia of warfare and allied products...probably constitutes the largest single category of tourist attractions in the world”.

According to Smith, (1998, p.205) terms such as Trojan horses, still hold particular meanings two thousand years after the battle of Troy took place. Likewise, from video games to dinner theatres feature the jousting of armoured knights, although the medieval era ended hundreds of years ago. New memorials to passed wars continue to be constructed, lest they be forgotten.



*8 Tower Poppies installation - Tower of London*

Smith (1998, p.205) states that “Literature, music, museums, monuments, and motion pictures all feature war themes. Millions of tourists gawk each year at L'Arc de Triomphe, and visit Gettysburg Cemetery, the Nazi Holocaust camps and Hiroshima, to name but a few.”

There is, therefore, without a doubt a link between the movement of people i.e. Tourism and Military related events. Many military related Tourism segments have arisen over the years, such as Battlefield Tourism, Thanatourism and Dark Tourism, to answer this particular demand.

### **3.3 - Battlefield Tourism**

To define Battlefield Tourism comparatively to the concept of Military Tourism defended by Coelho (2011) authors such as Smith, (1996) who have worked on this subject for decades

are called upon. Smith, (1996) concludes that as the name states, Battlefield Tourism is the reuse and transformation of battlefields as tourist attractions.

This is nothing new, Battlefields have existed for a great many years and have attracted tourists and fellow military persons alike to them to pay homage to the fallen and the historical importance of the said battles. This can be considered as Battlefield Tourism.

There is evidence that Alexander the Great interrupted his invasion of Asia to pay homage to the slain of Troy. Arrian, (as cited in Miles 2012, p. 4) “In 1856 Thomas Cook organised his first tour to Waterloo and was taking customers to the South African Battlefields of the Boer War even before hostilities ceased in 1902!”

According to Miles, (2012, p.2) the impetus for a tourist to visit a site is often generated in whole or in part by that person’s image of place and the media and publishing have been two potent factors in tourist image creation.

Television programs featuring heritage such as *Heritage TV* are increasingly popular counting with a 98% rate of adults seeing at least one heritage programme each year and 20% of viewers watching 99 programmes. Miles (2012) also points out the emphasis on the ‘power of place’ or setting of locations depicted in the programmes. Shows like *History of Britain* in 2000 had 4.3 million viewers holding up well even when repeated in 2004 - 2005 with a reach of between 400,000 and 700,000. This was around the entire daily audience for the UK TV History Channel Groot, (2008) (as cited in Miles 2012).

### **3.4 - Thanatourism Tourism**

Battlefield Tourism is considered as part of Thanatourism also known as Dark Tourism or be it “Tourism that involves travelling to places associated with death and suffering” **Oxford English Dictionary Online**

Miles (2012) considers Battlefield Tourism as a type of thanatourist experience given that the motivation of travel is based on a desire for an actual or symbolic encounter with death.

“The terms thanatourism and Dark Tourism appeared in the tourism literature in 1996 through the work of Foley & Lennon and Seaton. “From the outset, however, study of this phenomenon had ‘fuzzy boundaries and ill-defined limits” Ryan, (2005 as cited in Dunkley, &

Morgana, & Westwood, 2010), and as a result, much of the literature has since been concerned with definitions and typologies.

Dunkley, & Morgana, & Westwood (2010) define battlefield tourism is a particular form of warfare tourism, which itself falls under the umbrella of Dark Tourism or Thanatourism.

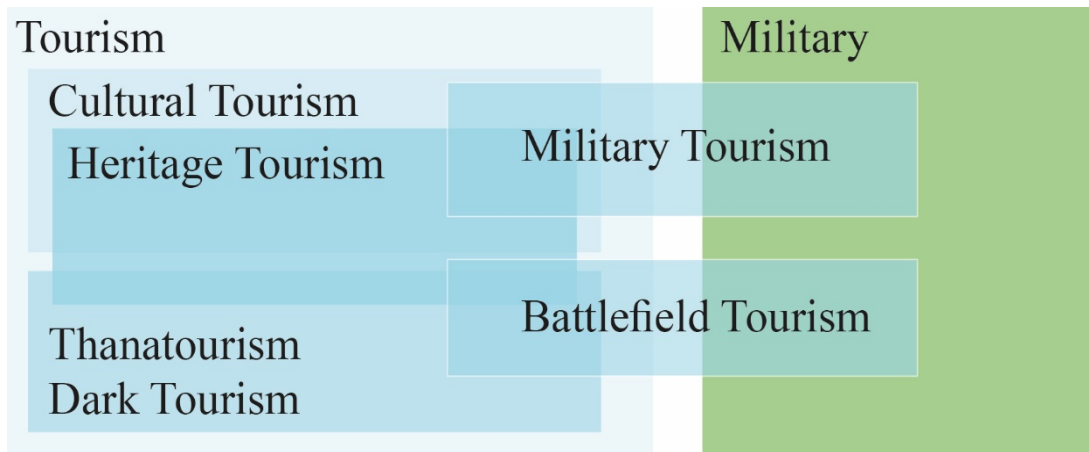
Foley and Lennon 1997 (as cited Dunkley, & Morgana, & Westwood 2010) suggest that thanatourists are motivated by three main purposes: education, remembrance and entertainment, whilst Tarlow (2005) contends that thanatourists are attracted by a desire to pay their respects, out of curiosity or because it is ‘the thing to do’.

Dunkley, et all (2010) bring us the experiences of thanatourists namely in the words of the “seasoned battlefield tourist and ex-army chaplain David explains that both his grandfather’s involvement in WWI and his own military background had developed into a long-term interest in WWI: ‘I’ve always just wanted to do a little tour of the area really, to see what it looked like as best to try and get your head around the whole ethos and reasoning behind it all.’. (p.863)

It is therefore possible to identify a defining characteristic between Battlefield Tourism and Thana Tourism, Battlefield tourism explores battlefields specifically as places where famous battles took place, whereas Dark or Thana Tourism focuses on death as a phenomenon wherever and however it may have occurred.

### **3.5 - Military Tourism**

From a different perspective, certain authors have progressed in the conceptualization of the use of military history, heritage and sights for tourism purposes, in a slightly different direction to Thana and Dark Tourism.



9 Own elaboration, the Military Tourism Segment

Coelho (2011) defines Military Tourism as a segment of Cultural Tourism and states that it can be considered as an asset with tourist and cultural objectives. His work, in Portugal, focuses on the appropriation of national resources, namely of a historical and military nature, and their consequential transformation into tourism attractions. Coelho goes on to state that Military Tourism can be presented under different forms of attractions for each specific target market, taking into consideration the variety of possible products which can steam from this concept.

The search for military themed tourism is on the rise in Portugal and the Military Tourism product requires further research as a segment of cultural tourism.

In this theme of cultural tourism Coelho (2011) considers as Military Tourism resources:

-Military units of the Portuguese Armed forces existing up and down the country which reveal different emotions in the common citizen, from “curiosity” to “dreams”, “sadness” and “remembrance”. Current and ex-servicemen who pay homage to their military unit will certainly make up a great number of visitors. Many military units contain museums and visitable collections which may be integrated and contextualized in local history connecting local society to the units and thickening the ranks of the tourism supply:

-Military museums are the greatest witnesses to national military history and attract considerable numbers of visitors and currently hold one of the greatest roles in Military Tourism affirmation in Portugal. Considering the varied demand at museums, they must be considered

as military resources with great strategic value and a means of sustaining the creation of Military Tourism products on national territory.

- Businesses and historical recreational associations are, a determinant part of the entertainment and animation process at a themed event. Associated to a determined historical time or territorial area, these associations and businesses assume a key role in the conjugation of resources towards Military Tourism fruition.

- Battlefields (here enters the above mentioned battlefield tourism) riddle the Portuguese territory for over almost nine centuries of history as territory has been the stage of several military confrontations. The motivation behind visitation to many of these stages seems obvious and may become a catalyser of well-structured commercial initiatives. In Portugal the economic sector of tourism entertainment may be strengthened when allied with Military Tourism and in this case the use of battlefields for the tourism supply.

- Built heritage should be considered as a physical manifestation of memory. In the context of military history the existing fortifications throughout Portugal which give body to a set of notable resources are a great asset to the development of Military Tourism.

- Military History is another tool at the service of Military Tourism, and is one of the main resources of all the conceptual and scientific construction and one of the main motors for the development of this new tourism product. All historical contents and their presentation are inserted in innovative cultural tourism products. This narrative may be educational and formative while at the same time being recreational and inspiring.

- Documental collections exist in vast amounts and are dispersed throughout military institutions, organizations and associations along with all museums who assume an important role to the dissemination of Military Tourism. These collections may be a strong incentive in diverse lines of academic and scientific research along with the development in other areas such

as educational and didactic services. Military Tourism strives to liberate the access to these documents.

- Military Assets must be recognised by their pioneering spirit in various fields of technology, namely in engineering, allied to the great historical and symbolic value unknown to the general public particularly in the fields of telecommunication these must be given their due importance and this field of military assets offer a vast quantity of resources to develop Military Tourism.”

Coelho’s (2011) considerations of Military Tourism resources available in Portugal, are much in accordance with international opinion, such as Tunbridge (2007) in “*The Churchill–Roosevelt Bases of 1940: The Question of Heritage in their Adaptive Reuse*” article in 2007. In this article Tunbridge discusses the US military bases in the British Western Atlantic colonies, negotiated between Churchill and Roosevelt abandoned by the 1990s and how these can be reused for their heritage value.

Tunbridge (2007, P.229) “The US military bases in the British Western Atlantic colonies, negotiated between Churchill and Roosevelt and formalized in the 1941 Destroyers–Bases Agreement, were all abandoned by the 1990s. In the process of their reuse the question of heritage meanings arises.” Many of these bases appear to be, to the general public as “eyesores, scars upon the landscape, occupied by nondescript utilitarian structures, sites often casually abandoned in a contaminated state requiring ‘environmental remediation’.”

Military Tourism can for the above reasons be considered as a separate segment from Battlefield Tourism and Thana Tourism and that other researchers at an international level have also arrived at this conclusion-

### **3.6 - Military Tourism in Portugal**

This initiative stems from the first meetings of Military Tourism in December 2010 at IPT, where the Secretary of State for Tourism and the Secretary of State for Culture determined

the pertinence, feasibility and necessity of the integration of Historical/Military heritage in the development of tourism products.

These meetings in Tomar and Vila Nova da Barquinha attracted over one hundred people, from several sectors, who participated in one way or another, people such as students, researchers, politicians, tourism professionals, cultural brokers and businessmen and women. <sup>11</sup>The discussions and considerations aimed at debating the importance of Military Tourism in the development of cultural tourism products were in line with the theme of the ongoing master's dissertation being researched at the time at the Polytechnic Institute of Tomar and later culminated in a visit to the Paratrooper school of in Tancos.



10 Visit to the Tancos Paratrooper School in "Jornal o Mirante"

Further research in 2011 at the IPT led to the publication of a master's thesis by Coelho regarding Military Tourism as a segment of Cultural Tourism which contributes to raising awareness in the Middle Tagus territory and with national projection for the integration of Historic/Military heritage in the development of Cultural Tourism products.

Coelho (as cited in Amorim, E., Figueira, L., Soares, C. 2015) stated that this step led to the candidature of a project proposal headed by the Brigada de Reação Rápida (Fast Reaction Brigade, a Military Unit) to the Military Academy Research Centre in partnership between the IPT and the CMVNB representing the Medium Tagus Inter-municipal Community, entitled

<sup>11</sup> <http://www.omirante.pt/?idEdicao=53&id=42213&idSeccao=516&Action=noticia#.VgmMs-jkJmZ>

Military Tourism: tourist activation of existing national military heritage within the armies military units. This candidature was accepted and this project is currently underway in all the national territory.

Following research by Coelho (2011) a series of actions took place, namely the creation of a Military Tourism work force between the IPT the Fast Response Brigade and the Municipality of Vila Nova da Barquinha. To further the research on this topic, a partnership with the University of Aveiro through a PhD program to integrate Military Tourism in national strategy and later public policy was forged.

<p><b>PROJETO 21 DESENVOLVER O TURISMO MILITAR</b></p> <p><b>FUNDAMENTO</b></p> <p>Existem em Portugal diversas instalações militares, ativas ou não, que demonstram um forte potencial de exploração turística, quer pelo seu significado histórico-cultural, quer pela possibilidade de construção na temática, de propostas integradas de experiências turísticas diferenciadas e características, permitindo o acesso a novos segmentos de mercado e perfis de consumo.</p> <p>Estes elementos, constituem, não só um fator de diversificação da nossa oferta e de mercado, mas também um fator de qualificação da imagem do destino Portugal.</p>	<p><b>ATIVIDADES</b></p> <ul style="list-style-type: none"> <li>• Realização do inventário do património militar com vocação para a atividade turística;</li> <li>• Elaboração de uma proposta de Rede Nacional de Roteiros de História Militar que integre o património militar com vocação turística, classificado por tipologia, por período histórico e outros critérios considerados pertinentes;</li> <li>• Criação de uma imagem de marca para o produto Turismo Militar, declinada do sistema de identidade do turismo português;</li> <li>• Preparação de um Plano de Promoção do Turismo Militar;</li> <li>• Desenvolvimento de propostas de carácter educativo e formativo que valorizem o conhecimento da História de Portugal;</li> <li>• Desenvolver um modelo integrado de gestão e operação da Rede Nacional de Roteiros de História Militar.</li> </ul>
--	--

#### 11 Military Tourism in PENT

The inclusion of Military Tourism into the PENT “*Plano Estratégico Nacional do Turismo – Revisão do plano de desenvolvimento do turismo no horizonte de 2015*” following the council of ministers resolution nº 24/2013 n74 was a great step forward for the affirmation for this project. This achievement not only contributed to the recognition of the brand but it also roused enthusiasm among the various associated partners of the project and spurred their cooperation and intervention towards the implementation of Military Tourism.

### 3.7 - Military Tourism Charter

Regarding the research carried out by the partnership between the Polytechnic Institute of Tomar (IPT) and the Brigada de Reação Rápida (Fast Reaction Brigade, a Military Unit) and the municipality of Vila Nova da Barquinha, a project was conducted in 2014 with the objective of creating a Military Tourism Charter. This charter aimed at developing develop a definitive

operational and conceptual definition of Military Tourism in Portugal and to be a guiding document to the creation of Military Tourism Products. This was achieved by obtaining contributions from different entities along with the general community, whilst also promoting the national strategic importance of developing responsible sustainable products, projects and actions which combine heritage and tourism. The Charter also strived to open channels of communication and movement of knowledge between government guidelines, academic, military and entrepreneurial institutions on the basis of reciprocity and sustenance of the Military Tourism Concept.



*12 Military Tourism Charter website*

Resulting from the collection of these contributions, a report was drawn up identifying key details and exclusive information about the current public opinion on the Military Tourism Segment.

This project collects information based on public and private entities along with the general public opinion to solidify a definition of Military Tourism and a strategic guiding proposal for the future development of Military Tourism products.

The designated contribution collection period occurred from the 16<sup>th</sup> of December 2013 to the 28<sup>th</sup> of February 2014 and during this period 280 out of 305 contributions were validated.

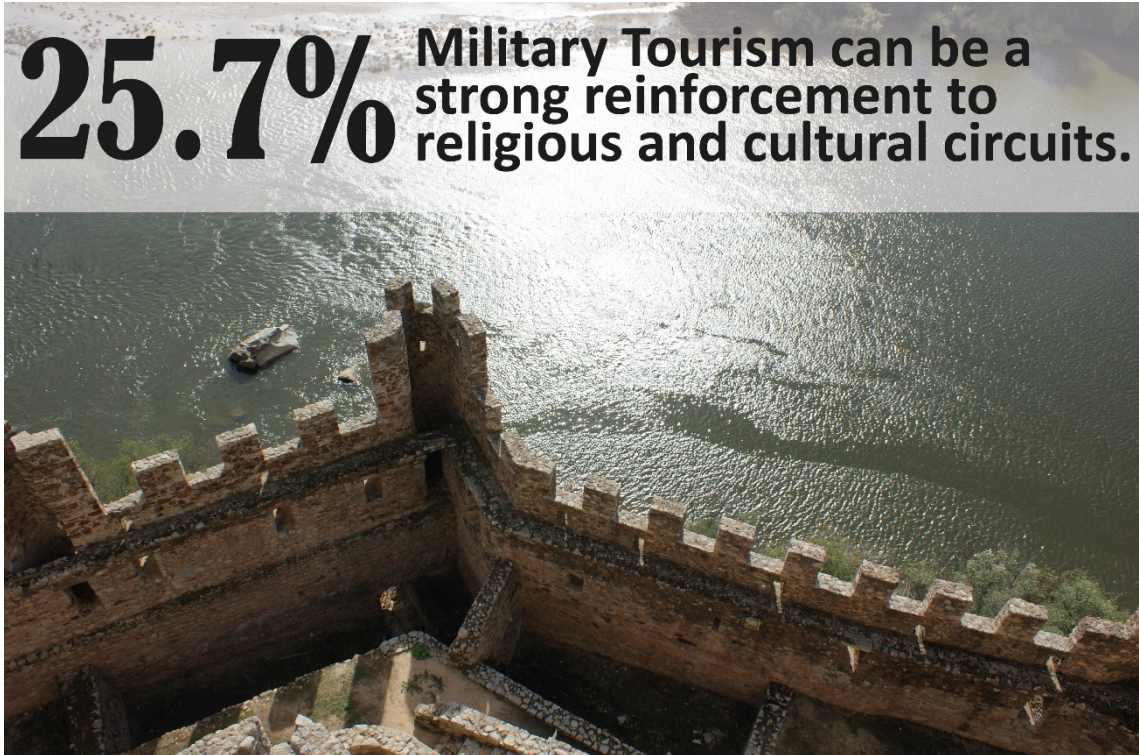
The results of this report CNTM (2014) culminated in the following data:

The great majority of contributions were from Portuguese citizens, an astounding 93% of answers, leading to a strong representation of national opinion. Almost half the inquired 49.9% possessed a BA degree while 27% were currently completing secondary (high school) education. 22.1% of contributors work in intellectual and scientific areas while 19.6% of the group were executive managers, directors and Tourism and Culture professionals, followed by intermediate professionals and armed forces servicemen with 16.4% and 12.9% respectively.

