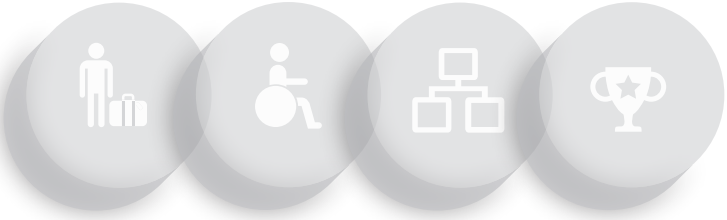
Politecnico di Milano
School of Design
Master Degree in Product Service System Design
Academic year: 2012/2013

GAME SERVICE SYSTEM FOR CRITICAL THINKING

A LUDIC PARADIGM TO CONVEY AWARENESS TOWARDS ACCESSIBILITY FOR ALL



Anna Maggi
783073
Relator
Maresa Bertolo
Co-relators
Davide Fassi
Ilaria Mariani

INDEX OF CONTENTS

INDEX OF IMAGES

Introduction

CHAPTER 1. GAME

CHAPTER 2. GAME DESIGN AND PSSD

CHAPTER 3. TRAVEL AND TOURISM

CHAPTER 4. URBAN ACCESSIBILITY

CHAPTER 5. TARGET AND CONCEPT

CHAPTER 6.PROJECT

CHAPTER 7. CASE STUDY: VERONA

Abstract - English

The design output of this dissertation is the development of a urban game for tourists who aim to explore in alternative way the Italian cities with a high level of artistic, cultural and historical.

Designing the project I have adopted an interdisciplinary approach, based on the design methodologies of the Product Service System Design and Game Design – two disciplinary fields which share some approaches and practises – which led me to realize a system of game and service, a Game Service System .
The analysis of the target range, the study of the Italian tourist market and the research on the conditions of the urban tissue in many Italian cities (these topics are examined in the third chapter of the essay), led me to design a service offer which would like to reach two categories of users: on one hand the direct target, which is composed by visitors who will use the service to explore and discover the city; on the other hand the indirect target, composed by the Municipalities of the locations which host the service offer (the service is indeed a framework, composed by base elements and values which can be adapted to different locations).
The direct users of the service have access to an alternative guided tour of the urban space, which - through an experience of urban game - guides them to discover the local culture and to reach a superior level of awareness on the issue of urban Accessibility for All. The service indeed acts as a ludic paradigm to convey Awareness on the subject of Accessibility for All and to make users aware on this actual issue. Furthermore, the project provides a system of feedbacks and suggestions, which aims to foster the public authorities to pay more attention on the issue of urban accessibility, both for visitors and citizens.
The municipalities, and in particular local and regional authorities dealing with urban planning, constitute the indirect target of my service offering, which is directly addressed to a user base composed by local visitors – or Zero mile Tourists – and citizens of the place which hosts the service. They are the players of a urban team race which develops itself in stages spread around the city centre; the game path leads participants to explore the city urban tissue and to discover local curiosities of artistic-cultural nature; in

addition, users move around the game areawith some rules and constraints which bring them to walk in the shoes of people with mobility impairments (individuals on wheelchair, but also elderly people, parents with strollers and tourists with heavy trolleys, to mention a few examples).
To incline direct users towards the topic of accessibility, the project puts players in direct contact with temporary and permanent architectural barriers which normally they would not notice: participants have to drive vehicles on wheels, shopping carts. Driving carts, visitors are hampered by architectural barriers and in consequence they gain awareness on the issue (as I have observed in the playtesting session). The stages of the race have been studied to guide users among the main tourist attractions and simultaneously to put them in contact with obstacles which impede the access to public spaces. Every team which participates to the urban race is accompanied by a game “inspector” who controls that the rules and constraints are respected during the gaming session and marks on a paper map of the city the presence of barriers around the area. At the end of the race the inspectors deliver the map to the Town Hall; the service does not provide only a tourist-ludic experience, but it also contributes to help local Municipality with the administration of public spaces.

Abstract - Italiano

La presente dissertazione ha avuto come output progettuale lo sviluppo di un gioco urbano per turisti che vogliono esplorare in modo alternativo le città italiane ad alto interesse storico, artistico e culturale.

Per realizzare tale progetto ho adottato un approccio interdisciplinare basato sulle metodologie progettuali del Product Service System Design e del Game Design – due ambiti disciplinari affini che condividono alcuni approcci e pratiche – che mi ha portata alla realizzazione di un sistema di gioco e servizio, ovvero un Game Service System.
L'analisi del target di riferimento, lo studio del mercato turistico Italiano e la ricerca sulle condizioni urbane delle città italiane ad alto potenziale turistico (che interessano il terzo capitolo della dissertazione) mi hanno portata a formulare una proposta di servizio che interessi due distinte categorie di target: da un lato un'utenza diretta, ovvero i visitatori, che utilizzeranno il servizio per esplorare la città; dall'altro un target indiretto, costituito dalle Municipalità delle location che ospitano il servizio (il servizio infatti si propone come un framework, composto da alcuni elementi e valori di base declinabili su diverse realtà locali).
Gli utenti diretti del servizio hanno accesso ad una visita turistica alternativa dello spazio urbano, la quale – attraverso un'esperienza di gioco urbano - li guida alla scoperta della cultura locale e li porta ad un livello di consapevolezza maggiore riguardo l'accessibilità urbana per tutti. Il servizio infatti si propone come paradigma ludico per veicolare consapevolezza sulla tematica dell'Accessibility for All e sensibilizzare gli utenti verso tale problematica. Inoltre, il progetto attraverso un sistema di suggerimenti e feedback, intende stimolare le autorità competenti verso una maggiore attenzione riguardo l'accessibilità urbana, per i visitatori e per i cittadini.
Le municipalità, e in particolare gli enti territoriali che si occupano della pianificazione urbana, costituiscono infatti il target indiretto della mia proposta di servizio, il quale si rivolge direttamente ad un bacino di utenza composto principalmente da turisti di prossimità – o a chilometri zero - e cittadini dei luoghi che ospitano il servizio-gioco stesso.
Essi sono i giocatori di una corsa urbana a squadre che si sviluppa a tappe distribuite nel centro urbano della città; il percorso di gioco li porta ad esplorare il tessuto urbano e a

scoprire alcune curiosità artistico-culturali locali; inoltre gli utenti si muovono con alcuni vincoli di gioco che li calano nei panni di persone con disabilità di tipo motorio (individui su sedia a rotelle, ma anche anziani, genitori con passeggino e turisti con pesanti bagagli su ruote, per citare alcuni esempi).

Per avvicinare l'utenza diretta del servizio al tema dell'accessibilità, il progetto mette i giocatori a diretto contatto con le barriere architettoniche permanenti e temporanee che normalmente essi non noterebbero: i partecipanti devono infatti guidare un veicolo su ruote, un carrello della spesa. Guidando I carrelli i visitatori sono così ostacolati dalle barriere architettoniche e acquisiscono consapevolezza sulla problematica (come ho osservato nella fase di playtesting). Le tappe della gara infatti sono state studiate per guidare i giocatori tra le maggiori attrazioni turistiche, portandoli contemporaneamente a contatto con le barriere architettoniche che ostacolano l'accessibilità agli spazi pubblici. Ogni squadra che partecipa alla corsa urbana è accompagnata da un "ispettore", il quale controlla che le regole di gioco siano rispettate durante la partita e che si occupa di segnare la presenza di tali barriere architettoniche su una mappa della città, che consegnerà poi al Comune. Il servizio non fornisce solo un'esperienza ludico-turistica, ma contribuisce ad aiutare la municipalità locale nell'amministrazione degli spazi pubblici.

We can play any games we want.
We can create any future we can imagine.

McGonigal (2010) *Reality is Broken*: p.15

We've identified key innovations in the emerging landscape of alternate reality design. And we've tracked how game design is creating new ways for us to work together at extreme scales, and to solve bigger real-world problems.

McGonigal (2010) *Reality is Broken*: p.346

INTRODUCTION

Why did I choose to build my thesis around the topic of game?

During the formative path that has accompanied and led me in the past five years I came in contact with various Design disciplines, including Product Design, Communication and Graphic Design, Co-design with citizens, Service Design, Design for All and Game Design, to mention a few.
Thanks to the multifaceted teaching that is proposed in *Politecnico di Milano*, I have learned to observe things with an "interdisciplinary" eye. I learned that no field of Design is a separate world, but that often the best design strategies involve synergies between figures from various creative and scientific environments.
My main task as a Master's degree student in Product Service System Design is to analyze modern media, tools and innovative ways to lead people into reflecting on issues that belong to everyday life, thus, opening new viewpoints: the discipline does not just propose solutions, it explores them, also raising new questions. In this standpoint, games could be a good tool for exploring creative solutions in different service fields.

Game has always been part of human existence and often accompanied mankind in the development of the survival skills. This behavior is typical if we take a look at other animals: by observing two lion cubs chasing and biting each other we understand they do it for amusement. Unconsciously they are improving their reflexes and their ability to hunt preys, and by instinct they acquire and train their skills within certain limits, for example avoiding to hurt each other.[1]

1 The example derives from the analysis made by Johan Huizinga on the games. Huizinga is one of the main historical figures for the Game Studies. He wrote the essay *Homo Ludens* in 1938, which has been a source of inspiration over the years. It is actually on the ground of the Game Studies and Game Design disciplines. A crucial theory contained in the text is the concept that to play is a voluntary activity but it was born as a learning tool for children and puppies: they are driven by instinct to play and develop mental and physical abilities.

And therein we can find the key to understand the potential of the game immersed into a service system: the learning feature of the game is a peculiarity for its application into the Service Design field, as the Games for Change corporation has declared in its manifest: Catalyzing Social Impact Through Digital Games.[2]
Many theorists from various disciplines have highlighted the ability of game to transmit knowledge, contents and skills to players (Jane McGonigal, Raph Koster and Steven Johnson, to mention a few). Since childhood games accompanies us to overcome obstacles, spurring players on a creative process of problem-solving. These skills to solve problems accompanies us during our life, characterizing many daily activities, for instance during our work time (Anolli, Mantovani, 2011; McGonigal, 2011).

I share the vision of the game as a learning tool, since the game (which has always been a crucial part of my life) have really helped me to hone my creative, deductive and logical skills, my socio-behavioral attitude and my mental and physical coordination. By playing I have gained confidence in myself, learned to count and draw within the edges, to share my toys with friends and to put my ideas across. My passion for the game has deep roots, which have seen me grow from a simple player to a person who is actively involved in designing games as elements of service systems.
The didactic path that I have chosen in the last years led me to come into contact with the Game Studies and the Game Design disciplines. I have read and analyzed many essays on the topic of game; comparing the texts of the various scholars I have identified Jane McGonigal's work as the closest to my way of thinking and to my view on games.
In the essay *Reality is Broken* (2011), she argued that game is probably one of the most promising tools for the human future, to solve the social isolation in which men has been immersed after the personal technology development. It is a medium to change people's vision of the life itself. Moreover games are an important tool to empower people, bringing them to a collaborative struggle against the big problems of the world. Their ability is given by

2 It is the mission statement of the corporation (on the official website *gamesforchange.org*). The argument is analyzed in depth at paragraph 2.1.2

the fact that players feel the need to solve the problems proposed by games.
This need arises from some intrinsic factors in the game, as the gratification that the player receives during the gaming session. The journalist and writer Steven Johnson (2005) argued that the gratification is everywhere in the world of games, and it is precisely this that makes the play a need. In specific, it makes it necessary to resolve the problems offered by the gaming system, as to each challenge resolved corresponds a reward. The rewarding system and need to play are discussed in detail at paragraph 1.3.
This feature of the game, as a need of the individual, makes it a tool to foster player's participation and awareness on actual issues (McGonnigal, 2011).

Although I identify her vision as optimistic and in some traits overly positive, I agree with the concept only at its base; I recognize that games have a great power which can be expressed only if players will contribute actively to its implementation in their daily life. There are numerous studies which describe how the game introduces itself in our daily life, infusing many aspects of our lives beyond the pure entertainment; this feature of the game is an important element for my research in order to create a system that combines the disciplines of Game and Service Design. Voluntary ludic spirit is the engine capable to push the evolution of games toward service systems, blurring the boundaries between the Game Design and the Service Design fields. I am confident that in a close future the game itself will become an important issue inside the Service System Design field.

«extremely powerful tool for inspiring participation and motivating hard work»
McGonigal (2011: p.33)

At this point I would like to focus on the didactic component of the game. I will make an example, based on the essay by Steven Johnson (2005): do you know what kind of person plays hours and hours with a videogame, solving a number of complex logic-based puzzles, but would actually refuse to finish their daily homework?
They perceive the game as a recreational activity, even if it is able to transfer them an enormous amount of knowledge,

Image 0.01: the Prussian lieutenant Georg Leopold Von Rewitz playing Kriegsspiel; illustration of 1812, n.p. author

without they really realizing it.[3] From this point of view, playing is a great source of unconscious learning. Game is a medium to develop the innate human quality of problem-solving, besides developing logical thinking, creativity, imagination, lateral thinking and the ability of *telescoping.*[4] The last ability of the list consists in the capacity to manage multiple tasks simultaneously[5], focusing on immediate issues without losing the global overview.