When asked how the inquired came into contact with Military Tourism 37.1% of individuals revealed their contact with this segment, through family and friends, while 14.3% attributed responsibility to their initial contact with Military Tourism to Social Media Networks. These figures make it evident that at the time of this inquiry Military Tourism was mostly known through person to person channels. This theory was later proved with a resonating 0.4% of the inquired having knowledge of the concept in any entertainment activities, along with another 0.4% knowing of any Military Tourism activity through tour operators or agencies. The further 20.4% of individuals who alleged having no knowledge of the concept whatsoever are not to be taken lightly, and represent a clear necessity to structure and promote Military Tourism in national territory. Although the segment is present in national strategy documents, such as the PENT, there is a notorious lack of promotion of this brand. A staggering  $\frac{3}{4}$  of individuals denied being aware that Military Tourism was even considered in national strategy making this a critical issue which needs to be addressed.

Over 75% of the inquired claimed never to have participated in Military Tourism activities and 85% wouldn't even know any businesses who could offer such activities, products and experiences.

Of great interest for the purpose of this dissertation, the following data shows that, out of 10 possible national strategic tourism products 25.7% of the inquired stated that Military Tourism can be a strong reinforcement to religious and cultural circuits.



13 Own creation - Military Tourism and Cultural Circuits CNTM

Closely followed by 22.4% of individuals who believe that Military Tourism will contribute to short stay holidays in the country, while 12.9% believe that this segment could even contribute to the promotion of national wine and gastronomy making it evident that there is a possibility for this segment to be transdisciplinary.

However, 16.5 % of people selected a visit to a historical military museum as a Military Tourism activity, manifesting a clear interest in the subjects of, history and military history, concerning material/tangible heritage and immaterial/intangible heritage. This theory is reinforced with the selection of 15.8% of the questioned population who suggest a visit to a military unit, and the 15.6% who selected visits to existing fortifications as a Military Tourism activity, making the demand for culture and military activity evident. The 15.1% of participants who opted for historical re-enactments of well-known battles prompts to the importance of entertainment at the service of tourism experience and desirability of interpreting the Portuguese Historic-Military Heritage,

There is however a general consensus that Military Tourism occupies a place of great importance to the inquired. After understanding the possibilities and limitations of this concept, 41.4% of the inquired considered Military Tourism as “very relevant” to national tourism strategy while an additional 31.4% of individuals underline it as relevant, representing 72.5% of the total opinion.

### 3.8 - Military Tourism in the Portuguese Spotlight

#### Ministry of National Defence and Polytechnic Institute of Tomar, Partners in Military Tourism <sup>12</sup>



14 Signing of the cooperation protocol between National Defence Ministry and IPT

On the 14<sup>th</sup> of November 2014 Berta Cabral Assistant Secretary of State and of National Defence considered formalized a cooperation protocol between the Ministry of National

<sup>12</sup> <http://www.defesa.pt/Paginas/mdneinstitutopolitecnicodetomarparceirosnoturismomilitar.aspx>

Defence (MDN) and the Polytechnic Institute of Tomar (IPT) as the opening of a new chapter of Military Tourism.

The Assistant Secretary of State Berta Cabral felicitated the Polytechnic Institute of Tomar for their initiatives along with the Armed Forces, through the Brigada de Reacção Rápida (Fast Response Brigade), and the Direção de História e Cultura Militar (Military History and Culture Authority) in the realms of routeing for their meritorious work permitting the immediate advances with a group of circuits and itineraries in the Lisbon, the Tagus Region and Elvas (Alentejo), classified as authentic pilot projects for the overall national development. Berta Cabral went on to reveal the upcoming presentation of a website and mobile application specifically for Military Tourism.

Assistant Secretary of State, Berta Cabral states that military Tourism, in all its fields, possesses every necessary condition to give an important contribution to the maintenance and creation of job placements, with the advantage of being less seasonal than other segments of Tourism.

### **Central Tourism Entity advances with Military Tourism**

<sup>13</sup>On the 2<sup>nd</sup> of April 2015 the president of the Central Tourism Regional Entity, Pedro Machado told the Lusa agency (newspaper) that Nature Tourism and Military Tourism are the two products he aims to structure in the coming years by working with local public and private agents.

Pedro Machado reminds the public that following the partnership between the Polytechnic Institute of Tomar the Central Tourism Entity is bent on accepting and “spreading this challenge to the whole of the central region ... making use of the existing infrastructures in the region, (Museums, ruins, fortresses and castles) while at the same time revitalizing the Wellington route, from Buçaco through Almeida finishing in Torres Vedras”.

Pedro Machado, president of the Central Portugal Regional Tourism Entity admits that “We are involving organisms, from the State and private collections available in our region

---

<sup>13</sup> [http://www.rtp.pt/noticias/economia/turismo-do-centro-aposta-no-turismo-militar-e-de-natureza\\_n817274](http://www.rtp.pt/noticias/economia/turismo-do-centro-aposta-no-turismo-militar-e-de-natureza_n817274)

which need to be made use of, to entertainment initiatives such as historical re-enactments in two locations Almeida and Buçaco, however we need to add more”

<sup>14</sup>On the 7<sup>th</sup> of April 2015, Pedro Machado told Lusa that he wishes to create an integrated offer of Military Tourism in the Central Region, making use of military and militarized heritage for tourist’s fruition. <sup>15</sup>Pedro Machado intends to structure Military Tourism as a new ready-made product which can be bought over the counter at Hotels and Tourism stands. As a first step to the creation of this product research would have to be carried out to categorize and map all available and viable resources in this region to create new fluxes of tourists to this interior region of Portugal.

### **Launching of the Military Tourism APP**

<sup>16</sup> On the 25 of august 2015 the <sup>17</sup>Recently Created Military Tourism Association released two national historic military monuments, battles and heroes routes.

The Newspaper “O PÚBLICO” tells us that this new organism (Military Tourism Association), strives to promote Portugal’s historical and military heritage through videos and mobile Apps.

Currently the Military Tourism Website and App offer only two Military Tourism routes, one linked to the defence of the Alentejo and the other associated to the presence of the Knight Templar in Portugal. However work is already underway to develop a following route linked to the Portuguese expeditionary campaign.

Each monument referred in the routes is located on a map and has a small description allowing the user to read or listen to the information about each specific monument, and even participating in a quiz to test their comprehension.

To explore each itinerary the user is given the option to follow the complete route and life history of the selected hero, or create his own course, selecting all monuments he or she wishes to include in the visit.

---

<sup>14</sup> [http://www.rtp.pt/noticias/economia/turismo-do-centro-quer-criar-oferta-integrada-de-turismo-militar\\_n818323](http://www.rtp.pt/noticias/economia/turismo-do-centro-quer-criar-oferta-integrada-de-turismo-militar_n818323)

<sup>15</sup> See Annex 6

<sup>16</sup> <http://p3.publico.pt/vicios/em-transito/17916/ja-ha-uma-app-com-um-roteiro-por-castelos-batalhas-e-herois-portugueses>

<sup>17</sup> <https://www.youtube.com/watch?v=XZBrIsA9LYk>

Álvaro Covões, president of the Military Tourism Association told the *Público* that a third route is being developed on the subject of the Portuguese expansion campaign following heroes on mobile applications or in promotional films. Covões considers this new project as a great opportunity to use storytelling as a means of introducing foreign and national tourists to Portuguese military history and Heroes.



15 Military Tourism APP - RTP Pedro Oliveira Pinto, Pedro Amancjás

### 3.9 - Summary

Chapter three defines Military Tourism as the union of Tourism and Military. Jafari states that tourism is a multi-sectorial industry and military as anything relating to soldiers, arms, war and the armed forces. Attempting to find a correlation between war and tourism this chapter takes the views of various authors into account and stumbles upon other concepts such as Battlefield Tourism and thanatourism. Chapter three goes on to establish the differences between Military Tourism and Battlefield Tourism – which focuses on the reuse of historical battlefields to provide tourism experiences, and thanatourism – a type of tourism associated to sites of death.

Coelho defines Military Tourism as a segment of Cultural Tourism and establishes what can be considered as Military Tourism resources, such as: Military Units, Military Museums, and Businesses with historical associations, Battlefields, Built Heritage, Military Heritage,

Documental Collections and Military Assets. This definition has been widely accepted in Portugal, and following a series of initiatives has become part of the PENT. The National Military Tourism Charter Report provides valuable data regarding the acceptance of Military Tourism. However a vast majority of the population 75% of inquired claim to never have participated in any such event, even when 72% of the population consider this segment as an extremely important part which should be taken into consideration during the development of national tourism strategy.

## 4 - The Fruits of Technology: Gamification and its application to Military Tourism in Portugal

---

### 4.1 - Introduction

Chapter four adds a new component to this dissertation by taking into account the existence of available technology and its possible applicability to the development of the Military Tourism segment in Portugal.

Therefore this chapter defines technology along with its benefits and limitations when applied to the tourism industry attempting to establish a link between the progressive development of the tourism industry and the technological advances humanity has played witness to over the past century. Namely the appearance of the Internet, the Web 2.0 and the resultant social revolution which has placed the consumer in the centre of the industry, not only as a consumer but also as a content creator and developer.

From the analysis of this new era of technology the existence of a new type of tourist which makes use of new tools and means of interaction with the market, namely through the use of games emerges.

From here chapter four defines the term game along with its specifications, based on the work of know authors and speakers in these areas, arriving at the adherent term, gamification, and gamification applied to tourism.

### 4.2 - Technology as a tool

To understand the application of technology to the tourism industry and towards its development, this dissertation first analysis the concept of technology based on authors and available dictionaries.

According to the **Oxford English Dictionary** the word **technology** refers to “the application of scientific knowledge for practical purposes, especially in Industry” In other words the OED considers technology as the result of scientific knowledge applied to practical problems.

**Cambridge Dictionaries Online** follow this train of thought considering technology as the “study and knowledge of the practical, industrial, use of scientific discoveries” This definition introduces a sense of breakthroughs, “discovery”. However technology does not always need to signify state of the art devices and machinery as an end all solution to our problems. Some situations do not require this type of technology, older techniques may still be adequate to solve the problem, Jafari (2000, p. 575) alerts us to the over use of technology, questioning “Does a fifty- room, budget hotel need the same front office sophistication as a five-hundred room, five-star hotel?.”

Technology as single concept can therefore be defined as a solution provided by years of practical knowledge, however in Tourism as in other industries must be used wisely.

<sup>18</sup>The businessdictionary.com defines technology as “ The purposeful application of information in the design, production, and utilization of goods and services, and in the organization of human activities.” and divides it into five categories, namely:

- 1 - Tangible Technology: such as blueprints, models, operating manuals and prototypes.
- 2 - Intangible Technology: consultancy, problem-solving, and training methods.
- 3 - High Technology: entirely or almost entirely automated and intelligent technology that manipulates ever finer matter and ever powerful forces.
- 4 – Intermediate Technology: semi-automated, partially intelligent technology that manipulates refined matter and medium level forces.
- 5 - Low Technology: labour-intensive technology that manipulates only coarse or gross matter and weaker forces

### **4.3 - Technology as a tool for Tourism development.**

Jafari (2000) Approaches Technology relating to the tourism industry and considers it as the “systematic knowledge and action applicable to any recurrent activity”. In other words it is the application of the proven solutions to repetitive through human design and choice, providing “(...) the means to create, stimulate and then satisfy tourism demand”. (p.574)

Sheldon (1997) (as cited in Costa, Panyik & Buhalis 2013) states that “information is the lifeblood of tourism and ICT (Information and Communication Technology) provides the

---

<sup>18</sup> Read more: <http://www.businessdictionary.com/definition/technology.html#ixzz3oVPAZjeQ>

backbone for facilitating the industry”. When Sheldon wrote this back in 1997 it was already evident that ICT, played a vital role in the provision of solutions for the tourism industry. This has become increasingly evident since the emergence of the internet, a never before seen communication platform whose full potential and dimension is as yet still unknown.

Costa, et al (2013) ICT development has changed the way we communicate and do business, for example marketing strategies now follow a different over cheap and fast approach, based on web based method, built on personalization, experiences, involvement and permission as opposed to mass communication and onetime selling. The search for new and creative concepts have surpassed existing advertising models, resulting in a more competitive and innovative market.

The Tourism industry functions on the basis of information intensive communication to connect with tourists and markets (Poon 1993 in Buhalis 2013). The Internet has, without a doubt, revolutionized the Tourism Industry, becoming the main source of Tourism information in the destination and product selection decision making process. ICT has arrived and has exponentially increased the number of choices available to the tourist when choosing his or hers holiday destination, shortening the gap between supply and demand and consequentially making the tourism industry increasingly competitive. With the tools the internet has to offer, from booking websites to user generated content describing destinations and experiences, the tourism purchase choices are no longer limited to recognized brands or destinations.

Berg, I. & Berg, N (2012, P. 28) state that back in 1909 Henry Ford said that any customer of his “can have a car painted any colour that he wants so long as it is black”. Ford was of course referring to the famous Ford Model T, however this statement is a clear reflection of the extreme change we have experienced in the past century. It is undeniable that there has been a profound evolution in terms of the supply market, not only in the automobile industry but in all other industries also, this is one of the main effects of technological advancement and subsequent globalization.

In the Tourism Industry, the wider selection of choice and tools has created a new type of customer, a customer who is more “Independent and involved in itinerary planning process, becoming ever more dependent on electronic media for information and to communicate their needs” Costa, Panyik & Buhalis (2013).

It is therefore necessary to establish a balance between the dependency on technology and in this case the application of gaming models and the opportunity for product development.

Poon defined in 1993 the New-Tourist as an “independent, adventurous, eager, to experience something different and wanting to be in charge”. This new tourist has been taken to a whole other level and proliferated by the Internet (Costa et al 2013).

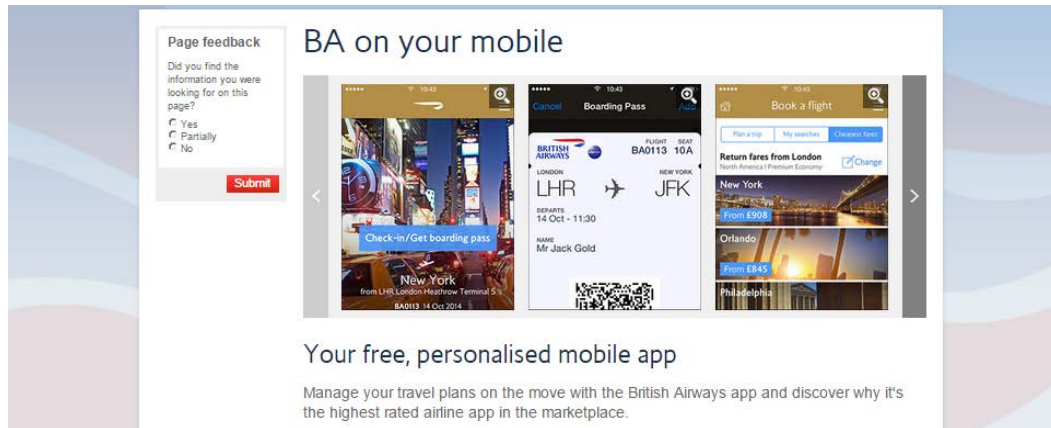
The Web 2.0 and the social media have been instrumental in the change in the tourism industry. Costa, et al (2013) describe the Web 2.0 more as a change in consumer attitudes and behaviours rather than in technology itself, becoming more collaborative, inclusive, creator/user centric, unsettled with information intensive user generated content.

According to Zeng (2013) social media in tourism has been increasingly prominent as an emerging topic, and has been noted as having an increasingly important role in many aspects of Tourism. Information search, decision making behaviours, and tourism promotion have made social media one of the best practices for interacting with customers.

According to Zeng & Gerritsen (2014) “the use of Internet and other information communication technologies is leading to a new era for the global economy.”

“Social media is changing the way travellers and tourists search, find, read and trust, as well as collaboratively produce information about tourism suppliers and tourism destinations.”

Costa, et al (2013) state that “Smartphones are one of the most recent mediums for advertising even though they are still in the infancy of their potential.” *Businesses from various sectors have jumped on the mobile bandwagon, such as hotels (Hilton), Airlines (British airways, Lufthansa, American Airlines), Travel communities and Travel Guides (Lonely Planet).*



16 British Airways Mobile APP

The British Airways app gives users privileges such as instant access to upcoming flights, flight booking and check-in services, online boarding passes, gate notifications and access to WIFI passwords.

TripAdvisor offers tourists over 225 million user created reviews, opinions, pictures and videos, helping tourists plan the perfect trip, from lower airfares to the best hotels, restaurants and fun activities.

Many destinations have developed APP's which take advantage of location and context based services.

London is a prime example of the use of free mobile apps which allow tourists to fully explore London without previous research or preparation. Technology such as that augmented reality allows users to view real-life objects and locations in London while receiving more in depth information about the object on their smartphone.

GPS (Global Positioning System) on smartphones allied with google maps technology has armed users with the tools to wander around town with precise information on their whereabouts.