We can consider a good example the military game *Kriegsspiel*, a German game created on 1812 to train officers of the Prussian army in military strategies.

In the image *1.01* - which appears in many essays on the war games - it is depicted a gaming session with the boardgame *Kriegsspiel*, where the Lieutenant is training himself and other officials in the creation of war strategies. He refined the game invented by his father, as a strategic training because the notions learned during the gaming session will find an application in the real world.

In order to deeply understand this concept, it is important to

3 I would like to specify that not all games are designed to be bearers of knowledge and contents, but a large portion of them effectively stimulates the player to develop logical, deductive and physical capabilities and to go beyond his/her current limitations.

4 The term comes from Steven Johnson (2005) *Everything bad is good for you.*

5 The ability to cope with many issues and information is the multitasking skill (Jenkins, 2009) which is defined by the scholar as «The ability to scan the environment and shift focus onto salient details».

know that games are essentially models of reality and they teach our minds how to recognize real pattern within the game system. This feature of games was described by many scholars; for instance the game designer Raph Koster in his essay *A Theory of Fun for Game Design* (2005: p.34-35) argued that games «are iconic depictions of patterns in the world. They have more in common with how our brain visualizes things than they do with how reality is actually formed». The concept of pattern is deeply explained, within an architectural background, in the essay *The Timeless Way of Building* (Alexander, 1979). Alexander argued that patterns are the constitutive elements of the world «they are the atoms from which a building or a town is made». His vision of pattern is associated to urban man-made elements: a building, a park, and also a city, are made of patterns of events and patterns of space. Every place is given its attributes by particular patterns of events that keep on happening there, shaping the local culture.

But the concept of pattern as a constitutive atom is applicable to every element. I will borrow an example from Johnson (2005): if we see a cat in a cartoon, we notice that the cat is definitely not real; there are no details to confirm the truthfulness of the animal. Yet we understand that it is a cat simply because our mind recognizes the pattern. The same can be said on houses and hotels in Monopoly or mushrooms in Super Mario, to mention a few.

We can conclude that notions acquired during the gaming experience will be useful for users in the real world, because they take place within a world based on pattern of reality.

The link with the reality assumes a crucial role if we consider the effects game can have in our ordinary life.

Mary Flanagan (2009) in her essay *Critical Play* argued that during many games players «experience the game as at least a part of ordinary life» (2009: p.197). Thanks especially to new technologies, the fusion between the reality and the world of games, led Flanagan to draft the concept of *critical play*, which means «to create or occupy play environments and activities that represent one or more questions about aspects of human life» (2009: p.6). A ludic practice can solicit a critical reflection on society and on current issues. This approach is a common ground for the innovation in the

disciplines of Game and Service Design.

Another element located in the common ground between the two disciplines is the user experience, which defines the activities of games and services: to design a service means to study the target audience, the problems they have to face in everyday life and potential ways to solve them (or at least suggest reflections on the issues); to design a game means to define a target range with particular skills, desires, needs and expectations and then to create an experience based on these features. The experience can be designed to create a perceivable meaning, to shape the "meaningful play". The concept was defined by Salen and Zimmerman (2004: p.34)[6] through two definitions:

> meaningful play in a game emerges from the relationships between player action and system outcome; it is the process by which a player takes action within the designed system of a game (...) the meaning of an action in a game resides in the relationship between action and outcome;

> meaningful play occurs when the relationships between actions and outcomes in a game are both discernable[7] and integrated[8] into the larger context of the game. Creating meaningful play is the goal of successful game design.

«We can manifest a different future. It is not enough to simply call for change and then hope for the best; we need interventions at the level of popular culture»
Flanagan (2009: p.261)

Mentioning again Flanagan's essay (2009), the play experience can be designed to relate players with actual issues that pervade society, through the game system. Zimmermann argued about Flanagan's paper «The core issue of the book is creating forms of play that ask important questions on human life. *Critical Play* should be read by anyone who cares about the cultural importance and

6 Katie Salen, Eric Zimmerman (2004) Rules of Play. MIT Press: chapter 3, p.4

7 Discernable means that the result of the game action is communicated to the player in a perceivable way

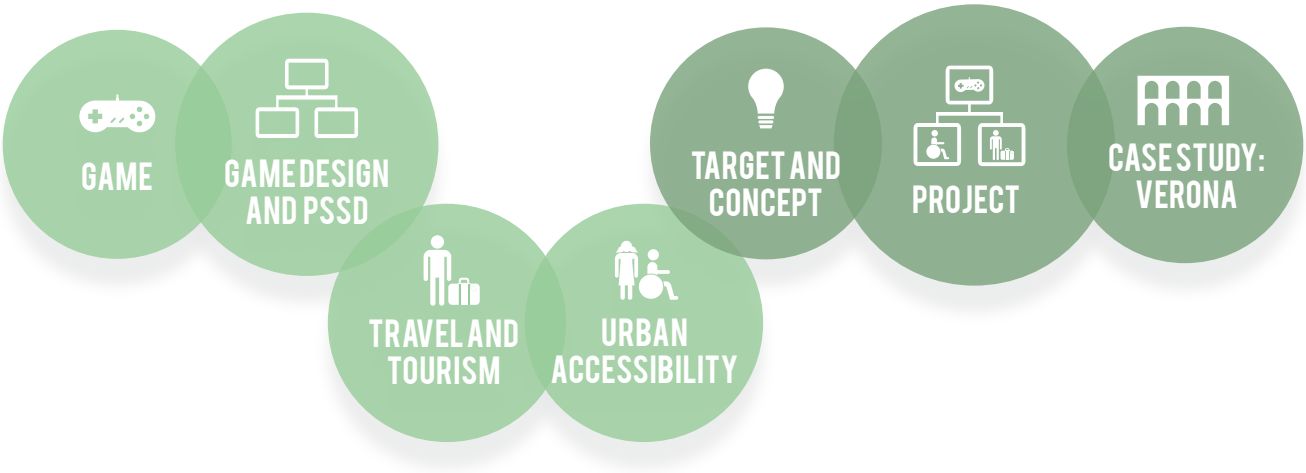
8 Actions a players take are integrated into the larger context of game if they not only have immediate significance in the game, but also affect the play experience at a later point in the game.

future potential of games». The new challenge for designers is to offer many possibilities in games with a wide range of interests and social roles. Flanagan (2009) argued that through games, designers can foster people intervention towards a different future.
In the essay *Reality is Broken* (McGonigal, 2011: p.144) the author stated how in the future many alternative realities will be proposed and that their design won't be a task just for game designers. This implies the need for collaboration among different disciplines to shape meaningful game experiences for users, in which to every action corresponds an outcome which would make reflect on actual issues to sensitize society on their existence and maybe push towards their resolution or improvement.

I aim to design a Game Service System, within which the ludic paradigm acts as a medium able to foster awareness on the actual issue of Accessibility for All and to promote social innovation in this field. Through a tourist experience of ludic nature, players will be culturally and socially enriched, gaining a new perspective on daily elements which compose the urban tissue of a location and which are perceived as architectural barriers by the minority of the people.
I am addressing the offering also to an "indirect" target, the municipalities of the locations which host the service. They gain visibility between visitors and citizens and avail of the service for the local Administration, because participants help mapping the architectural barriers and verifying public spaces are adapted to the actual Laws and Decrees on the accessibility.

This is the core of my project, which is composed by many different elements that combine in a system; I will analyze them in the course of my dissertation.
The chapters which compose this essay represent the stages for the development of a project, from the theory to the desk and field research until the creation of the project itself, which incorporates concepts from other chapters and connects them towards a project that is an original contribution to knowledge.

Image 0.02: the main areas of the thesis



The dissertation presents some Case Studies that enrich the dissertations and support the research. They are proposed in a defined form which depicts their main traits and they can be of two typologies: Game and Service.

Games are characterized by the icon

Services are marked by the symbol

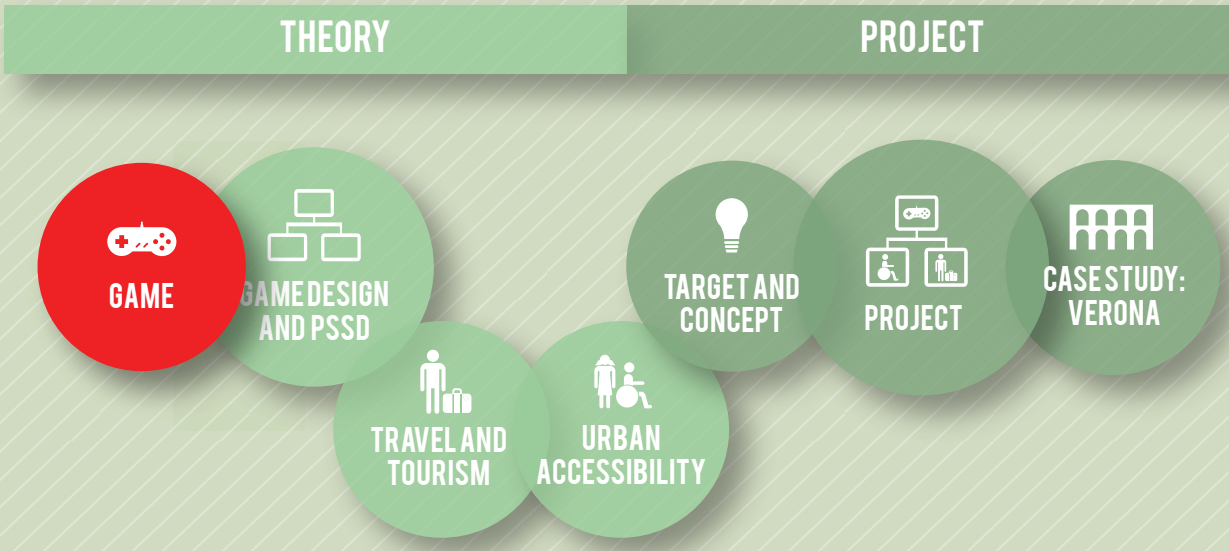








1. GAME


THEORY
PROJECT
GAME
GAME DESIGN AND PSSD
TRAVEL AND TOURISM
URBAN ACCESSIBILITY
TARGET AND CONCEPT
PROJECT
CASE STUDY: VERONA

For many game players, games exist for entertainment, for passing the time, for fun.
They are a diversionary activity, meant for relaxation or distraction—a "not-work" space where players are free to engage in fantasy narratives, amazing feats, and rewarding tasks. But what if certain games have become something more? What if some games, and the more general concept of "play," not only provide outlets for entertainment but also function as means for creative expression, as instruments for conceptual thinking, or as tools to help examine or work through social issues?

Flanagan (2009: p.1)

As I mentioned in the general introduction, the main goal of this essay is to investigate the role of game as element of a service system.

To insert the gaming element within a service system it is necessary to analyze it, understanding its characteristics and potential.
The service system will be deepened in the chapters 5 and 6, but the first part of the dissertation examines the Game Studies and their role within the contemporary society. In the first chapter we will define the concept of game and outline a definition of game and play.
The analysis aims to study the evolution of the game, or more precisely the development in the conception of the game and of its application to different fields of the daily life.
Drafting this chapter I have deepened the theories of designers and scholars from different design disciplines and fields of science, which sustained me to understand the development of game, over time up to the present situation; nowadays the game is not perceived as pure entertainment, but as bearer of change in the daily life.

The game becomes a medium which can convey contents and knowledge, guiding players towards a critical thinking on current issues. Writing the chapter I referred at first to the work of historical game designers and scholars who founded the Game Studies (for instance Huizinga and Caillois, as we will see shortly in the chapter), arriving then to study contemporary thinkers; for example, some names which often recurs in my dissertation are Jane McGonigal and Mary Flanagan.

In summary, this chapter explores the Game Studies discipline and its application towards the design of a service system. It examines various definitions of game and play, created by some of the most esteemed scholars, academics and designers from different fields. All these topics will shed light on how games could be a force of change in the daily life.