<sup>19</sup> <http://www.visitlondon.com/traveller-information/getting-around-london/london-maps-and-guides/apps>



17 Street museum app from London

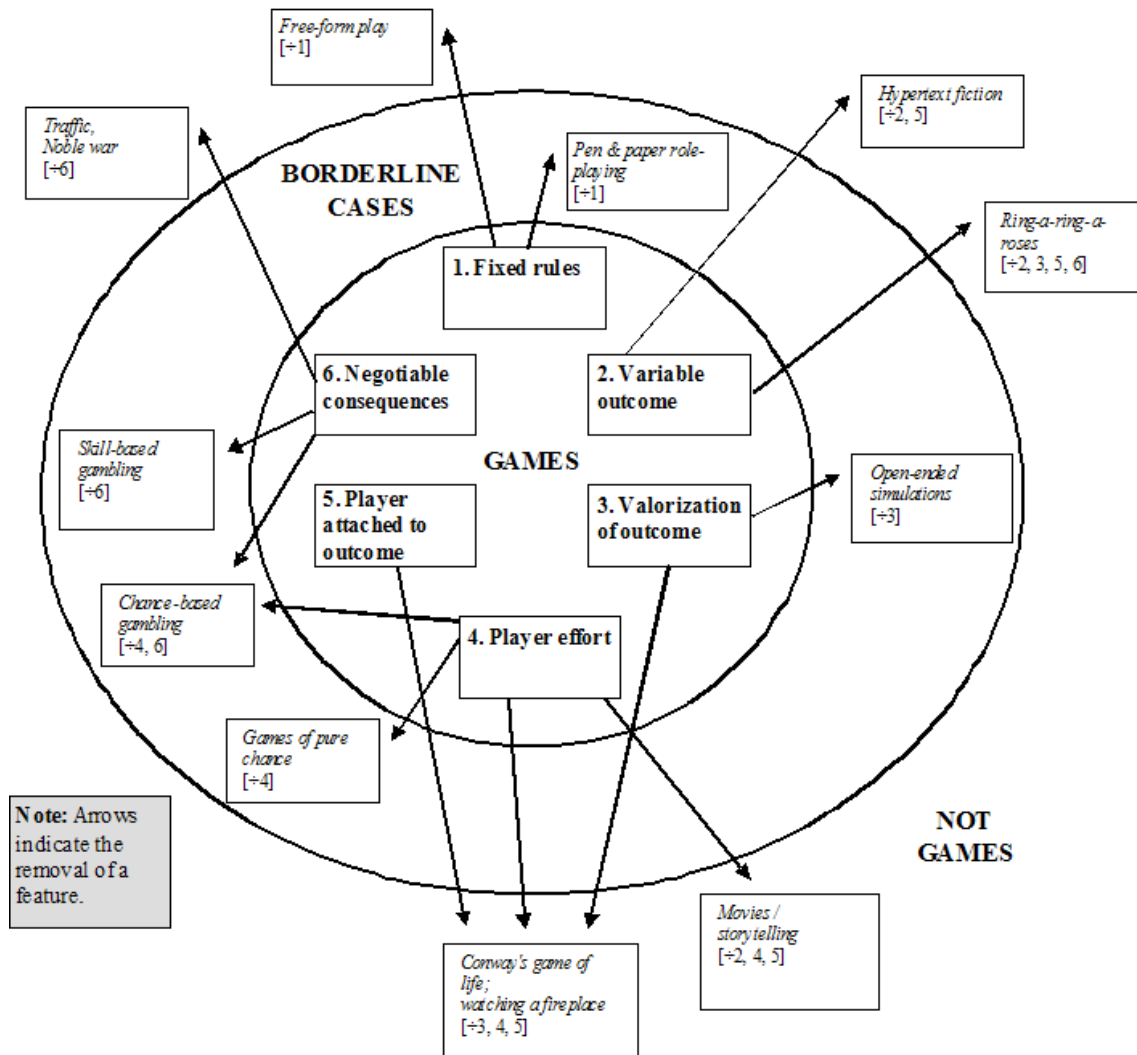
For example apps such as street museum which offers the visitor a unique experience allowing him or her to view images of London in decades passed based on the hundreds of images from the museum of London’s collection. The visitor may make use of the existing map or use his or her own Global Positioning System to locate nearby images and view the London streets as they were in the past with a series of historical facts at the end of the user’s fingertips.

Once the user is acquainted with the software street museum will even allow the user to create his or her own trails around London from home to plan a visit to the capital or make use of the app’s database on their way to work or any other engagement in the city.

This technology is indubitably a tool to make use of an array of existing documental records passible of being used in current day activities, giving new life to older records and allowing the tourist a different perspective of his or her surroundings.

#### 4.4 - Technology and Games

Juul (2003) defines games as ‘‘rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable.’’



18 The game Diagram Jasper Juul 2003

According to thesaurus.com (accessed October 2015) a game is a word which translates "joy, fun, amusement," regarding "participation, communion," and giving a sense of a group of people together or single person who compete according to an established set of rules. The **Oxford English Dictionary** identifies game as a form of competitive activity or sport played according to rules.

Weber, (2012, p.3) defends that games are a powerful industry comprising a market share of \$93 billion in 2013 and an estimated growth to \$222 billion by 2015.

Majoor (2014, p 22) states that the use of games have an array of applications from “teaching the pilots how to fly a plane using a flight simulator and avoiding real failures, to

enterprises benefiting from community help (...) One good example for the companies who are solving their business problems using gamification is IBM which uses an award systems for their employees using points and badges. When the employees volunteer to complete a certain task they get points. And the points turn into bonus payments for the employees with highest points. This way, IBM employees voluntarily translated the product manual and reduced the cost of translation dramatically, and increased the quality of translations”

It is therefore evident that the continuous growth of the games market may be applied to a variety of situations, supplying businesses and entities with a range of tools to improve their productivity.

All of us have heard about games and social games, however there is not much written material about them. Jon Radoff gives us some information about the history of social games from 3100 BC to today’s social media games.

<sup>20</sup>The original knucklebones used for divination lead to the appearance of dice, which paved the way to games like Persian backgammon (3000 BC) and later Early Commercial Board Games - Such as Snakes and Ladders and Monopoly. These Commercial Board Games are also based on Egyptian Senet (3100 BC) Chinese GO (500 BC) and even 16<sup>th</sup> century Leela from India.

Knuckle bone games paved the way to tarot card games and later modern playing cards (Poker). A later variant of card games came in the form of collectible trading card games such as <sup>21</sup>“Magic the Gathering” a massive turn based card game, which evolved into an online card game with virtual cards and consequentially a virtual economy.

<sup>22</sup>This virtual economy expanded and took on an extremely immersive virtual style in games such as “second life” and “Eve-online”.

These games involved virtual credits, acquired through real world credits creating a totally secondary goods markets.

Polo (500 BC) and gladiator games introduced martial games such as fencing and jousting tournaments, leading to early war games.

---

<sup>20</sup> See annex 7

<sup>21</sup> See annex 8

<sup>22</sup> See annex 9

Chess from 6<sup>th</sup> century India, one of the most well-known games in the world was the forbearer of and link between early board games and early war games brought on tactical war games such as <sup>23</sup>“Risk” and later “Axis and Allies”.

Tactical War Games such as “BlitzKrieg (1965), <sup>24</sup>(a board game with printed cardboard square pieces played on a hard map board. The map board is hard paper stock that is the same as what one would find with a Monopoly play board. Printed on the map board is a map on a hexagonal grid (hex spaces, or simply "hexes"), and terrain for land, beach, cities, rivers, roads, mountain, desert, and borders. There are a few charts, such as the one for the combat results table, and a die for random outcomes). and Chainmail (1971) <sup>25</sup>(rules for medieval miniatures, man-to-man combat, fantasy supplement, and tables. The introduction for the rules offers an extremely brief history of wargames that jumps to a few paragraphs on simulating terrain for wargaming) were the foundation to modern RPG – Role playing Games.

The **Concise Oxford English Dictionary 11<sup>th</sup> edition** define Role Playing Game as a game in which players take on the roles of imaginary characters who engage in adventures, typically in a fantasy setting.

Continuing Radoff’s train of thought, RPG’s were the start of a new form of gaming known as MMORPG’s (Massively Multiplayer Online Games) like <sup>26</sup>Everquest 1999 and the most popular MMORPG <sup>27</sup>World of Warcraft.

**Oxford Dictionaries Online** define *MMORPG* as an online role playing game in which a very large number of people participate simultaneously.

As defined by Radoff, a game with the dimension of World of Warcraft attracting millions of players all over the world was also a strong contributor to the growth of the secondary virtual goods market, allowing players to pay for in game privileges.

---

<sup>23</sup> See annex 10

<sup>24</sup> <https://boardgamegeek.com/boardgame/4168/blitzkrieg>

<sup>25</sup> <http://www.rpg.net/reviews/archive/10/10195.phtml>

<sup>26</sup> See annex 11

<sup>27</sup> See annex 12

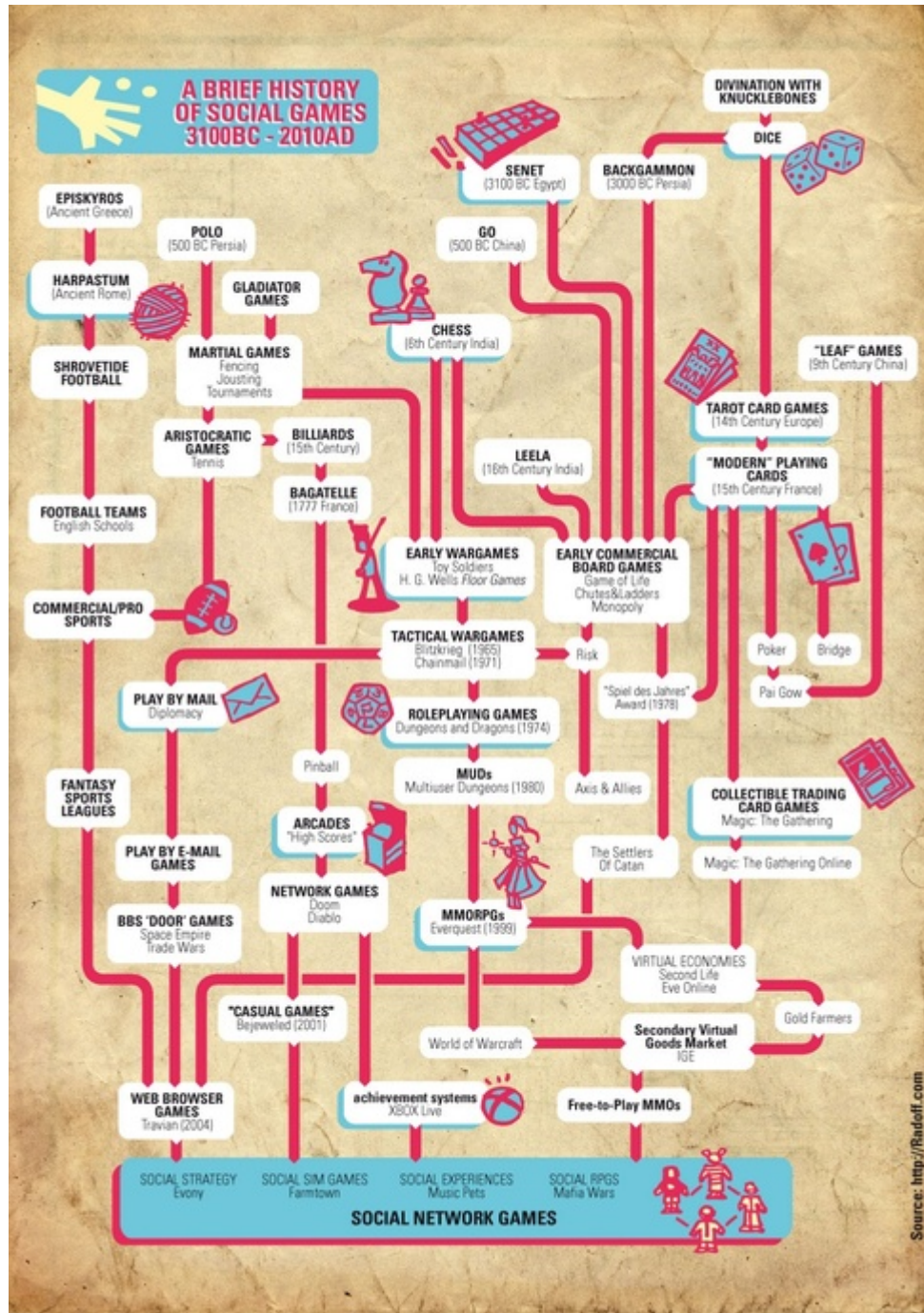
The above mentioned Martial Games like fencing jousting evolved into professionalised sport games through aristocratic games like tennis which lead to commercial or pro sports games. These games also have roots in educational sport games such as football in English schools descendant from ancient Greek episkyros.

Commercial/Pro Sports brought us fantasy sports leagues and later web browser games, (such as Travian 2004).

Aristocratic Games also derived to 15<sup>th</sup> century billiards and 18<sup>th</sup> century Bagatelle (France) are the origins games such as pinball and the renowned arcade games which later developed into network games such as <sup>28</sup>Doom and Diablo, introducing leader boards and point based ranking systems. The current expression of these early leader boards and point based systems are known as achievements, a popular form of captivating players used on gaming consoles such as the Xbox, Playstation and WII.

---

<sup>28</sup> See annex 13



19 Radoff, (2010), "History of Social Games"

All these variants of gaming have, over the years contributed the development of the current social network games, such as social strategy social games, social simulation games, social experiences and social role playing games.

## 4.5 - Gamification

Burke, (2014) considers that Gamification is not only the application of technology to old engagement models, but is the creation of an entirely new set of models, leading people to achieve goals they may not even know they have.

<sup>29</sup>In the immortal words of Mary Poppins back in 1964, based on the 1934 novel by P. L. Travers. It is evident that the roots of gamification go much deeper than the mere application of technology “In every job that must be done, there is an element of fun. You find the fun, and - SNAP - the job's a game!”

Signoretti, A., et all (2014, p.5) state that the use of gamification is the use of game elements in non gaming processes.

Egger & Bulancela, (2015) state that gamification is still undergoing development of theoretical and conceptual definition. However according to Seaborn & Felds, (2015) it seeks to encourage motivation, enjoyment and engagement in non-gaming contexts. The intersection of different author's views on conceptualisation of gamification led to the emergence of a standard definition of gamification:

Seaborn & Fels, (as cited in Egger & Bulencea 2015, p.29) state that “The intentional use of game elements for gameful experience of non-game tasks and contexts. Game elements are patterns, objects, principles, models and methods directly inspired by games.”

Mcgonigal, (as cited in Egger and Bulancela, 2015) states that being gameful can be defined as having the spirit of the gamer, as an optimistic curious and motivated person who seeks a challenge.

In other words, it is the use of elements present in games, meant to motivate and captivate players to continue playing, applied to non-game contexts. Applied to work like situations, the use of games intends to accelerate and motivate workers to accomplish tasks through elements, patterns, models and methods directly inspired by games.

Werbach & Hunter, (as cited in Egger And Bulancela, 2015).The term gamification first appeared in 2003 as coined by a British game developer called Nic Pelling who applied game-like interfaces to electronic gadgets.

---

<sup>29</sup> <http://www.imdb.com/title/tt0058331/quotes>

Burke (2014) In Pelling's view gamification was all about hardware and he created the term to describe the services of his start up consultancy firm. However the term outlived the firm and took on a completely different meaning.

Burke, (2014) states that many definitions of gamification share common characteristics, Gartner (world-leading information technology research and advisory company) also defines gamification as the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals.

- "Game mechanics describes the key elements that are common to many games, such as points, badges and leader boards.
- Experience design describes the journey players take with elements such as game play, play space, and story line,
- Gamification is a method to digitally engage rather than personally engage, meaning that players interact with computers, smartphones, wearable monitors or other digital devices,
- The goal of gamification is to motivate people to change behaviours or develop skills, or to drive innovation,
- Gamification focuses on enabling players to achieve their goals – and as a consequence the organization achieves its goals"

Seven years later in 2010 after its first appearance gamification took on a new dimension when Jesse Schell author of the book "The Art of Game Design" gave a presentation at the DICE Summit with a startling prediction: "a future where 1-ups and experience points break "out of the box" and into every part of our daily lives".

Gamification reached critical mass to appear on google trends in the second half of this year, and by 2011 was the **Oxford English Dictionary's** selected runner up word of the year.

Schell, (2010) believes that everyday objects will be gamified, leading people to make consumption and behavioural decisions based on their motivation to achieve virtual points, taking games out of the realms of mere fantasy to increasingly real-life situations, with the use of measurement sensors and other types of technology.

The following years bring a series of other terms however gamification continues to be a difficult term to work with, according to Egger & Bulancela, (2015).

Buhalis (2013) states that Gamification has already been successfully used in marketing, business, health and education and, based on Gartner (2011), estimates that 70% of the global organisations were looking for innovative approaches and would be using gamification by 2014.

#### **4.6 – Summary**

This fourth chapter makes it is evident that technology has evolved and continues to evolve, infiltrating every aspect of our daily life. As can only be expected the application technology to the tourism industry is already well underway and has had resounding results in this information based industry.

The application of technology to tourism through the use of tools such as the Web 2.0, the social media, user-generated content has become ever more present in everyday life and has progressed from desktops and less than portable computers to smartphones capable of multiple tasks at one time.

An array of mobile applications has armed smartphones with the tools to overcome obstacles to the user's needs. Not only have these tools overcome the user's needs but have also created new needs, social needs and objectives mixing the virtual world with the real world.

## **5 – How can Gamification be applied to Tourism?**

---

### **5.1 - Introduction**

The use of game models in the tourism industry has long been occurring, however has only recently surfaced as a documented phenomenon. The simple use of loyalty programs used by airlines in which the flyer was awarded air miles for every flight he purchased with that particular company which later translated into real world rewards such as free flights, class upgrades and so on are no more or no less than game elements motivating players to earn and spend more points in order to cash rewards.

This chapter analyses but a few applications of gamified methods to tourism products attempting to identify at least one of each form of game discussed in this thesis, however the reader should be aware that considering the sheer size of this industry a few not be mentioned.

Interpretation models were also approached during the course of this chapter as an attempt to establish a link between the application of gaming models to other segments of the tourism industry, and the application of these models to the Cultural Tourism Segment and consequentially the Military Tourism sub-Segment.

### **5.2 – Game design elements applied to Tourism**

The application of game design elements in tourism is already present but it might not have been recognised or been named as the concept of gamification. Every loyalty card or frequent flying program is a gamification approach as points are collected to be redeemed for a bonus. Examples can also be found in restaurants giving free cupcakes to game player's virtual game achievements such as Foursquare Frey (2012) or Lufthansa and American Airlines' social media channels to generate brand awareness (WTM 2011)."

According to recent research "Gamification in tourism, designing memorable experiences" by Egger & Bulencea, (2015) the use of play in games beyond leisurely entertainment is nothing new. However according to Deterding, (2014) the emergence of the experience economy, in which individuals value the maximization of self-expression and

personal well-being over authority and economic achievement, has made it a very important topic.

The properties of gamefulness presented by McGonigal, (2011) in Egger & Bulancela, (2015) “optimistic curious and motivated person who seeks a challenge” are precisely the properties that enhance the tourism experience making it more memorable. This author goes on to present the possibility that this fact could be a contributing factor to why gamification is a growing trend in tourism.

Egger & Bulancela, (2015) state that during the aftermath of tourism experiences people have a greater tendency to recall emotions rather than contexts and places visited. Emotions and feelings make for a more memorable experience.

Psychologists have found that different factors play an integral role in the formation of autobiographical memories, such as emotion and familiarity Kim, (2014) states that familiar experiences tend to lead to improved memory retention.

Other researchers note that if the familiarity of an event is high, it is deemed uninteresting and is not deeply encoded. Conversely, if the novelty factor of an event is high, all facilities of the memory system are employed to implant the new event Kim, (2014).

This is a lead factor to why videogames and tourism are so successfully matched. According to Schell (2008) every successful videogame finds a way to combine something familiar with something novel.

Schell (2008) states that “Some designers would never make a game about ninjas, because ninjas have been done to death. But what if you made a story about a lonely ninja, or an incompetent ninja, a ninja dog, a robotic ninja, or a third grade girl who leads a secret life as a ninja? All of these storylines have the potential to be something new and different, while having a hook into a world the player already understands.” (p.314)

The 2011 World Travel Market Report points to existing links between gamification and the tourism industry, through gaming dynamics such as offer points, badges, status levels, as well as real gifts such as trips or air miles. “There are many synergies between social games and traditional loyalty programmes, which can be considered as the first example of gamification in the travel industry.”

**“Given that Tourism Ireland has a fan base of 480,000 people, each of the fans has in turn an average of 130 friends, Tourism Ireland can potentially engage with 62.4 million people worldwide through our Ireland Town game.”**  
*Mark Henry, Director of Central Marketing, Tourism*



*20 Ireland Town netizens reach. WTM report 2011*

The Irish tourism board realised the potential of the social media networks and created the Ireland Town game which allows the player to create their own perfect Irish town while learning about the history and lore of Ireland. The Irish Tourism Board chose to invest in this social media because following their calculations their page had a fan base of almost half a million people, and each of these had an average friend base of 130 people who can be invited to play Ireland Town reaching a potential public of 62.4 million netizens.

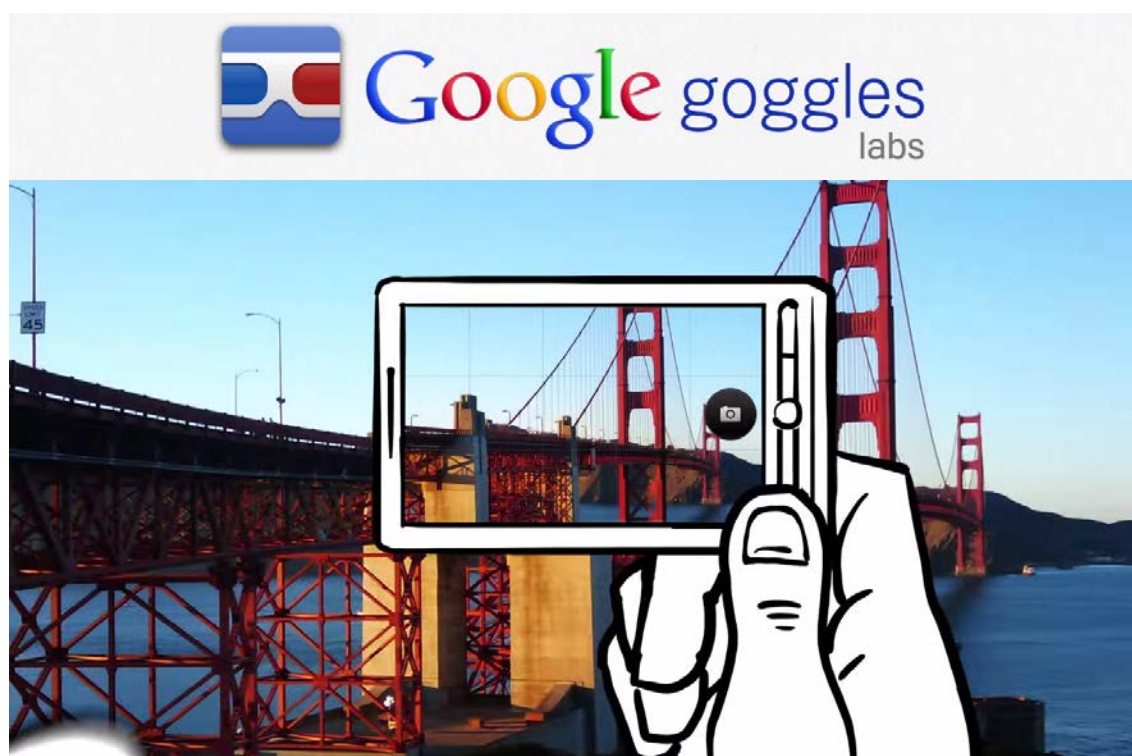
Weber (2012) states that many tourism players have advanced to implement gaming into their marketing strategy engaging customers and employees in new ways to create a culture of playfulness and fun.

According to the report travel companies starting using social games in 2010. The Australian Tourism Board and Lufthansa offer competitions to encourage travellers to share photos and experiences. Ireland targeted netizens, in 2011, when they launched a new social

game called Ireland Town, enabling web users to explore the countries attractions, complete challenges based on activities.

Weber (2012) predicts that location based Augmented Reality Games users can play at their travel destination will be a one of the major developments in the next few years.

Apps such as Google glasses for android allow the user to “scan” objects and identify them on the google search engine. This technology has great potential, especially when applied to cultural landmarks and artworks allowing tourists to receive tourist information about objects and landmarks in the palm of their hand without need for physical information stands or being part of a guided tour. The google glasses app through the articulation with other google technology offers the user not only information about the landmark through the search engine, but also location information on google maps and even a text translation functionality directly into Google Translate.



21 Google Goggles

In some cities such as London, Berlin, and Barcelona games straight out of the users pocket have stimulated tourism experiences, and will soon be available through advances in

<sup>30</sup> <https://www.youtube.com/watch?v=Hhgfz0zPmH4>

mobile technology. Exciting scavenger hunts are possible anywhere and the local characters tell the history of the place and give background information. Location-based games bring history alive and create playful interactions between the visitor and the tourist destination.

<sup>31</sup>Another APP from the United States which has flourished in the location based game sector is SCVNGR. SCVNGR (pronounced scavenger) can be played on a smartphone or via text messaging service and is a game that challenges its users to go places, do challenges to earn points with friends, unlocking badges and real world rewards.

These challenges are extremely varied and of differentiating difficulty, challenges may be set by the app developers or by other SCVNGR users, challenges can be, for example:

- Checking in to a location or business - 1 point
- Taking a picture of a determined object – 2 points
- Scanning a QR code at the destination - 2 points
- Completing a certain activity at the destination, such as finishing a determined circuit – 2-5 points
- Doing a social check in by bumping phones with a friend at a café or restaurant – 2 points for each user.

---

<sup>31</sup> [http://www.pressofatlanticcity.com/life/sunday\\_life/travel/phone-app-turns-tourism-into-a-location-based-game/article\\_b186d20c-237d-5761-836f-b9dd9873bacc.html](http://www.pressofatlanticcity.com/life/sunday_life/travel/phone-app-turns-tourism-into-a-location-based-game/article_b186d20c-237d-5761-836f-b9dd9873bacc.html)



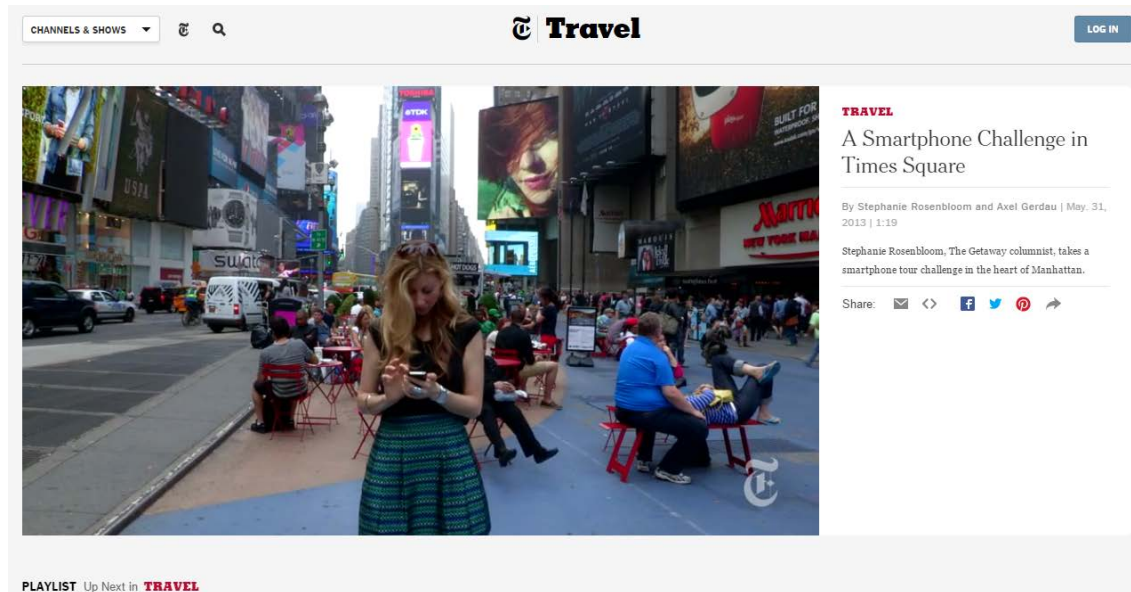
22 - SCVNGR location based game

Other users can create challenges at their chosen places generating activities for other players, friends, strangers or patrons to participate in. ScvngR also offers treks, much in the mould of a planned route or itinerary users can connect a series of places and challenges within a trek to earn more points.

These points earned from challenges award the user with virtual rewards such as badges and real world rewards like discounts at cafes and restaurants.

Norfolk tourism officials created a partnership with ScvngR and have since created four interactive treks a walking tour, a driving tour a tour aimed at the Ghent neighbourhood and even a pub crawl. These tours aim to lead players to museums, historic churches, shops and restaurants, ScvngR has around 1000 clients who pay to build interactive tours on this game based model

In May 2013 Stephanie Rosenbloom and Axel Gedau released a video entitled “Now playing in Time Square” which analysed a mobile app called Stray Boots. A mobile game set on the well-known Times Square intersection in New York, awarding the user with points for finding attractions and completing dares (such as taking pictures with police officers and street performers).



23 Now Playing in Times Square

As the player progresses through the game, the challenges become increasingly difficult to test even to the most competitive player. As a result of this project local businesses have experienced an increase in people coming into their shops and searching for the answers to the questions from the game.

### 5.3 - Interpretation

For this tourism experience to take place there must be a certain degree of interpretation when dealing with our tourism products.

Hall, Gossling, & Scott (2015, p.24) define interpretation as the common tools interpreters use (...) to provide information about the place visited (museums, zoos, historic houses, guided trails, guided talks, signs, exhibitions, films and brochures).

Tilden (1977) (ac cited in Hall, Gossling, & Scott 2015) defined Interpretation as an educational activity which aims to reveal meanings and relationships through the use of original objects by first-hand experience, and by illustrative media, that than simply to communicate factual information.(p.23)

According to Hall, Gossling, & Scott (2015), following an academic literature examination and tourism practise analysis, there are four main functions or purposes to interpretation.

### **1. Interpretation as visitor management;**

Ham; Brown; Curtis; Weiler; Hughes & Poll (2007) “Visitation to protected areas has increased steadily in recent decades, and among these visitors is a special subset of individuals who engage in behaviours that are at odds with management objectives. Managers have long considered interpretation an effective and appropriate strategy for dealing with these kinds of problems, but success in using it to influence visitor behaviour has been mixed.”

### **2. Interpretation as visitor experience;**

Another aspect of great discussion is how tourism products are interpreted, how can the tourism supply convey their product and offer the best experience possible to each individual consumer?

Nunes (2012) states that “Presentation – Interpretation is a process of access and fruition to a heritage asset or a tourism attraction, in terms of its understanding, interpretation for tourist visitation.”

Figueira (2013) gives us an answer to tourist interpretation by presenting four levels of interpretation, with varying levels of complexity to offer the best experience to each consumer.

The first level, **Initiation** destined for people with little or no relation to the visited object and able to deal with a basic level of complexity (corresponding to secondary grade or equivalent).

The second level, **disclosure**, corresponds to a presentation and interpretation for people with ability to obtain an average understanding of the visited object (corresponding to pre-university grade or equivalent)

The third level, **further development** is destined to people with higher learning or equivalent, who seeks to answer the needs of a deeper and more detailed interpretation (corresponding to BA degrees, Post-Graduates and self-learners with equivalent aptitudes to these levels of academic degree).

And finally the fourth level of interpretation, **research** which focuses on scientific and technical publics who are within the domains of the visited objects and can be contextualized and illustrated in greater depth in certain more specific aspects. (Technical and Scientific visits for Research and Development.

### **3. Interpretation for tourism development;**

Tracey Firth (2011) approaches tourism interpretation as a means of conserving industrial heritage and consequential tourism development through the preservation and increase of supply.

From the interpretation point of view technology can be used as a tool to achieve greater communicative efficiency and greater communication flux in the interpretation process.

### **4. Interpretation as a tool for encouraging more sustainable lifestyles.**

This final function begins to merge tourist interpretation with the concept of social marketing, alerting tourists to the concept of sustainability and leading them to adopt a more sustainable lifestyle.

The sustainability of this form of interpretation relies on context factors which aid interpretation, meaning that the greater the mergence between tourist interpretation and social marketing the greater the sustainability of this form of interpretation.

## **5.2 - Gamification applied to Cultural Tourism**

Weber (2012) states that Gamified Immersive Experiences in Cultural Heritage allows visitors to connect to cultural heritage sites through missions and quests, interacting with characters and sites rich in history. Through games the user can play with the history and culture of a given location in a light-hearted and gameful way. Strong scientific evidence affirms that playing games evokes within the player feelings of being present in previous times and creating a relation with people who lived back in the era. Cultural heritage sites increasingly seek new ways of applying gamification to their purpose. These new methods of interpretation through gamification are more efficient and effective than traditional methods in the areas of social interaction and recollection of historical facts. Weber, (2012) “Games open up new opportunities to transfer education and culture through gameplay and thus enhance the visitor experience.” Mobile location based games offer new experiences when interacting with heritage. As discussed above, the application of novelty approaches to existing interpretation models give tourists a more memorable experience. This technology provides a new format of heritage experience by applying new interactive gameplay to ordinary exhibitions.

TravelPlot Porto applies gamification to the cultural heritage of Oporto by applying transmedia storytelling to the tourist experience, using social media platforms and other interactive networks to deliver a story. Players can choose between stories at any time according to their ideas. Travel Plot Porto is an excellent example of transmedia storytelling in which the tourist must save the Port Wine by completing a series of challenges to find the hidden treasure.

## **5.4 - Military Tourism resources in Portugal**

The current Portuguese territory possesses a very rich military history having been stage to centuries of coming and going of tribes and peoples. It is possible to identify a number of peoples who have fixed themselves within the current Portuguese borders. (Coelho, 2011). These tribes and peoples have inhabited this territory for over five hundred thousand years and brought with them a rich history and culture which serves as a strong

resource for cultural tourism providing enormous potential for tourist fruition through gamification.

Following Coelho's, research (2011) of these peoples one of the most notable are the Romans, the Roman Empire conquered the Iberian Peninsula in the second Punic war and left a sizable mark on this territory and a strong contribution to national heritage.

The demise of the Roman occupation was brought about at the command of a notable Portuguese hero, Viriato a true guerrilla warrior in the Portuguese mountains, Serra da Estrela. This hero has the potential to be a great asset to tourism supply.

The following Barbarian invasion marked Portuguese history albeit in a minor scale in comparison to the Roman occupation and to the remaining hispano-roman population, however leaving a significant contribution to national heritage.

The Muslim invasion in 711 AD had a much more profound effect on Portuguese history and heritage. This five hundred year occupation left its mark on Portuguese culture and territory. The variety of possibilities for interpretation and product development, linked to this theme is tremendous, there has already been a great deal dedication to the military history shared with the Muslim peoples through books, music, films, games and more. Themes such as the influence of order of the knights Templar have generated, over the years, much demand. In games, possibly some of the most well-known games that approach this subject are strategy games which focus on the military strategy and battles per say. Other games such as Assassins Creed a historical fiction action-adventure open world stealth video game series which revolves around the rivalry between two ancient secret societies, the Assassins and the Knights Templar has sold over 73 million copies as of April 2014.

The founding of the nation following the civil war is another part of history which deserves to be told as it stars some of the most famous historical icons in Portuguese history, namely Afonso D. Henriques the first King of Portugal, following the battle of São Mamede. The presence of famous historical icons such as Afonso D. Henriques is instrumental in the gamification and storytelling process, seeing as it provides the player with a reference or character to follow while learning about his historical context.

Other notorious historical figures such as D. João I and D. Nuno Alvares Pereira associated with famous and noteworthy periods and battles, such as the Batalha de Aljubarrota provide content creators with precious material to draw up narratives and

themes. Another strong source for narrative development can be found in the mythology involving D. Sebastian as based on the film by Manoel de Oliveira “*Non ou a Vã Glória de Mandar - Non ou la Vaine Gloire de Commander – 1990*” which depicts the portuguese battles from the era of D. Afonso Henriques, the story of the Master of Avis to the Colonial War.

History shared by other countries and in particular with countries to whom the tourist can relate, offers a feeling of familiarity and proximity when learning about another culture. Themes such as the Portuguese Maritime Expansion, the Napoleonic Invasions and the British allegiance should therefore be explored in greater depth and developed to reach a wider range tourists.