1.1 Game Studies

Before delving into the discipline of Game Design and its more contemporary practices, I believe it is fundamental to analyse some elements and basic concepts. For example a question that may seem obvious like “What is a game?” requires a deep reflection in order to have an answer.
The discipline of Game Studies is recently born and it bears different fields of study which have contributed to its formation. It focuses on the study of game and play, their relationship with players and their role within the society.
Game Studies employs an amount of methodologies both with humanities and social science approach, within an interdisciplinary perspective that involves specialists from other fields, for instance Psychology, Anthropology, Communication and Computer Science.
Since Game Design is going towards a multidisciplinary approach - involving figures and methodologies from other disciplines - game scholars and designers started to build a dictionary to create a common language which must be shared and understood by diverse professional figures.
To design a project of Game Design with solid basis, it is necessary to clarify the meaning of some terms which recur in the Game Studies discipline.
This paragraph is dedicated to the comprehension of the question “What is a game?”
This is a crucial question for someone who, like me, wants to design a game and which therefore requires a response. This answer can only start from the definition of game and the characteristics that make it an interesting design element. This is the topic of the paragraph.
There are several categories of games: boardgames, videogames, card games, urban games, to mention a few. They use different tools to create particular experiences, but do they have something in common? What is the *trait d’union* between the different games?
To introduce “What is a game” in relation with the players and within the society, we have to investigate on what is the game and what is the action of play, their relationship and peculiarities.

1.1.1 Play and Game

What is the difference between "play" and "game"? Which is their relationship?
Many game designers and modern scholars have tried to determine the answer to these questions, generating different definitions, which may look similar but which have significant differences.
The differences between the concepts of game and play have been explored for decades, but new definitions continue to arise. I want to start the reflection from a fairly recent theory, proposed by the game designer Raph Koster. He said that play is a non-goal oriented activity, while game tends to have a goal (Koster, 2005: p.36). The same vision is shared by the ludologist Jasper Juul who distinguishes *play* as a free-form activity while *game* as a rule-based activity.[9] For him the term game is both a noun and a verb and it can mean a static object or an activity performed by players. This peculiarity is typical of the English language; Italian language uses two namesakes to indicate different concepts, while English has two different words. To clarify the difficult concept I report a short quote that Umberto Eco wrote in the Italian preface of *Homo Ludens* (Huizinga 1938), one of the earliest essays on the game, at the base of many successive reasonings.
Eco wrote:
«The English word "game" highlights the feature of competence, of a set of rules known and recognized (...) Games are tennis, poker, golf: systems of rules, patterns of actions, combinatorial matrix of possible moves. "To stay in the game" and "to follow the rules" is translated into "to play the game". There is an abstract entity, the game, and there is a concrete behavior, a performance, which is the play. To play is "to take part in a game"» (TdA, Eco in *Homo Ludens* Italian preface, 2002).[10]
This sentence means that the word *game* includes the presence of a set of rules and to *play a game* means to

9 Jasper Juul (2006: p.64).

10 From the original text:
Nell'inglese game viene evidenziato l'aspetto di competence, di insieme di regole conosciute e riconosciute (...). Game sono il tennis, il poker, il golf: sistemi di regole, schemi di azioni, matrici combinatorie di mosse possibili. "Stare al gioco" e "osservare le regole" si traduce "to play the game". C'è un soggetto astratto, il gioco come game, e c'è un comportamento concreto, una performance, che è il play. To play è "to take part in a game"

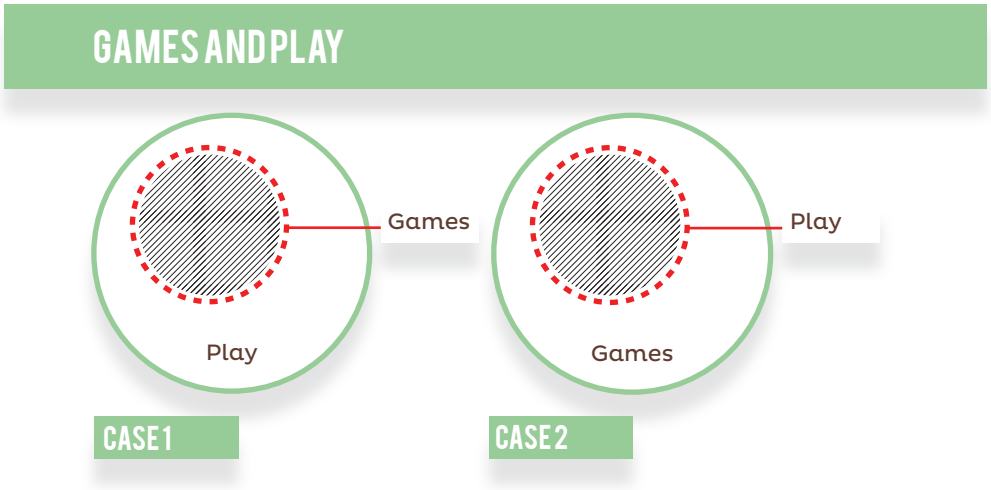


Image 1.01: Games and Play, based on Salen, Zimmerman (2004:p.72-73)

observe these rules; moreover *game* is the subject of *play*, which is a performance. *Games* are frames of actions and possible moves within a *play* experience.
In the essay *Space Time Play* (Von Borries, Walz, Böttger, 2007: p.62) the definition of *game* is that of a structured-activity which is performed according to a set of rules and to *play* is a fantasy driven activity which is less limited by rules. Therefore, it is clear that *play* and *game* have two different meanings, although, there is not a unique and incontestable definition on them. Despite their dissimilarity they have a strong connection, which was analyzed by Katie Salen and Eric Zimmerman in their essay *Rules of Play* (2004). They identified the two words as systems which can intersect in different ways [*Image 1.01*], depending on the point of view that we use to observe them.

> **>Case 1**: *Game* can be a subset of *play*, when people play following the rules of the game (in this sense the game is a manifestation of the play action).
> **>Case 2**: At the same way *play* can be a subset of *game*, because to play is a way to make use of the game. A game, seen as a product, exists also when no one is playing it.

The socio-anthropologist Bateson (1977) came to the conclusion that *play* can be identified as the life itself, an

experience with the purpose to discover the rules that always change during the lifetime.
The architect Alberto Iacovini in his essay *Gamezone. Playground tra scenari virtuali e realtà* (2006: p.14) has come to a similar conclusion: to *play is the life itself*, «*life can be seen as a game with the aim to discover the rules, rules that always change and cannot be discovered» (TdA)*[11].