These are only but a few examples historical characters and periods of Portuguese history with potential to be interpreted and presented to the market under the form of gamification or through tourism routes, or both. The focus of the application of these gaming models lays in the use of already studied contents, for contents may exist without games, however no game exists without contents, and in an ever evolving society which all indicators point towards an ever more gamified society these contents must be approached from different perspectives as to maintain their place in the market”

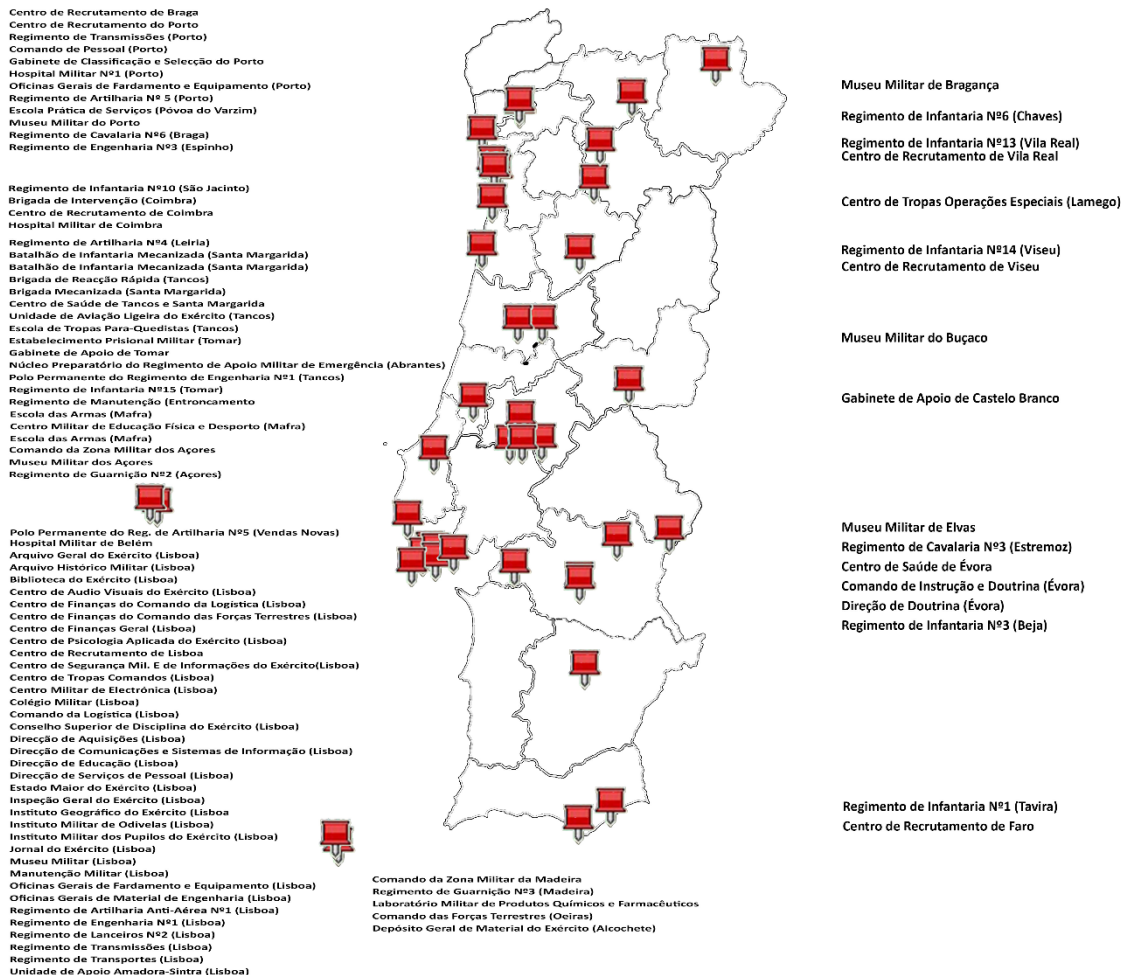
Portuguese history is replete with military events which, regardless to their indubitable consequences on the nation’s diplomatic and political positioning have left rich layers of historical-military heritage which have all the potential to be successful tourism products.

Coelho (2011) Military Tourism in Portugal possesses conditions to stimulate and realize the opening of national military units, museums and collections. Following Coelho’s work the armed forces are receptive to interaction with civilian society, namely through didactic and pedagogical channels. Portugal possesses many military installations that demonstrate potential for tourist development, offering differentiated experiences and strong historical-cultural backgrounds.

As seen on the below map there is a plentiful supply of military units and museums, without taking into consideration the remaining military heritage, the development of these maps to identify key locations where Military Tourism resources exist is of the upmost importance for game development.

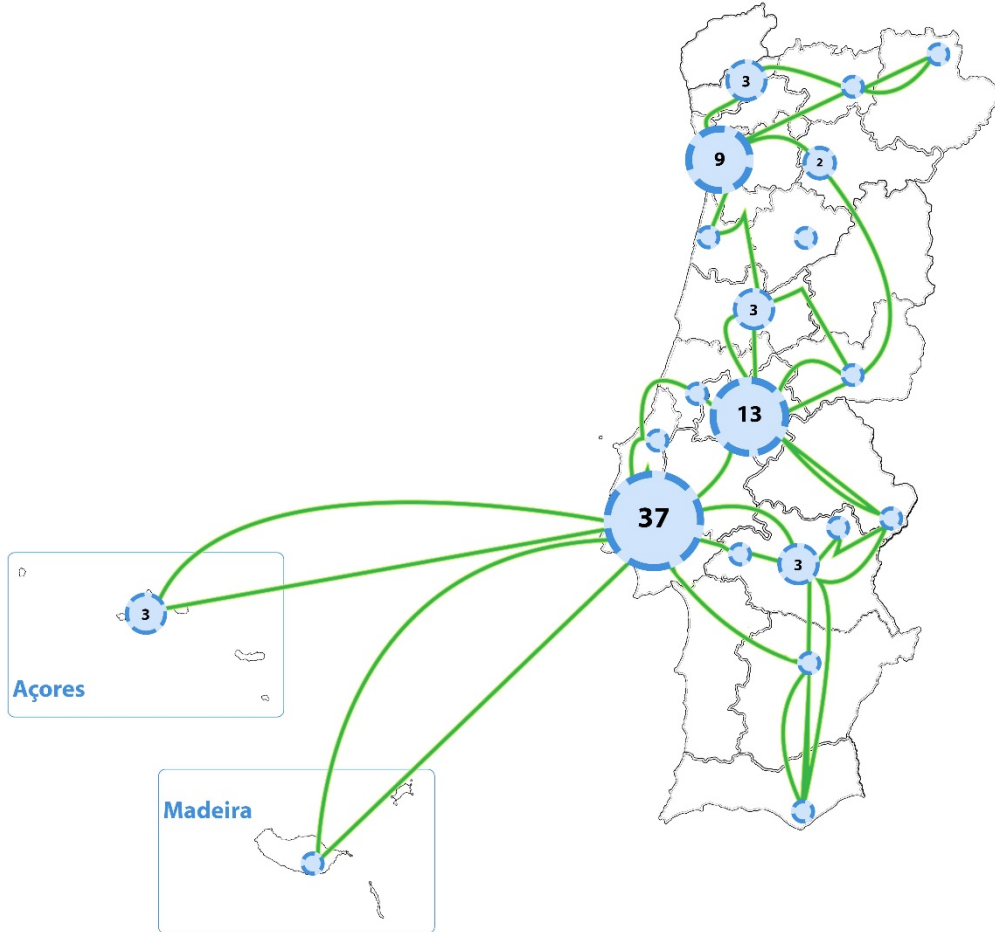
Map 23 identifies three main poles of military tourism resources, the metropolitan areas of Porto and Lisbon and the area surrounding the Tancos Polygon in the Medium Tagus region.

The Medium Tagus region alone counts with 25 military units currently in operation and 62 historical military heritage sites with the potential for tourist and cultural fruition as recorded on SIPA (Sistema de Informação para o Património Arquitectónico) the Portuguese Architectonic Heritage Information System.



24 Army units in Portugal. (own elaboration)

The above map shows the location of the current 95 military units existing in Portugal. Many of these units possess the potential to be valuable resources for the development of Military Tourism in Portugal.



25 Clustering of Military Units: (own elaboration)

These military units are predominantly located in Central Portugal and the Lisbon Area, naturally with greater expression in the capital city of Lisbon.

## 5.5 - Gamification applied to the operationalization of Military Tourism

Military Tourism, is without a shadow of a doubt an upcoming segment of Cultural Tourism with sizable potential to be a strong product for the country, having already generated much interest among various sectors, and could greatly benefit from the application of technology used in gaming to its interpretation.

Gamified Immersive Experiences in Cultural Heritage allow visitors to connect to cultural heritage sites through missions and quests, interacting with characters and sites rich in history. It would seem evident that as stated above in terms of military history Portugal has much raw material to offer, game developers and tourists alike, when it comes to cultural heritage sites and characters rich in history.

Research collected during the National Military Tourism Charter Report shows that there is demand for the development of Military Tourism segment of cultural. The armed forces have shown openness to participate in this initiative; businesses are interested in developing Military Tourism products; governmental entities have shown their support for the development of Military Tourism products, and new associations have been created specifically with Military Tourism in mind.

Portugal's rich military history counts with thousands of years of tribes and peoples who occupied this territory and left it layered with architectonic military heritage and heroes, who can be used as gateways to the interpretation of military history in Portugal through the use of gamification tools.



26 Example of Gamification applied to Military Tourism (own elaboration)

According to theory researched in the works of the above authors, the development of Military Tourism based games has potential to be a lever to the development of this sector

in Portugal. The application of game models such as points, badges, levels and rewards can motivate tourists to select Military Tourism products.

As Military Tourism is still taking its first steps in Portugal, it may benefit from the association with social media games along with all the promotional and low cost publicity, characteristic of social media websites such as Facebook and Instagram through the sharing of photos and experiences between netizens.

Technology such as Augmented Reality games and applications can illustrate national history on site, through a hand held window to the past, carried around in the tourist's pocket.

32



*27 Augmented Reality Gladiator School Carnuntum*

Current partners involved in the development of Military Tourism, have at their disposition the technology to challenge tourists to discover Portugal, or even through user created challenges created by local people with local knowledge about military attractions.

Location based games can make use of buildings and local heroes to tell the story of certain towns through their association to those heroes and locations, through playful interactions.

According to Ponsen, & Spronck, (2004) RTS (Real Time Strategy) Games are simple military simulations that require the player to control armies consisting of different types of units with the ultimate objective to defeat all opposing forces. Typically the key to winning

---

<sup>32</sup> <https://www.youtube.com/watch?v=c4-TkpAAuPk>

lies in efficiently collecting and managing resources and later distributing these resources over various game elements. RTS games include elements such as construction of buildings, research technologies and military combat.

Buro, (2003) defines Real-time Strategy games such as the million sellers Starcraft by Blizzard Entertainment and Age of Empires by Ensemble Studios are simplified military simulations in which several players struggle over resources scattered over a two dimensional terrain. RTS games not only depict military confrontations but also task the player to develop an economy, research technologies, construct buildings and monuments along with armies and fleets, leading them into battle in real time.

33



28 Portugal 1111 RTS game in Visão

In Portugal, April 2004, the municipality of Soure launched a Real Time Strategy game, “Portugal 1111” and according to TSF radio news this game promised to take players back to the medieval era. The original idea for the production of this game lies with History Professor, Joaquim Carvalho who challenged João Gouveia, at the time, president of Soure council to develop this game.

<sup>33</sup> <http://www.gamefaqs.com/pc/921971-portugal-1111-a-conquista-de-soure/images/156895>

Portugal 1111 tasks players to organise the village of Soure around the castle and collect resources to fund the battles between Arabs and Christians. Over nine levels the player is challenged to manage economic resources, create farmland, fairs and windmills without forsaking the military defensive aspect of the game by building walls, watch towers and a castle, along with religious buildings such as churches, chapels and monasteries.

## **5.6 - Summary**

The use of games have gone from being mere means of entertainment, to being used in non-game contexts as tools for to aid interpretation and education this exercise, known as gamification has been applied to many segments of the tourism industry.

Gamification motivates tourists to connect to heritage sites through missions and quests, interacting with characters and sites rich in history, giving them motives for visitation they did not previously have.

Applied to Military Tourism gamification has a tremendous potential to expand based on the rich military history and heritage of Portugal, and can be a lever to the development and promotion of this segment.

From the literature review it is possible to conclude that society is heading towards an entertainment focused society. Richard Florida states that Cities need to invest in Technology, Talent and Tolerance. This theory affirms that destinations need to mould themselves to develop new technology and talent (in the form of universities researchers and scholars) and lastly tolerance, cities need to be open to accept what technology and talent have to offer. Games are here to stay, gamification has already become a leading factor in how we shape our everyday lives, we must therefore be, not only, open to accept this reality but to get on board and work towards it with our products.

## **6 - The application of Games to Military Tourism Products**

---

### **6.1 - Introduction**

Routeing applied to Military Tourism has an important role to play in national economy. Following the research and examples provided in the above chapters it is evident that technology has an extremely important role to play in the Tourism industry. This final chapter seeks to explain the potential of technology applied to Military Tourism in the form of gamification, by analysing various types of games and what elements each of them can contribute to the creation of Military Tourism Games. To better illustrate this, a table was drawn up with the aim at analysing what each element of different forms of games can contribute to the resolution of the problems presented in the National Military Tourism Charter Report and finally some suggestions for what is needed to create Military Tourism Games and apply them to Routeing.

### **6.2 - Routes, Military Tourism and Gamification**

Routes have an important role to play in the tourism sector, bringing together a wide range of activities under one theme. Therefore the creation of Military Tourism routes can bring together Military Units, Military Museums, Businesses, Battlefields, Built Heritage, Military history, Documental Collections and Military assets, as Military Tourism Products.

Signoretti, A., et all (2014, p.5) state that the application of gamification to a governing platform may be associated to various tourism components, such as hotels, bars, restaurants, and general services, offering a shortcut to a series of game phases, and through games linking these components by providing discounts and prizes for visitors and local residents alike.

The measured use of technology is a tool for the development of Military Tourism Routes in Portugal. Information is vital for tourism and ICT can provide a backbone for facilitating the development of this sector of the tourism industry. Figueira (2013) states that the application of other scientific fields such as mathematics may be applied to the development of routeing, meaning that this process may be associated with various fields of research. Considering the application of technology to the tourism industry in the form of

gamification what tools exist to create tourism games and more specifically Military Tourism Games?

### **6.3 - Role Playing Games**

Role playing games have gained increasingly important roles in the fields of pedagogy and are ever more being used in classrooms and workshops to promote new forms of teaching.

Summarily role playing games are based on the premise in which each participant takes on the role of a character in an imaginary adventure. This adventure is narrated by a referee, usually named a master, who describes everything that happens in the scenarios telling the player where to look, what to listen out for, what to feel, etc. From thereon players dictate what characters do when confronted with a series of proposed situations. Much like a theatre, RPG play out before the audience, but in this case it is written as it plays out, each player defines his or her own path.

An above mentioned game, Assassins creed is a fine example of a RPG which make use of existing heritage as part of the virtual world.



29 *Assassins Creed* gameplay image in Paris

This game has explored cities like Jerusalem, Acre, Damascus, Venice, Rome, Constantinople, Paris and others, and is constantly being tested for its historical accuracy and realism. Over the years the game developers at Ubisoft, have strived for ever greater levels of detail requiring researchers and artists to recreate scenes based on paintings, depictions, books, museums, specialists and more recently photographs to create the virtual world this game is set in.

Considering the rise of RPG as an educational tools, and the growing popularity of these RPG set in historical themes, with ever increasing attention to detail, allied the fact that these RPG's are capable of making use of historical heroes and characters tell the history of the country through playful interactions, could the use of the vast resources of military fortifications, infrastructures, history and heritage available in Portugal linked with the technology to create these games be a solution to the current deficiency of knowledge about Military Tourism in Portugal.

---

<sup>34</sup> <http://bgr.com/2014/12/02/assassins-creed-unity-paris/>



30 Example of RPG

35

## 6.4 - Real Time Strategy Games

Similarly to RPG's RTS games can offer players a gaming experience following a narrative to tell a story. While RPG's follow a single character, RTS games involve a whole other spectre of elements, from military tactics resource gathering, construction, economy to research, this form of game allows a much wider approach to subjects such as history, if the game is set with a historical theme.

---

<sup>35</sup> <http://www.gamewatcher.com/reviews/the-first-templar-review/9338>



31 – Illustration of the Iberian Peninsula, RTS game Empire Total War, IGN.com

36

Focusing on Portuguese military history RTS games may be used as a tool for tourism interpretation, depicting Portugal’s history in an interactive and gameful way. Telling various aspects of civilizations through RTS games is possible from a variety of approaches, namely:

Economy – portraying transactions between countries, gathering and management of resources in order to build defences and attack forces, along with technological advances in areas such as weaponry, sciences and arts showing the progression of peoples climbing the technological tree.

Military Tactics – Recreating historic battles, managing armies and re-enacting military strategies, tactics and movements, while following a story of a country or people through campaigns over a determined period of time.

Kirkpatrick (2015) states that games bring people together, make them laugh and create conviviality.

One example of this form of gaming in Portugal is that of Portugal 1111 the conquest of Soure, a game which includes aspects which range from clothing, architecture, commerce, gastronomy and military strategy. This project which sets place in the XII century Coimbra

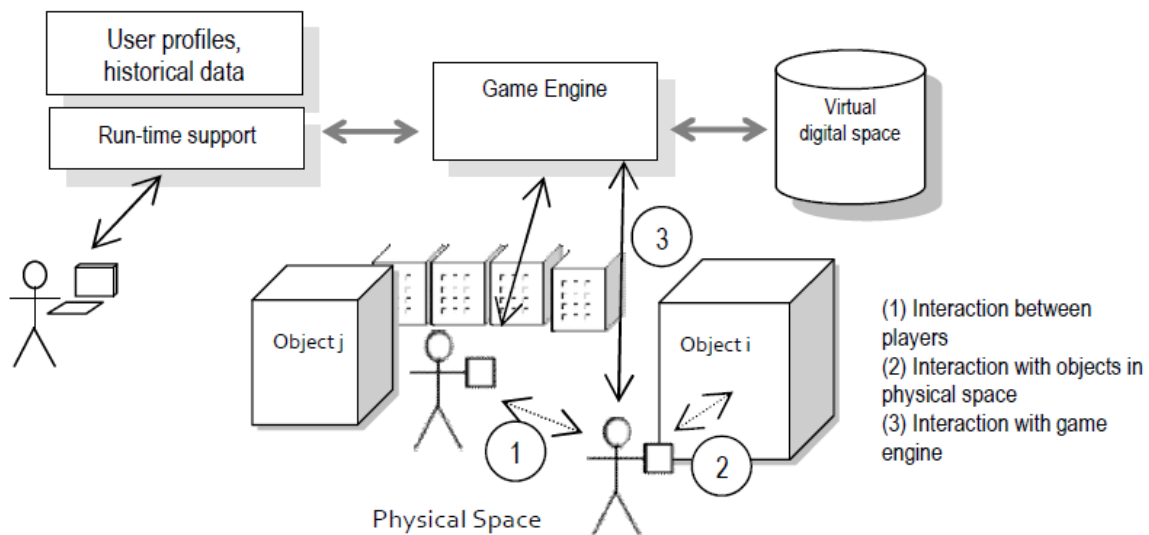
<sup>36</sup> <http://shoguntotalwar.yuku.com/topic/44091/Immediately-crushing-Portugal?page=2#.VjHtN0q-NmY>

region depicts the life of those residents of the Soure and military events which took place in that period. To develop this game a year's worth of work took place involving teams of computer experts, historians, designers and architects.

### 6.5 - Location Based Games

The development of mobile devices has facilitated the appearance of a new form of games with activities based on the player's current location. The proliferation of mobile devices such as smartphones with advanced location sensing capabilities like GPS has permitted games to be viewed from a whole new perspective.