The aim to discover the rules creates an area of uncertainty between reality and fiction where players can try and change the moves.
The concept of uncertainty is fundamental inside the field of Game Design and it has been debated by many scholars. Greg Costikyan wrote an essay on the topic, *Uncertainty in Games* (2013), in which he explains that despite the term "uncertainty" has a negative meaning in many areas of the individual's life, its role changes radically when we speak about games. At page 9 of his essay, Costikyan quotes Caillois (1958: p.7) «play is [...] uncertain activity. Doubt must remain until the end, and hinges upon the denoument [...] Every game of skill, by definition, involves the risk for the player of missing his stroke and the threat of defeat, without which the game would no longer be pleasing. In fact, the game is no longer pleasing to one who, because he is too well trained or skillful, wins effortlessly and infallibly». The meaning of this short extract is that is important for a player to be uncertain about the final result of a gaming session: if players had known since the beginning who will be the winner of the match, they would lose interest in the game. Uncertainty is what games require to hold the player's interest and commitment.
The play activity can be considered in different modes, depending on the contents which the designer wants to communicate and on the players' attitude: for instance it can be pure entertainment, a competition aimed at victory, a training session for mental-physical skills or a learning activity. According to many scholars, such as McGonigal (2011), Flanagan (2009) and Koster (2005), the act of playing can help people of different ages, genders, cultures and generations to improve their skills, to gain new abilities, to develop social relationships, to turn frustrating tasks into fun activities and to learn competences to use in the daily life.

11 Original text:
un gioco il cui scopo è di scoprire le regole, regole che cambiano sempre e non si possono mai scoprire.

1.1.2 A definition of Play and Game

A large number of definitions has been proposed over the years. Over the last decades societies, technology and culture have changed, influencing the scholars' insights on the game itself. These theories result very connected to the moment in which they have been defined; for instance they are affected by the philosophical currents, the politics, the economy and in general by the ongoing socio- cultural dynamics.

Various authors have analyzed the definitions formulated by theorists coming from different disciplines, aiming to obtain a definition of Play and Game which is coherent to the current context.

This paragraph presents an overview of the most incisive definitions which characterize the Game Studies field.

Many scholars examined the topic of game, but Huizinga's essay *Homo Ludens* has been the basis for the game studies since 1938. Nineteen years later, in 1958, Roger Caillois wrote the book *Man, Play and Games* reflecting upon Huizinga's work with the aim to formulate a theory for Game Studies. Caillois defined play as a free and voluntary activity (1958: p.6), an experience. The play experience has certain features: it is a free activity, separated by real life in time and space, with a dose of uncertainty. It does not produce assets: game resources are autotelic, which means that they have a value just inside the game and they do not create wealth out from the ludic experience (an example is the money of the popular boardgame Monopoly, useful outside the game). The play experience is linked to set of rules, which are not dependent from the real-world laws.

Caillois' essay contains a taxonomy of play:

- **agon**, players have to prove their value and their superiority against other participants (competition);
- **alea**, the experience is not based on the players' abilities, but on the chance;
- **ilinx**, players attempt to achieve the vertigo, a state of dizziness;
- **mimicry**, players assume a fictitious identity.

These four categories represent different attitudes to the game and from them derive various ludic experiences.

Players look for different experiences, because they have diverse purposes. The main gaming attitudes, or "way to play", are Paidia and Ludus (Caillois, 1958). The playful approach is close to a state of Paidia when it is spontaneous, driven by fantasy and improvised by players. The Ludus arrives when the necessity of play becomes stronger; it starts to organize and discipline the Paidia, creating structures where the primordial need to play can be satisfied. The structure of a game is made by the set of rules which controls the play dynamics.

Many scholars from different fields gave their definition on game, trying to identify their fundamental features. The *image 1.02* presents an interesting chart proposed in the essay *Rules of Play* by Salen and Zimmerman. It is the output of an analysis on the existing definitions that was conducted to f ormulate their own explanation *«A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome»* (Salen, Zimmerman 2004: p.81).
I consider this definition complete and meaningful: it contains the idea of complexity, describing the game as a system within players are engaged into an artificial conflict; moreover the conflict is regulated and it does not produce outcomes out of the game system. The artificial conflict happens inside a system defined by rules, objectives and obstacles, an immersive world. This place has been described by Huizinga in 1938 (in his essay *Homo Ludens*) with a list of examples of gamefields, of which the most famous one - among the game scholars - is the *magic circle*. Salen ad Zimmerman used the *magic circle* concept to define the play world, an element that I will examine in depth in the paragraph 1.2.1.

«The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain»
(Huizinga, 1938: p.10).

The game system is composed by a series of elements that form a system regulated by rules and constraints, wherein the player decides to engage in voluntary way.

CHART OF GAME DEFINITIONS

ELEMENTS OF A GAME DEFINITION	Parlett	Abt	Huizinga	Caillois	Suits	Crawford	Costikyan	Avedon Sutton-Smith
Proceeds according to rules that limit players	▲	▲	▲	▲	▲	▲		▲
Conflict or contest	▲					▲		▲
Goal-oriented/outcome-oriented	▲	▲			▲		▲	▲
Activity, process or event		▲			▲			▲
Involves decision-making		▲				▲	▲	
Not serious and Absorbing			▲					
Never associated with material gain			▲	▲				
Artificial/Safe/Outside ordinary life			▲	▲		▲		
Creates special social groups			▲					
Voluntary				▲	▲			▲
Uncertain				▲				
Make-believe/Representational				▲		▲		
Inefficient					▲			
System of parts/Resources and Tokens						▲	▲	
A form of art							▲	

Image 1.02: c*hart on game definitions, based on Salen and Zimmerman (2004: p.79)*

Playing a game is a voluntary, entertaining activity, but it also involves a considerable level of mental and physical fatigue to overcome obstacles toward the achievement of an objective. The philosopher Bernard Suits (1978: p.39) asserted that these obstacles are unnecessary, built because they are voluntary designed to prevent players from the easiest solution.

In this way participants accomplish a voluntary effort, intentionally excluding easy solutions, to prove their abilities and value. In *The Grasshopper,* Suits introduced the concept of the Lusory attitude: it makes player accepts the rules and the obstacles, because they are on the basis of the game experience itself.
The *lusory attitude* of the player is an essential component of the game system «the acceptance of constitutive

rules just so the activity made possible by such acceptance can occur.» (p. 40). Therefore, players decide voluntarily to abide by the rules and constraints that make the goal difficult to reach, with the awareness that they have to accomplish a series of psycho-physical efforts, which are adapted to the difficulty proposed by the system.

«In anything but a game the gratuitous introduction of unnecessary obstacles to the achievement of an end is regarded as a decidedly irrational thing to do, whereas in games it appears to be an absolutely essential thing to do [...] But games are, I believe, essentially different from the ordinary activities of life»

(Suits, 1978:p.39)

Fun for Game Design

It is crucial for a game designer to reflect on the game and on the relationship between the player and the game system; this consideration can be conducted in order to understand how to design a good play experience which is able to engage users. It is important to analize the elements which push the players to undertake a play activity. A crucial issue is the concept of fun.