Location based games involve the interleaving of virtual and physical spaces, these games can have a positive impact on learning processes, especially in contexts such as environmental studies, visits to museums and other sites of cultural and historical value. .



32 Architecture of location based games - Avouris, & Yiannoutsou 2012

(Avouris, & Yiannoutsou, 2012). The typical architecture of location based games as depicted above, shows that the action takes place in the physical space, while a digital infrastructure exists to support the activity.

This infrastructure consists of the following elements:

- (i) The game engine, which is the mechanism that observes the state of the game and application of the game rules,

- (ii) The virtual space, which contains facts and media related to the story and activity, and
- (iii) The user profile database, which maintains the player's identities and status, while it may also store historical data that can be used for adapting game-play and for enriching current player experience. Players interact with objects and each other and the events are recorded in the game engine.



### *33 Location based game applied to military museums*

Location based games applied to Military Tourism heritage has the potential to be a positive and resourceful asset.

Location based technology makes use of available resources initially developed for the military forces such as GPS.

In the early 1960s US government organisations, namely the DOD (Department of Defence), the National Aeronautics and Space Administration (NASA) and the DOT (Department of Transport) were interested in developing a satellite system with three-dimensional positioning determination. This project lead to a fully operational positioning system which provides accurate continuous, worldwide, three-dimensional position and

velocity information to users with appropriate receiving equipment. (Kaplan & Hegarty 2006) (p.2)

This technology has become available for the general public and has thrived with the evolution of mobile technology, such as PDA's (Personal Digital Assistants), Smartphones, Tablets and smartwatches.

This technology, GPS, can be used over widespread territories, guiding people to their desired destination with pinpoint accuracy.

Applied to Military Tourism this technology can guide tourists to selected attractions in a determined territory or even guide tourists around a specific attraction, showing its specific details.

Applied to games this tool can be used in a range of formats, from simple quiz based games in which GPS simply leads the tourist to the military site, or through the use of complex location sensitive systems connected to social media platforms or photo recognition technology. Location technology can be used in the development of challenge based games, guiding the player to a specific destination at which he or she must complete a set challenge.

In response to the problems identified in the National Military Tourism Charter, location based games can be useful tools in the development of Military Tourism products, namely:

- Towards the contribution of Military Tourism to the establishment of cultural and religious circuits. Location based games can guide players along a path, stopping at military sites and attractions, developing military routes, learning about these attractions as they find them;
- These games offer players rewards when they check in at attractions, motivating them to visit a series of locations, from castles, fortifications, military infrastructures and other military units;
- Military Museums can also benefit from location based games, guiding visitors through their collections and challenging visitors to find specific objects;
- Adding value to the registry and touristic and military geography of the country.

## 6.6 - Challenge/Reward Games

Challenge or reward games are world based games operating on an inclusive platform which allows players to visit places and unlock rewards by completing challenges.

These games will challenge players to visit military sites and discover Portugal's military history by daring them to participate in an array of tasks.

Companies can get involved in this type of game by challenging players to participate in activities, offering competitors rewards and motivating the public to search for similar experiences. Meaning that, challenge based games can be used by players and businesses alike.

Challenges can range from the participation in re-enactments to taking pictures at famous monuments or trying local delicacies.



34 Example of Military Tourism Challenge Source: Pratt

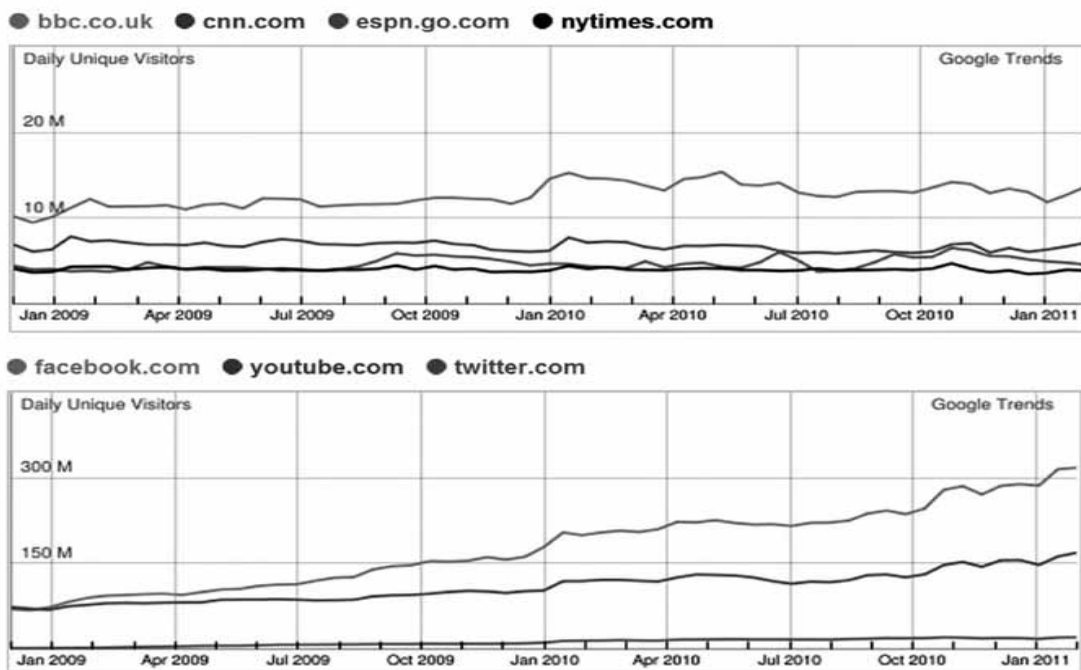
Challenge based games has sever potential applications to offer Military Tourism experiences:

- As tool for the commercialization and promotion of Military Tourism activities by challenging players to participate in set events, visits and activities. The development of these tasks and their association with social media networks will reach out to these players social group and potentially encourage more players to take up the challenge;

- Castles, fortifications and military infrastructures can also increase visitation through challenge based games by entering into challenges and encouraging visitors to create their own challenges;
- Due to the nature of these challenges they can target material and immaterial heritage daring players to not only visit military heritage, but also encourage players to participate in military themed events and activities;
- These challenges relating to material and immaterial heritage can offer players new cultural and tourist experiences;
- The opening of user created challenges allow visitors and locals to participate in the creation and establishment of Military Tourism products, while also complementing existing activities through surrounding challenges in other segments;
- Businesses can also associate themselves to challenge based games by linking their activities to Military Tourism challenges.

### 6.7 - Social Media Games

The application of social media to gaming can, potentially, be beneficial for the promotion and establishment of Military Tourism, mostly through the nature of the social media itself.



35 Pan and.Crotts traffic of media sites versus social media sites

The above graph showing the traffic volumes of top mass media sites versus top social media websites makes it clear that the mass media sites were, from January 2009 to January 2011 undoubtedly surpassed by popular social media sites. The main online website which reached 39.2 percent of the internet population back in 2011 today counts with an astounding 968 million users worldwide, 844 million of these via mobile devices.

For this reason, considering the association of Military Tourism with the social media opens up an immense potential audience. This is a tool which must not be taken lightly, by linking Military Tourism games to the social media, the potential visibility of Military Tourism products and activities is exponentially greater.

People like to advance and achieve, by earning points and rewards, people also enjoy sharing their achievements with co-workers, friends and Family, if these achievements and points can be associated with the purchase of Military Tourism products we have a recipe for success.

Therefore social media games are potential drivers of Military Tourism in Portugal as:

- A virtual platform which links Military Tourism game players to military heritage, products and activities, by providing resources for their implementation.
- A form of raising awareness about Military Tourism through small online games depicting Portuguese military history and promoting the importance of military assets.
- Complementary component to distinguish Tourism in Portugal as stated in National Strategy

## 6.8 - Augmented Reality

37



36 Digital 3D representation of UNESCO World Heritage site Convento de Cristo, Tomar Source Google Earth

Technology such as augmented reality applied to games can illustrate national history on site through a handheld or fixed platforms. The use of three dimensional representations of heritage allows the user a wider and more holistic view of the site and puts previously unknown aspects about what they are visiting into perspective. At a smaller scale augmented reality tools may be applied on smaller and more focused representations of objects or monuments allowing a detailed description of analysis. To museums or monuments, getting up close and virtually touching objects in a more focused and detailed fashion without risking damage to these objects is a indubitably a useful tool for interpretation.

Use of augmented reality may also be applied to show historical sites in current day environments. Simply by using augmented reality technology it is possible to demonstrate, for example, what current day towns or cities would have looked like hundreds if not thousands of years ago. As applied to gaming augmented reality technology can be used as a complementary tool to other forms of games such as challenge based games or location based games introducing an animated and innovative method of interpretation.

## 6.9 - Military Tourism Game Creation Model

Coelho, (2011) states that the creation of tourism routes applied to the military theme can become a positive result for the development of Military Tourism. Considering

<sup>37</sup> <http://viajarconelarte.blogspot.pt/2014/11/el-convento-de-cristo-de-tomar-ii-los.html>

Portugal's national history it is possible to create a range of activities, visits of a leisurely and pedagogical nature relating to national culture, based on a military theme. This type of intervention has the potential to become a strong source of income for the whole sector.

The information collected from the National Military Tourism Charter report indicates that:

- 1) There is a deficiency of knowledge about Military Tourism in Portugal, namely regarding its presence in national tourism strategic planning and regarding entities which promote and commercialize activities of this nature.
- 2) Military Tourism as a Segment of Cultural Tourism can contribute to the establishment of cultural and religious circuits, of short break holidays and promotion of national gastronomy and wines.
- 3) Castles, fortifications, military infrastructures and functioning military units can be converted into military heritage tourism attractions.
- 4) According to the inquired Military Museums, historical re-enactments and visits to military heritage are recognized as examples of activities and services which deserve greater attention when developing Military Tourism products.
- 5) Material and Immaterial Heritage, along with military history are two of the main components to validate a territory with potential to develop Military Tourism activities.
- 6) National Military history possesses the required conditions to create new tourist and cultural experiences.
- 7) The interaction between tourism and historical military heritage can create new activities and products along with complementing existing activities.
- 8) Entrepreneurs require the necessary conditions to allow the development of Military Tourism in Portugal.
- 9) Local communities should be involved in the establishment of Military Tourism.

Considering the array of game types discussed throughout this dissertation we can identify six main game elements which can be potentially used in Gamification:

A - Social Media Elements

B - Challenge Based Elements

C - Role Playing Elements

D - Location Based Elements

E - Augmented Reality Elements

F - Real Time Strategy Elements

To better illustrate the applicability of these forms of game to aid in the solution of problems relating to the establishment of Military Tourism products, the below model was developed. This model presents possible articulations between both of these elements and identifies necessary measures to put each form of gamification in place.

<b>Military Tourism Product development axis.</b>	<b>Gamification Solutions</b>	<b>Necessary Measures</b>

<p>1 – Increase awareness regarding Military Tourism in Portugal, stimulate visibility of Military Tourism activities and entities.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote these infrastructures raising awareness to their importance by challenging the player to share pictures and experiences through their social network while referencing the attraction, involving competitions and rewards;</li> <li>• Interaction between players created content;</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends)</li> </ul>	<p><b>A – Social media games:</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism businesses and entities must establish a social media presence creating a strong network, business to business and business to client;</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player participate.</li> </ul>
---	---	--

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Use of challenges which take players to military sites and activities, increasing visibility of Military Tourism products.</li> <li>• Use of competition between players to allow them to challenge each other to participate in Military Tourism activities.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> </ul>
--	---	---

	<p><b>C – Role Playing elements:</b></p> <ul style="list-style-type: none"> <li>• Development of Role Playing Games which take players to real world Military Tourism sites, promoting real world visits and activities on a virtual platform.</li> <li>• Use of storytelling to reinforce the importance of military history in the construction of national identity.</li> <li>• Increase “Genius loci” also referred to as the spirit of a specific place, along with residents self esteem.</li> </ul>	<p><b>C – Role Playing games:</b></p> <ul style="list-style-type: none"> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> </ul>
--	--	--

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Inclusion of Military Tourism products in augmented reality interpretation systems developed for territories, identifying military assets when visiting destinations.</li> <li>• Link between AR services and other existing games, such as challenge based games and location based games.</li> </ul>	<p><b>E - Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> </ul>
--	---	---

<p>2 - Use of Military Tourism products towards the establishment of cultural and religious circuits, short stay holidays and gastronomical and wine visits.</p>	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit military heritage sites, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenge players to participate in a series of differentiated activities relating to Military Tourism, from visits to heritage to participating in historical re-enactments.</li> <li>• Tasked players may participate in activities associated with other segments of cultural tourism to complement their Military Tourism Experience, involving an array of businesses.</li> </ul>	<p><b>B - Challenge based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Association of Businesses</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS paths and routes associated to location of challenges</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> </ul>
--	--	---

	<p><b>C – Role Playing elements:</b></p> <ul style="list-style-type: none"> <li>• Development of Role Playing Games which take place over a certain narrative in time and space can tell the story of a selection of real world military attractions and heroes encouraging players to accompany the path of their characters.</li> <li>• Use of storytelling to guide players along a certain path within the game depicting real world routes and circuits.</li> </ul>	<p><b>C – Role Playing games:</b></p> <ul style="list-style-type: none"> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> <li>○ Use of existing Military Tourism routes as base themes.</li> </ul>
--	--	---

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Inclusion of Military Tourism circuits in augmented reality interpretation systems developed for territories, identifying military assets, their relation to other points.</li> <li>• Link between AR services and other existing games, such as challenge based games and location based games.</li> </ul>	<p><b>E – Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> <li>○ Research of historical, architectural and artistic details for a detailed and accurate representation of sights.</li> </ul>
--	--	---

	<p><b>F – Real Time Strategy elements:</b></p> <ul style="list-style-type: none"> <li>• Use of Real Time Strategy game’s narrative to depict the history of a nation may be used to describe a series of attractions over time and space under a particular theme.</li> <li>• RTS games may be used for promotional purposes, describing groups of attractions and under a particular theme raise awareness to the existence of these military sites.</li> </ul>	<p><b>F – Real Time Strategy games:</b></p> <ul style="list-style-type: none"> <li>○ Research into aspects such as history, arts, clothing, architecture, commerce, gastronomy and military strategy.</li> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> </ul>
--	--	--

<p>3 – Conversion of military infrastructures, functioning units, castles and fortifications into Military Tourism Attractions.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote these infrastructures raising awareness to their importance by challenging the player to share pictures and experiences through their social network while referencing the attraction, involving competitions and rewards. By raising awareness to the existence and importance of these constructions, they are indirectly being conserved.</li> <li>• Interaction between players created content;</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends, while learning about military attractions)</li> </ul>	<p><b>A – Social media games:</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>
---	--	---

	<p><b>C – Role Playing elements:</b></p> <ul style="list-style-type: none"> <li>• Associate new potential military infrastructures to existing Military Tourism attractions by telling their story along the narrative.</li> <li>• Development of Role Playing Games to tell the story of attractions, identifying their place in history and national identity.</li> </ul>	<p><b>C – Role Playing games:</b></p> <ul style="list-style-type: none"> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> </ul>
--	---	--

	<p><b>F – Real Time Strategy elements:</b></p> <ul style="list-style-type: none"> <li>• Associate new potential military infrastructures to existing Military Tourism attractions by telling their story along the narrative.</li> <li>• Use of Real Time Strategy game’s narrative to depict the history of Portugal may be used to describe a series of attractions over time and space under a particular theme.</li> <li>• RTS games may be used for promotional purposes, describing groups of attractions and under a particular theme raise awareness to the existence of these military sites.</li> </ul>	<p><b>F – Real Time Strategy games:</b></p> <ul style="list-style-type: none"> <li>○ Research into aspects such as history, arts, clothing, architecture, commerce, gastronomy and military strategy.</li> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in</li> </ul>
--	---	---

		military history and heritage in Portugal.
4 – Development of Military Tourism activities and services, associated with military museums and historic re-enactments.	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit and military museums, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific object within a museum or collection.</li> <li>• Allowing the visitor to create his own challenges, showing fellow players points he or she considered of particular interest.</li> <li>• Telling the story of a museum in a new and interactive way by challenging visitors to complete a series of tasks.</li> <li>• Challenging players to participate in Military Tourism events, like cultural and historical re-enactments.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events available to be included in the game.</li> </ul>

	<p><b>C – Role Playing elements:</b></p> <ul style="list-style-type: none"> <li>• Used for example on mobile based equipment in which the narrator guides the player through the game and the museum, allowing him or her to interact with objects without having physical contact with it.</li> <li>• Development of Role Playing Games to tell the story of attractions, and events identifying their place in history and national identity.</li> <li>• Encouraging players to participate in real world activities, such as historical re-enactments and museum visits depicted in the game, to gain points and advance along the story.</li> </ul>	<p><b>C – Role Playing games:</b></p> <ul style="list-style-type: none"> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> </ul>
--	---	--

	<p><b>D – Location Based elements:</b></p> <ul style="list-style-type: none"> <li>• Military Museums can also benefit from location based games, guiding visitors through their collections and challenging visitors to find specific objects.</li> <li>• Location based games can interact with visitors as they progress through the museum giving the user real time information about their visit.</li> <li>• Events and activities can also benefit from location based games, by getting players to sign in to their event upon arrival. Granting them points badges and rewards for participation.</li> <li>• Location based games can also be used to keep track of the amount of time the visitor takes during a visit adding a new element to gamming making this type of game a valuable asset when associated with other forms of gaming.</li> </ul>	<p><b>D – Location Based games:</b></p> <p>Much like the challenge based games, location based games require:</p> <ul style="list-style-type: none"> <li>○ An online Platform</li> <li>○ Link between locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi location detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Development of an up to date database with all information relating to upcoming events available to be included in the game.</li> <li>○ Narrative to aid visitation based on players location.</li> <li>○ Point, badge and achievement system to reward players for visits to museums or military tourism events.</li> </ul>
--	--	--

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Providing in depth interpretation of museum objects at the visitors fingertips without putting these objects at risk of damage.</li> <li>• Digital representation of objects in three dimensions.</li> <li>• Development of collectible markers with AR tags allowing collectors to take objects home with them in the form of three dimensional representations.</li> <li>• More detailed interpretation of battlefields allowing visitors to view these landscapes through a “window to the past” using AR technology to portray battles and tactics from different angles.</li> <li>• Potential link between AR services and other existing games, such as challenge based games and location based games to aid.</li> </ul>	<p><b>E – Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> <li>○ Three dimensional illustration software.</li> <li>○ Develop AR tag reader (software)</li> <li>○ Historical and artistic research to guarantee accurate and realistic representations of objects or battles.</li> <li>○ Placement of markers or beacons within the museum or battlefield to feed information to the device.</li> </ul>
--	--	---

	<p><b>F – Real Time Strategy elements:</b></p> <ul style="list-style-type: none"> <li>• Real time Strategy games are best applied to the historical re-enactment products, portraying military confrontations on a virtual platform describing the battle the visitor is viewing, or re-enacting.</li> <li>• Applied to Military Museums - RTS games may be used to describe military technological advancements.</li> </ul>	<p><b>F – Real Time Strategy games:</b></p> <ul style="list-style-type: none"> <li>○ Research into aspects such as history, arts, clothing, architecture, commerce, gastronomy and military strategy.</li> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in</li> </ul>
--	--	---

		military history and heritage in Portugal.
<p>5 – Use of material and immaterial heritage in the development of Military Tourism Products.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote infrastructures raising awareness to their importance by challenging the player to share pictures of visited heritage, along with experiences provided by immaterial heritage through their social network while referencing the attraction, involving competitions and rewards;</li> <li>• Interaction between players created content;</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends)</li> </ul>	<p><b>A – Social media Games</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit and participate in Military Tourism activities and visits, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific objects or activities.</li> <li>• Allowing the visitor to create his own challenges, showing fellow players points he or she considered of particular interest.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events and attractions available to be included in the game.</li> </ul>
--	---	--

	<p><b>C – Role Playing elements:</b></p> <ul style="list-style-type: none"> <li>• Development of Role Playing Games to tell the story of attractions, and events identifying their place in history and national identity.</li> <li>• Encouraging players to participate in real world activities, such as historical re-enactments and visits to museums, military infrastructures and units depicted in the game, to gain points and advance along the story.</li> <li>• Players become co-creators of tourism products, by providing ideas which may be put in practice along the games.</li> </ul>	<p><b>C – Role Playing games:</b></p> <ul style="list-style-type: none"> <li>○ Programming the game namely, coding, creating a graphical user interface, resource management, loading and saving, etc.</li> <li>○ Creation of artwork to illustrate the game, design and animation of characters.</li> <li>○ Creation of plot and narrative hook to keep the player interested in playing, writing of dialogs between characters, etc.</li> <li>○ Create in game objectives to guide players through the game.</li> <li>○ Inventory of promotional stories and resources which entice players to develop interest in military history and heritage in Portugal.</li> </ul>
--	--	--

	<p><b>D – Location Based elements:</b></p> <ul style="list-style-type: none"> <li>• Military edified heritage can benefit from location based games, guiding visitors through their collections and challenging visitors to find specific objects.</li> <li>• Location based games can interact with visitors as they progress through the museum giving the user real time information about their visit.</li> <li>• Events and activities can also benefit from location based games, by getting players to sign in to their event upon arrival. Granting them points badges and rewards for participation.</li> <li>• Location based games can also be used to keep track of the amount of time the visitor takes during a visit adding a new element to gamming making this type of game a valuable asset when associated with other forms of gaming.</li> </ul>	<p><b>D – Location Based games:</b></p> <p>Much like the challenge based games, location based games require:</p> <ul style="list-style-type: none"> <li>○ An online Platform</li> <li>○ Link between locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi location detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Development of an up to date database with all information relating to upcoming events available to be included in the game.</li> <li>○ Narrative to aid visitation based on players location.</li> </ul> <p>Point, badge and achievement system to reward players for visits to museums or military tourism events.</p>
--	--	--

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Digital representation of heritage in three dimensions allowing visitors to see aspects of the monument not visible from the visitor’s perspective.</li> <li>• Development of collectible markers with AR tags allowing collectors to take objects home with them in the form of three dimensional representations.</li> <li>• More detailed interpretation of battlefields allowing visitors to view these landscapes through a “window to the past” using AR technology to portray battles and tactics from different angles.</li> <li>• Potential link between AR services and other existing games, such as challenge based games and location based games to aid.</li> </ul>	<p><b>E – Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> <li>○ Three dimensional illustration software.</li> <li>○ Develop AR tag reader (software)</li> <li>○ Historical and artistic research to guarantee accurate and realistic representations of objects or battles.</li> <li>○ Placement of markers or beacons within the museum or battlefield to feed information to the device.</li> </ul>
--	--	---

<p>6 – Creation of new tourism experiences based on Portugal’s Military History</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote infrastructures raising awareness to their importance by challenging the player to share experiences through their social network while referencing the attraction, involving competitions and rewards;</li> <li>• Interaction between players created content;</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends)</li> </ul>	<p><b>A – Social media Games</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>
---	--	--

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit and participate in Military Tourism activities and visits, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific objects or activities offering players new and personalized experiences to.</li> <li>• Allowing the visitor to create his own challenges and own experiences then sharing with fellow players points he or she considered of particular interest.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events and attractions available to be included in the game.</li> </ul>
--	---	--

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Digital representation of heritage in three dimensions allowing visitors to see aspects of the monument not visible from the visitor’s perspective.</li> <li>• Development of collectible markers with AR tags allowing collectors to take objects home with them in the form of three dimensional representations.</li> <li>• More detailed interpretation of battlefields allowing visitors to view these landscapes through a “window to the past” using AR technology to portray battles and tactics from different angles.</li> <li>• Potential link between AR services and other existing games, such as challenge based games and location based games to aid.</li> </ul>	<p><b>E – Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> <li>○ Three dimensional illustration software.</li> <li>○ Develop AR tag reader (software)</li> <li>○ Historical and artistic research to guarantee accurate and realistic representations of objects or battles.</li> <li>○ Placement of markers or beacons within the museum or battlefield to feed information to the device.</li> </ul>
--	--	---

<p>7 – Reinforcement of the link between military heritage through the development of new activities, and strengthening complementary activities.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote infrastructures raising awareness to their importance by challenging the player to share pictures of visited heritage, along with experiences provided by immaterial heritage through their social network while referencing the attraction, involving competitions and rewards;</li> <li>• Interaction between players created content;</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends)</li> </ul>	<p><b>A – Social media Games</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>
---	---	--

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit and participate in Military Tourism activities and visits, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific objects or activities offering players new and personalized experiences to.</li> <li>• Allowing the visitor to create his own challenges and own experiences then sharing with fellow players points he or she considered of particular interest.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events and attractions available to be included in the game.</li> </ul>
--	---	--

	<p><b>E – Augmented Reality elements:</b></p> <ul style="list-style-type: none"> <li>• Digital representation of heritage in three dimensions allowing visitors to see aspects of the monument not visible from the visitor’s perspective.</li> <li>• Development of collectible markers with AR tags allowing collectors to take objects home with them in the form of three dimensional representations.</li> <li>• More detailed interpretation of battlefields allowing visitors to view these landscapes through a “window to the past” using AR technology to portray battles and tactics from different angles.</li> <li>• Potential link between AR services and other existing games, such as challenge based games and location based games to aid.</li> </ul>	<p><b>E – Augmented Reality games:</b></p> <ul style="list-style-type: none"> <li>○ Inventory of resources liable to be interpreted through virtual reality software.</li> <li>○ Design of artwork to illustrate real world objects with AR animation.</li> <li>○ Three dimensional illustration software.</li> <li>○ Develop AR tag reader (software)</li> <li>○ Historical and artistic research to guarantee accurate and realistic representations of objects or battles.</li> <li>○ Placement of markers or beacons within the museum or battlefield to feed information to the device.</li> </ul>
--	--	---

<p>8 – Engagement of the business sector providing them with the tools to create Military Tourism Products.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Social media games allow a greater interaction between supply and demand where clients actively provide research data about their experiences.</li> <li>• Become a virtual market bringing together actors both from supply and demand.</li> <li>• Allowing companies to participate in the construction on military tourism products by analysing clients preferences and most shared experiences.</li> <li>• Production of social media games which engage military infrastructures at a virtual level. (for example a collaborative game in which the player must build military monuments such as castles and fortifications and the surrounding towns with the help of friends)</li> </ul>	<p><b>A – Social media Games</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>
---	---	--

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit businesses consume activities products and services with the aim to complete tasks, which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific objects or activities offering players new and personalized experiences to.</li> <li>• Allowing the businesses to set their own challenges and be part of the game.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events and attractions available to be included in the game.</li> </ul>
--	--	--

	<p><b>D – Location Based elements:</b></p> <ul style="list-style-type: none"> <li>• Military edified heritage can benefit from location based games, guiding visitors through their collections and challenging visitors to find specific objects.</li> <li>• Location based games can interact with visitors as they progress through the museum giving the user real time information about their visit.</li> <li>• Events and activities can also benefit from location based games, by getting players to sign in to their event upon arrival. Granting them points badges and rewards for participation.</li> <li>• Location based games can also be used to keep track of the amount of time the visitor takes during a visit adding a new element to gamming making this type of game a valuable asset when associated with other forms of gaming.</li> </ul>	<p><b>D – Location Based games:</b></p> <p>Much like the challenge based games, location based games require:</p> <ul style="list-style-type: none"> <li>○ An online Platform</li> <li>○ Link between locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi location detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Development of an up to date database with all information relating to upcoming events available to be included in the game.</li> <li>○ Narrative to aid visitation based on players location.</li> </ul> <p>Point, badge and achievement system to reward players for visits to museums or military tourism events.</p>
--	--	--

<p>9 – Inclusion of Local communities in the establishment of Military Tourism products.</p>	<p><b>A – Social media elements:</b></p> <ul style="list-style-type: none"> <li>• Games designed to promote infrastructures</li> <li>• Raise awareness to their importance</li> <li>• Challenge players to share pictures and experiences of visited heritage, through their social network.</li> <li>• Interaction between players created content;</li> <li>• Bringing together actors both from supply and demand.</li> <li>•</li> </ul>	<p><b>A – Social media Games</b></p> <ul style="list-style-type: none"> <li>○ To increase social media presence, Military Tourism infrastructures must focus on creating competitions to grant attractions more visibility</li> <li>○ Create a reward system, using points, levels, badges and leader boards, translated into real world rewards to motivate the player to participate.</li> <li>○ Develop a place where businesses can interact with clients offering them offers while they are playing.</li> <li>○ Design, artwork, animation, historical architectural, artistic research or the development of online games which approach history and identity of military infrastructures.</li> </ul>
--	---	--

	<p><b>B – Challenge Based elements:</b></p> <ul style="list-style-type: none"> <li>• Challenge players to visit participate in Military Tourism activities and visits, setting a series of tasks which may be organised in a determined theme over a determined path offering a specific set of experiences.</li> <li>• Challenging players to find specific objects or activities offering players new and personalized experiences to.</li> <li>• Allowing the visitor to create his own challenges and own experiences then sharing with fellow players points he or she considered of particular interest.</li> </ul>	<p><b>B – Challenge Based games:</b></p> <ul style="list-style-type: none"> <li>○ Online Platform</li> <li>○ User generated Content</li> <li>○ Linking of Locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Network system which connects players allowing them to challenge each other.</li> <li>○ Development of an up to date database with all information relating to upcoming events and attractions available to be included in the game.</li> </ul>
--	---	--

	<p><b>D – Location Based elements:</b></p> <ul style="list-style-type: none"> <li>• Businesses can benefit from location based games, guiding visitors through their sales points and challenging visitors to consume specific goods or services.</li> <li>• Business can also benefit from location based games, by getting players to sign in to their establishment upon arrival. Granting them points badges and rewards for participation, an improved form of loyalty programs.</li> <li>• Location based games can also be used to keep track of the amount of time the visitor takes during a visit adding a new element to gamming making this type of game a valuable asset when associated with other forms of gaming.</li> </ul>	<p><b>D – Location Based games:</b></p> <p>Much like the challenge based games, location based games require:</p> <ul style="list-style-type: none"> <li>○ An online Platform</li> <li>○ Link between locations to the Platform</li> <li>○ Development of GPS location data base with activities and sites</li> <li>○ Installation of indoor positioning software: beacons or Wi-Fi location detection</li> <li>○ Leader board system to stimulate competition</li> <li>○ Development of an up to date database with all information relating to upcoming events available to be included in the game.</li> <li>○ Narrative to aid visitation based on players location.</li> </ul> <p>Point, badge and achievement system to reward players for visits to museums or military tourism events.</p>
--	--	--

*4 Military Tourism Game Development Model: Own creation*

This table allows us to identify a series of possible applications of gamification elements to the problems identified in the National Military Tourism Charter, however due to the ever changing and fast moving nature of the technology industry and Tourism industry alike there is always room for improvement. However it was possible to identify some forms of games are specifically pertinent to resolve specific problems, for example, social media games are the most effective games when it comes to publicity marketing and Military Tourism visibility as a sector. As shown in the table to solve these issues in Military Tourism product development more often than not, the best solution is to unite a series of game elements and make use of individual elements from each of them. With the use of game technology, a new generation of Military Tourism products can be developed, and the tools supplied by gamification can not only aid in the fabrication of these products but also provide the all-important link between them by organising them into a series of points in a network and creating Military Tourism Routes. The use of gaming applied to tourism products will apply and energy to the territory, this energy may later be disseminated towards other aspects of society, i.e. through the creation of games to help tourists interpret a territory and its products, nothing states that the impetus applied to their creation may not be wielded towards local residents-

### **6.10 – Summary**

To summarise, this final chapter identified the importance of the research carried out in the chapters above recognizing the key concepts of the three initial pillars of this dissertation Routeing, Military Tourism and Gamification. Additionally, this chapter identifies different types of games, their defining characteristics and examples of their applicability to Military Tourism. The core of this chapter rests in the creation of the Military Tourism Game Development Model. A table which cross references the nine problems with Military Tourism as identified in the National Military Tourism Charter, with an explanation of various forms of games and their defining elements, and the suggested necessary procedures to create games which answer each particular problem.

On the whole, no one game could be identified to solve any particular problem, however the use of various elements from different forms of games can be the solution to these issues.

## Conclusions

---

Routes have an important part to play in the tourism system, striving to unite a wide and varied range of activities under the umbrella of a particular theme. This union of activities, goods and services has a beneficial effect on territories and should be considered as an important measure to stimulate economic growth. Routeing defined as the process of organising natural and manmade attractions along an accessible and enjoyable path rests on three fundamental pillars: People, Materials, Information and Finance. However the process of creating successful routes is slightly more complex. Nevertheless as seen through national and international examples if this process is carried out correctly they can be important tools for the development of the tourism industry, making use of available resources and reaching out to a diversified demand.

For a resource base the study object of this dissertation, Military Tourism in Portugal was selected as the desired segment of study. Military Tourism is a segment of Cultural and Heritage Tourism which aims at making use of military units, Military Museums, Businesses and associations linked to Portuguese military history, Battlefields, tangible and intangible military heritage, documental collections and other military assets. Based on data from the National Military Tourism Charter it was possible to identify a demand for Military Tourism products and this segment should be considered as an important axis for national tourism strategy. To develop Military Tourism products this dissertation adopts a technological approach to product development, considering gamification as a means of achieving new and differentiated products.

Following research from various authors gamification presents itself as a valuable asset for the development of the tourism industry. Gamification makes use of current ITC trends such as smartphones, mobile apps, and other elements linked to the Web 2.0. Associating these technologies to Military Tourism new interpretation models can be applied to existing products and aid the creation of new products. Applied to Military Tourism gamification poses a tremendous potential to expand, based on Portugal's rich military history and heritage and may become a lever to the development and promotion of this segment. For this reason different types of games were selected and their defining elements analysed, to gauge their applicability to Military Tourism. Culminating in a table which cross

references the nine problems with Military Tourism as identified in the National Military Tourism Charter, with an explanation of various forms of games and their defining elements, and the suggested necessary procedures to create games which answer each particular problem.

On the whole, no one game could be identified to solve any particular problem, however the use of various elements from different forms of games can be the solution to these issues.

This cross referencing is merely a suggestion for a gamified product creation model and should be considered as a recommendation deserving of further research.

Finally, and in answer to the objectives set at the start of this research project, following this theoretical and empirical research, it is possible to affirm that:

From other examples presented and discussed above in other countries, gamification has been used as a tool to motivate visitors to historical and cultural sites, and has shown signs of success.

Military Tourism has been identified as a segment of cultural Tourism, a segment in clear ascension showing all indications of becoming a success.

The dispersion of military units in Portugal, centred in three main poles is a positive indicator for routeing, allowing facilitated access to a series of units without having to juggle long distances and scarceness of resources.

In short, gamification is a tool for tourism product development with proven results, Military Tourism is a segment in clear expansion, requiring new products to grant it greater depth and economic return, and routing is the organisation of tourism products along a path or theme, which provides the economy with greater return, keeping tourists within a territory for longer. Therefore in answer to our starting question **“whether or not Gamification can be a leaver to stimulate visitation to historical and military heritage in Portugal, and consequently promote the establishment of Military Tourism Routes?”** and following the conclusions drawn from this research all indicators point to a positive answer. However as stated above, more research should be carried out to further substantiate the facts and theories defended in this dissertation.

Considering that society is travelling towards an ever more digital age, through the use of technology, games present themselves as a motivator for tourist visitation and as soon as this becomes evident to responsible entities, tourism strategy will follow.



## References

---

### Bibliographical references

Aimée, D., Saladino, A., Lourenço, A., Teixeira, A., Custódio, A., Costa, C., Caldarelli, C., Oliveira, C., Baptista, B., Carlan, C., Damo, D., Bandeira, D., Dantas, F., Lima, F., Souza, I., Sobrinho L., Cacciatores, L., Figueira, L., Oosterbeek, L., Cacciatores, S., Caldarelli, S. (2015) *Patrimônio Cultural, Direito E Meio Ambiente um Debate Sobre A Globalização, Cidadania E Sustentabilidade*. Volume I Multi ideia

Amorim, E., Figueira, L., Soares, C. (2015). *Planejamento e Organização do Turismo*. Editora Intersaberes

Avouris, N., & Yiannoutsou, N. (2012). A review of mobile location-based games for learning across physical and virtual spaces. *Journal of Universal Computer Science*, 18(15), 2120–2142. <http://doi.org/10.1016/j.compedu.2011.04.006>

Berg, I. & Berg, N. (2012) *Top Gear Motor Mania*, Random House

Bhattacharjee, A. (2012), *Social Science Research: Principles, Methods, and Practices*, 2nd edition ISBN-10: 1475146124

Bremner, C., & Nelson, P. (2014). *WTM Global Trends Report*, (November), 1–54.