Thinking on fun we should consider that it could take different shapes: having fun it is not only a matter of laughing. In 2005 the game designer Raph Koster wrote an essay on the topic of fun, *A Theory of Fun for Game Design*; in the text (p.90) Koster describes his interpretation of the concept «when I have referred to "fun", I've meant only (...) mentally mastering problems. Often, the problems mastered are aesthetic, physical, or social, so fun can appear in any of those settings. That's because all of these are feedback mechanisms the brain gives us for successfully exercising survival tactics».

Players can express their fun with a laugh, but it does not always occur in the same way and often it is not visible to other people; for instance a person can have fun also solving complex puzzles.

In all its shapes, fun is the spring for pushing players to tackle complex problems with playful spirit, focusing towards a goal that will not return any wealth in the real

world but that will reward the players within the game system (Koster, 2005).

Raph Koster (2005: p.40) explains that the key for a fun game is the stimulation of the reward centers in the brain: having fun means to feel good and bring our brain to release endorphins into our body system.

As we have already said in the first part of the paragraph, play is an input/output system within a game supported by default rules and a game world delimited in time and space. The journalist and author Steven Johnson, in the essay *Everything Bad is Good for You* (2005: p.35), wrote that whenever the player acquires a useful notion throughout the game and applies it to solve a problem, the brain rewards the player by releasing dopamine. And the *need* of dopamine keeps the brain concentrate on the problem to be solved in the game, even in other moments of the day.

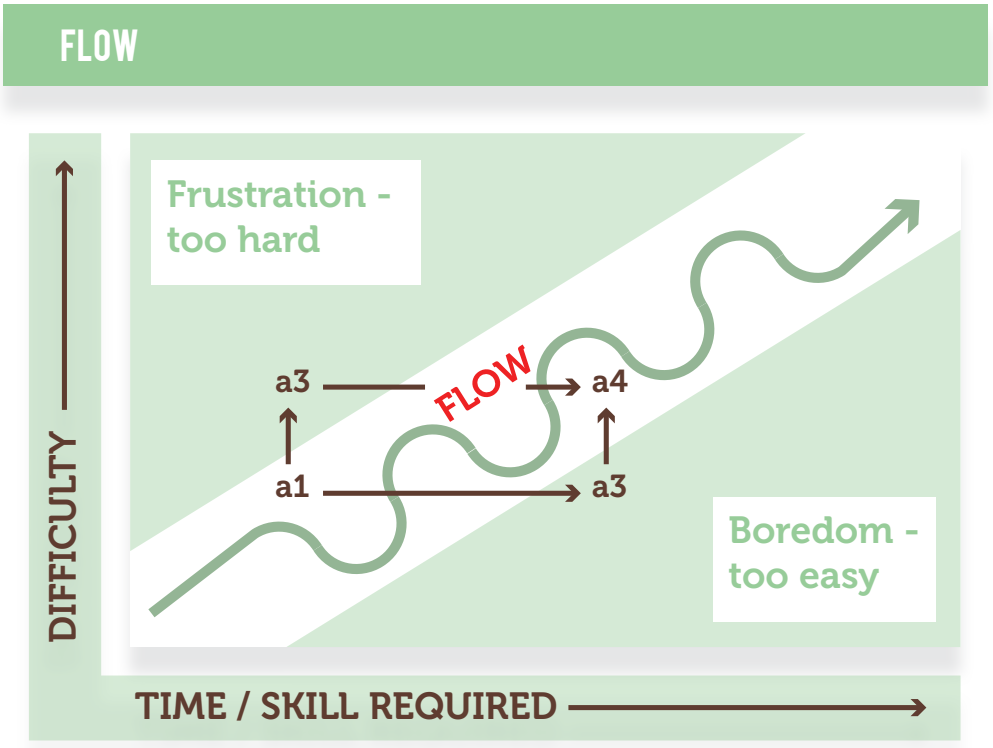
Similarly McGonigal (2011: p.47) talks on satisfaction and how it is tied to chemical reactions which take place inside our body. When a player undertakes a difficult challenge his/her body can produce a rush of adrenaline which makes him/her feels motivated, energetic and self- confident. Other hormones released by our brain in this kind of situations are norepinephrine, epinephrine, and dopamine: their combination makes the players feel proud and satisfied. Once the body receives these substances, which cause a state of happiness and euphoria, it begins to want more and more. If a player is stuck in the middle of a difficult task, his/her brain waits for the solution of the problem in order to release other dopamine: if this does not arrive when expected, the brain will reduce the dose, spurring the players to carry out greater effort.

Fun is one of the reasons that push players to face the obstacles proposed by the game system with a lusory attitude, respecting the rules and making an effort towards achieving the goals.

The flow

When a player is having fun he/she doesn't care of the hard work and effort that he/she has to face, nor this person cares about what's going on outside the game world. Playing, it happens that people isolate themselves from the surrounding environment, as if they were inside a world on their own, where all the rest is excluded.
In this regard, I would like to introduce the concept of *flow* [*Image 1.03*], elaborated by the sociologist, anthropologist and psychologist Mihaly Csíkszentmihályi. In an interview for the *Wired* magazine (on the number of Sep. 1996) he described the state of flow as «being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost».
It is a condition of immersion which is clearly not possible to design. This condition, to be described, needs to consider

Image 1.03: flow, based on Csikszentmihalyi's essay (1990: p.74)



on one side the concept of balance, and on the other the two aspects which need to be balanced: the *challenge* and the *ability*.

To allow the existence of a state of flow within a game experience, designers must indeed find a balance between the challenge difficulty and the players' skills level. If the task is too easy for the participant abilities, apathy and boredom occur; if the challenge is too difficult to be achieved, users face a state of anxiety and frustration. It is very important to keep a player inside the flow during the playtime.

In the *image 1.03* we can observe that the area defined by the flow is similar to a "channel" which includes the experience path. The flow "channel" is crossed by a curved line: it means that sometimes the game must overflow in the "too hard" and "too easy" areas, to maintain the players' attention alive.

During the gameplay it occurs that in certain moments the player must face challenges or obstacles of a certain difficulty: he/she is put on probation.

In this way he will make an effort to go beyond its current capacities. In other moments the player should feel more skillful compared with the difficulty level proposed by the game's mission. These situations must be well designed, to prevent that players enter a state of frustration or boredom.

The difficulty of a game must increase during the match, because the player's skills are destined to increase as they are being trained; this situation will repeat periodically until the end of the game.