Briedenhann, J., & Wickens, E. (2004). Tourism routes as a tool for the economic development of rural areas—vibrant hope or impossible dream? *Tourism management* volume 25

Burke, B. (2014). *Gamify: How Gamification motivates people to do extraordinary things* Gartner Inc

Buro, M. (2003). *Real-time strategy games: A new AI research challenge*. *IJCAI International Joint Conference on Artificial Intelligence*, 1534–1535.

Campos, J. & Preve, D. & Souza, I. (2015) *Patrimônio Cultural, Direito e Meio Ambiente: um debate sobre a Globalização, Cidadania e Sustentabilidade*. Vol.1 Multideia editor, ISBN 978-85-8443-049-9

Carta Nacional de Turismo Militar (2015), *Relatório Geral – Dados para apoio a discussão pública*. Instituto Politécnico de Tomar.

Chandralal, L., & Valenzuela, F. (2013). Exploring Memorable Tourism Experiences: Antecedents and Behavioral Outcomes. *Journal of Economics, Business and Management*

Coelho, J. (2011). *Turismo Militar como segmento do Turismo Cultural: Memória, Acervos, Expografias e Fruição Turística* – Instituto Politécnico de Tomar Available from: <http://webmanager.ipt.pt/mgallery/default.asp?obj=4048>

Costa, C., & Panyik, E., & Buhalis, D. (2013). *Trends in European Tourism Planning and Organisation*. Channel View Publications

Csapo, J. (2012). *The Role and Importance of Cultural Tourism in Modern Tourism Industry, Strategies for Tourism Industry - Micro and Macro Perspectives*, Dr. Murat Kasimoglu (Ed.), ISBN: 978-953-51-0566-4, InTech, Available from: <http://www.intechopen.com/books/strategies-for-tourism-industry-micro-and-macroperspectives/the-role-and-importance-of-cultural-tourism-in-modern-tourism-industry>. Digital Tourism Think Tank

Csapo, J., & Berki, M. (2008). *Existing and future tourism potential and the geographical basis of thematic routes in south Transdanubia, Hungary*. In International Conference of Territorial Intelligence, Besan,

Dunkley, R., & Morgana, N., & Westwood, S. (2010). Visiting the trenches: Exploring meanings and motivations in battlefield tourism *Tourism Management* 32 Elsevier

- Egger, R., & Bulencea P. (2015). *Gamification in Tourism: Designing Memorable Experiences* BoD Books on Demand
- Figueira, L. (2013). Roteirização do Turismo: Uma Abordagem Preliminar à “apresentação-interpretação” do território. *Revista Turismo & Desenvolvimento*, 20, 121 – 133.
- Figueira, L. (2013) *Manual de elaboração de Roteiros de Turismo Cultural*. CESPOGA - Instituto Politécnico de Tomar
- Gretzel, E. C. U. (2012). *Social Media in Travel, Tourism and Hospitality*.
- Hall, C., & Gossling, S., & Scott, D. (2015). *The Routledge Handbook of Tourism and Sustainability*. Routledge 2015
- Ham, S., & Brown, T., & Curtis J., & Weiler, B., & Hughes, M., & Poll, M. (2007). *Promoting Persuasion in Protected Areas: A guide for managers*. Sustainable Tourism CRC
- Issac R. (2008). *Understanding the Behaviour of Cultural Tourists Towards a Classification of Dutch Cultural Tourists*. NHTV Expertise Series
- Jafari, J. (2000). *Encyclopedia of Tourism*. Routledge
- Jull, J. (2003). *The Game, the Player, the World: Looking for a Heart of Gameness*. Level Up conference in Utrecht
- Kaplan, E. & Hegarty, C. (2006). *Understanding GPS: Principles and Applications*, 2nd edition Artech House, Boston
- Kim, J. (2014). *The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences*. Elsevier

Kirkpatrick, G. (2015). *The formation of Gaming Culture: UK Gaming Magazines, 1981 – 1995*, Palgrave Macmillan

MacNulty, P., & Cleverdon, R. (2011). *Handbook on Tourism Product Development*. UNWTO

Meyer, D. (2004). *Tourism Routes and Gateways: Key Issues For The Development Of Tourism Routes And Gateways And Their Potential For Pro-Poor Tourism*. Overseas Development Institute

Miles, S. (2012). *Battlefield Tourism: Meanings and Interpretations*. University of Glasgow

Nunes, J. (2012). *Interpretação Turística Na Qualificação Do Destino: Proposta De Modelo Aplicado Ao Centro Histórico De Tomar*. Instituto Politécnico de Tomar

OECD, (2009). *The Impact of Culture in Tourism*, OECD publishing, France

Ponsen, M., & Spronck, P. (2004). *Improving Adaptive Game AI with Evolutionary Learning*. Proceedings of the Computer Games: Artificial Intelligence, Design and Education Conference, (Manslow 2002), 389–396. <http://doi.org/10.1.1.109.6055>

Quivy, R., & Campenhoudt, L. (2008). *Manual de Investigação em Ciências Sociais*. 5<sup>a</sup> Ed., Trajectos, Gradiva

Richards, G. (2014). *Tourism trends: The convergence of culture and tourism*. Academy for Leisure NHTV University of Applied Sciences Available at:  
[https://www.academia.edu/9491857/Tourism\\_trends\\_The\\_convergence\\_of\\_culture\\_and\\_tourism](https://www.academia.edu/9491857/Tourism_trends_The_convergence_of_culture_and_tourism)

Richards, G & Smith, M. (2013). *The Routledge Handbook of Cultural Tourism*. Routledge

Richards, G. (2011). *Tourism trends: Tourism, culture and cultural routes*. Available from: [https://www.academia.edu/1473475/Tourism\\_trends\\_Tourism\\_culture\\_and\\_cultural\\_routes](https://www.academia.edu/1473475/Tourism_trends_Tourism_culture_and_cultural_routes)

Saldanha & Batista (2009). *A Concepção do Role-Playing Game (RPG) em jogadores sistemáticos*. *Psicologia Ciência E Profissão*, 29(4), 700–717.

Schell, J. (2008). *The Art of Game Design a Book of Lenses*. Elsevier Inc.

Signoretti, A., Paradedá, R., Câmara, M., & Signoretti, M. (2014). “Turistificando” a capital do RN com o Viva & Conheça Natal. *Revista Turismo E Desenvolvimento*, (203 – 211). <http://doi.org/10.13140/2.1.2244.9925>

Smith, V. L. (1998). War and tourism. *Annals of Tourism Research*, 25(1), 202–227. [http://doi.org/10.1016/S0160-7383\(97\)00086-8](http://doi.org/10.1016/S0160-7383(97)00086-8)

Su, X. & Teo, P. (2009). *The Politics of Heritage Tourism in China: A View from Lijiang*. Routledge

Tunbridge, J. (2004). The Churchill–Roosevelt Bases of 1940: The Question of Heritage in their Adaptive Reuse, *International Journal of Heritage Studies*, 10:3, 229-251, DOI: 10.1080/1352725042000234433 Available from: <http://dx.doi.org/10.1080/1352725042000234433>

TURISMO DE PORTUGAL, (2015). *Turismo 2020 Cinco princípios para uma ambição Tornar Portugal O Destino Turístico mais Ágil E Dinâmico Da Europa*. Available at: <http://www.turismodeportugal.pt/PORTUGUÊS/TURISMODEPORTUGAL/DESTAQUE/Documents/turismo-2020-cinco-principios-para-uma-ambicao.pdf>

TURISMO DE PORTUGAL. *Plano Estratégico Nacional de Turismo Revisão de objetivos 2013-2015*

Weber, J. (2012). *Gaming and Gamification in Tourism 10 Ways to Make Tourism More Playful*

Xu, F., Weber, J., & Buhalis, D. (2013). *Information and Communication Technologies in Tourism*, 525–537. <http://doi.org/10.1007/978-3-319-03973-2>

Zeng, B., & Gerritsen, R. (2014). *What do we know about social media in tourism? A review*. Charles Darwin University, Australia

Zeng, B. (2013) *Social Media in Tourism*. The Northern Institute, Charles Darwin University, Australia

### **Digital References**

Cambridge Dictionaries Online <http://dictionary.cambridge.org/pt>

Dicionário online de Português

<http://www.dicio.com.br> Accessed 2/10/2015

ITP, I.P. Turismo de Portugal (2015)

<http://www.turismodeportugal.pt/Português/ProTurismo/estatísticas/Pages/Estatísticas.aspx>

Jornal TSF

<http://www.tsf.pt/arquivo/2004/ciencia/interior/portugal-1111-retoma-conquista-de-soure--722070.html>

Ministério da Defesa Nacional

<http://www.defesa.pt/Paginas/mdneinstitutopolitecnicodetomarparceirosnoturismomilitar.aspx> accessed 13 10 2015

Oxford English Dictionary online <http://www.oxforddictionaries.com>

Portal oficial de Turismo de España (<http://www.spain.info>)

## Annexes



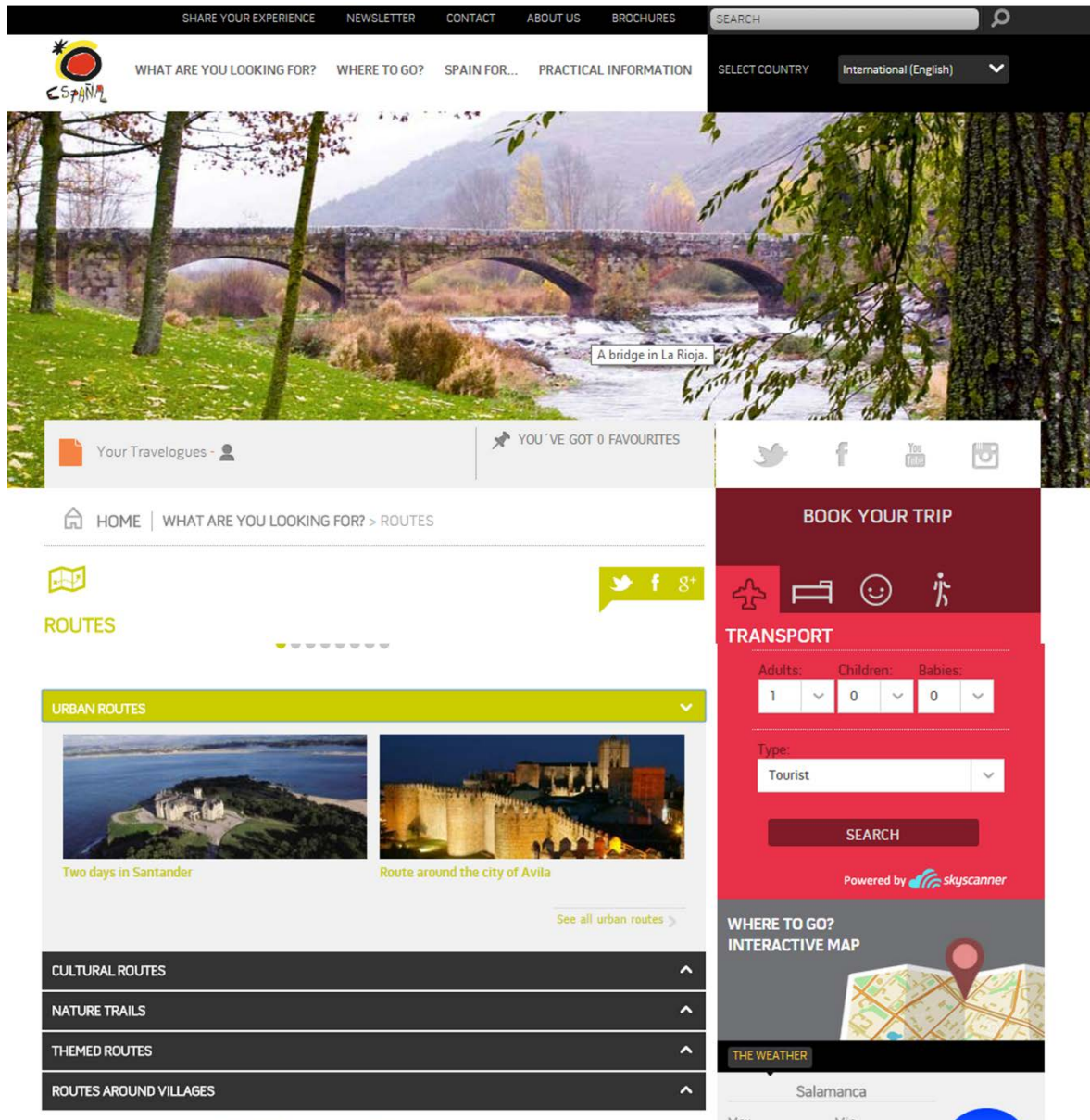
Annex 1- Tourism Statistics UNWTO 2015



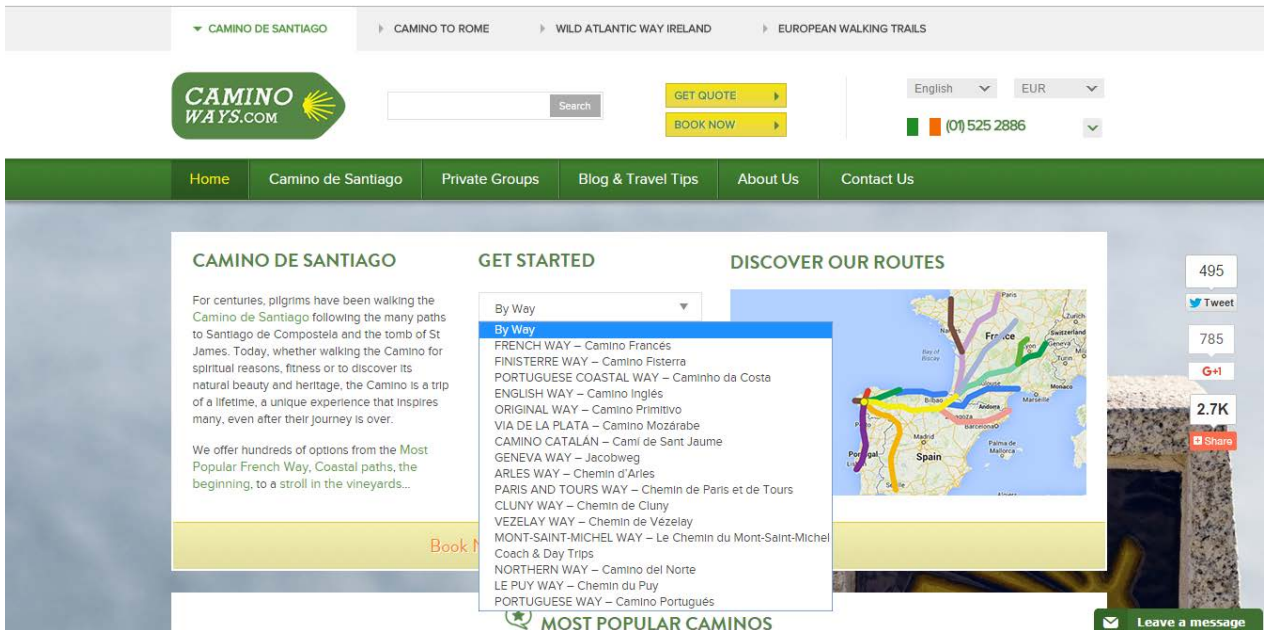
Annex 2- Tourism 2020 strategic document



*Annex 3 - Example of Military Tourism Products - Own elaboration*



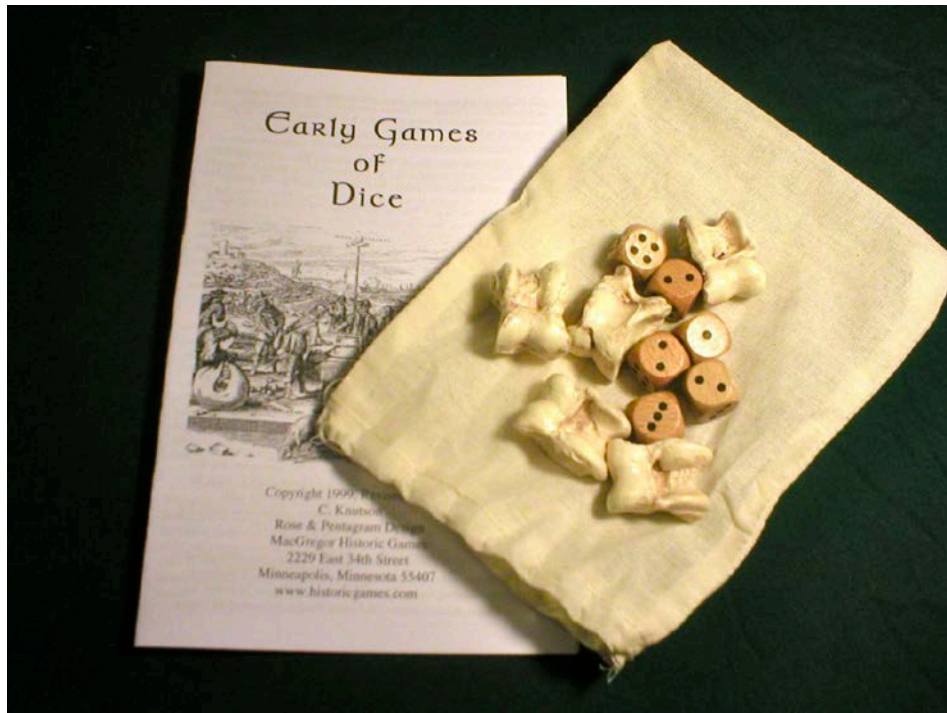
Annex 4 - Routes on Visit Spain Website



Annex 5 - Camino de Santiago routes



Annex 6 - Central Tourism Entity backs Military Tourism: Source: Turismo Centro Facebook Page



Annex 7- Early games of Dice and Knuckle bones, Source: [http://historicgames.com/xcart/knucklebones\\_dice\\_set.html](http://historicgames.com/xcart/knucklebones_dice_set.html)



Annex 8 - Magic the Gathering Card Game. Source: <https://crisiscreativa.wordpress.com/2012/05/>



Annex 9- Second Life (Left) Eve Online (right) Online MMORPG



Annex 10 Risk (Left) Axis and Allies (Right) source Amazon.com



Annex 11 – Evolution of Everquest (1999) RPG avatar



Annex 12 - World of warcraft MMORPG source: [www.themetropolis.com](http://www.themetropolis.com)



Annex 13 - Diablo Leader board system source: geektyrant.com