Resuming the theory proposed by Csikszentmihalyi, we can see how the flow is characterized by some fundamental conditions:

> there must be a balance between the difficulty and the user's skills;

> there must be a balance between the difficulty and the user's skills;

> players must be aware of the action;

> the attention is high and there is no space for external stimulus;

> the flow can exist when there are clear and well defined purposes;

> players need immediate and unmistakable feedbacks, to know if they are going to reach the goal;

> a state of total concentration which leads to a loss of sense of themselves and of the time.

To play is an autotelic experience: «It refers to a self-contained activity, one that is done not with the expectation of some future benefit, but simply because the doing itself is the reward» (1990: p.67). It happens when the motivations to act arise from the intrinsic pleasure (that ends in itself) that the users feel in carrying out the activity. It is an experience that the person is focused to do without dealing with the consequences or any resulting rewards.

Serious Games

The experience of a player during the game session and those of a person who is making use of a service have some common traits, starting from their autotelic disposition: the service exists from the moment it is provided and just when it is used (this feature is called Perishability[12]); the same can be said for the game experience, which is a self-contained activity that is not done with expectation of future benefits (Flanagan, 1990).
Game and Service Design have also similar approaches: the user-centered approach is indispensable to create offerings which respond to the needs and expectations of the target range; moreover, both can have a critical approach (the concept of critical approach is based on Flanagan, 2009) in designing an experience which can solicit a critical reflection on society and current issues.
The critical approach is essential for the innovation in the disciplines of Game and Service Design.
Since the two disciplines have a common ground, they can create synergies and work together designing contemporary innovation strategies.
There are several starting points for an application of games in other areas, for instance the service field. From the synergy between Games and other frameworks, for instance economy, healthcare and education (they are all fields which interest also the Service Design discipline) it was born the field of the Serious Games. In 1970 Clark Abt wrote *Serious Games*, a text which contains an important definition: "these games have an explicit and carefully thought-out educational purpose" (Clark Abt, *Serious Games*: p.9).

12 Perishability is a component of the IHIP paradigm of services marketing (composed by four specific characteristics: Intangibility, Heterogeneity, Inseparability, and Perishability), which we will see in detail at paragraph 2.1.
Lovelock and Gummesson (2004: p.21).

On the Ludus[13] document, the adjective "serious" is indicated with reference to «products used by industries like defense, education, scientific exploration, health care, emergency management, city planning, engineering, religion, and politics. Serious games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement».
After dealing with some fundamental concepts that characterize the ludic artifact and the resulting experience, I think it is important to resume what has been said earlier in the paragraph on definitions. In the light of what we have examined – with particular reference to the Service System Design field - I propose a definition of game which combines the concepts that I consider crucial.

A game is a system defined by rules, in which players led by a ludic spirit engage in a fun experience with a quantifiable outcome.

1.2 The socio-cultural dimension of game

At this point of the dissertation, we can only analyze a fundamental component of the game: its role in the society. In this text I consider the relationship among players and between them and the game system as a socio-cultural components of the game. The role of the game in the society is the basic issue of the paragraph.
Mankind plays from time immemorial. One of the oldest known games is the *Senet*: it was born in the era of ancient Egyptians for Pharaohs (it had been played also by the lower classes since 1500 B.C.).[14] The *image 1.04* is a hieroglyphics which portrays the Pharaoh Nefertari playing Senet with her invisible opponent, the fate.

13 Ludus is a programme co-founded in 2010 by the European Nations with the aim to create a network for the transfer of knowledge and dissemination of best practices in the field of Serious Games.

14 It was a challenging game which also had religious meanings related to the "transfer" from the earthly life to the afterlife. People believed that the fortune in the afterlife was linked to the result of a match of Senet, played between the deceased and the fate in person

Image 1.04: Nefertari playing Senet; displayed in the Egyptian Art collection at the Metropolitan Museum of Art, New York City

The human being begins to play during his childhood and the ludic activity accompanies him throughout his life. The game often comes with a didactic function, to help children develop mental and physical abilities (Huizinga [1938] 2002). It continues to accompany the child into his adulthood «It is done at leisure, during "free time"» (Huizinga, ivi: p.8).

Since ancient times, men have created games to entertain, train and/or to get recognition of their skills from the other players.

This statement implies that there is a social component within the gaming experience. Games invented by human beings have always been of two types: single or multiplayer. In the first case the player tests his skills by competing with the game system. In multiplayer games players cooperate or compete with other participants to achieve one or more goals and this leads to the development of social skills.

However it is no longer possible to divide games in two simple groups: videogames blurred the borders between single and multiplayer games. The interactivity of videogames brought a radical change in the habits of players, who are in a situation of ludic "isolation" due to the technology. The Internet connection among players can make unnecessary

Image 1.05: a team mission on WoW

the physical contact: this is the phenomenon of playing alone together which Calvin Morrill explained in the essay *Together Alone: Personal Relationship in Public Spaces* (2005).
Many people play alone without sharing the experience with friends or relatives; but some games, for instance the online MMORPG (Massive Multiplayer Online Role-Playing Game) offer some missions whose resolution requires collaboration with other players in order to solve complicated tasks. [15]
This is the case depicted in *image 1.05*, a frame caught during a *World of Warcraft* play session: players collaborate online towards a common purpose; if they achieve the challenge they share the same benefits.

Here we have the paradox of a person who plays alone in his room and in the meanwhile is interacting and collaborating with a number of other players, in many different places, working all together for a common achievement (it is a display of the *playing alone together* concept, Morrill 2005). It is a group of characters created and existing only within the game experience and that adds value to the activity itself. This virtual component leads to the creation of brief or long-lasting bonds among online players. They are playmates that do not disturb solitary activity but which increase

15 McGonigal has widely debated on this topic, talking about how a large number of players connected worldwide through the internet can work together toward the resolution of "epic" missions «And if we play a game long enough, with a big enough network of players, we feel a part of something bigger than ourselves—part of an epic story, an important project, or a global community» (2011: p.51).
I will talk about the concept of "epic" soon in the text

the value of the experience (naturally, the user is free to try or not this added value).

Social networks built around popular games are able to reach incredible numbers of players from all around the world, and these large virtual communities can cooperate to move toward goals that could be "epic", quoting the American game designer and researcher McGonigal (2011: p.113). These goals are indeed too big and complicated to be achievable for a player alone, but they can be accomplished by an amount of people working together. It is the *collective intelligence*, a concept that I will examine in the paragraph 1.2.1 on Pervasive Games.

How much "epic"? Taking as an example the game SuperStruct and its super-treat Power Struggle [16], if each player would make an effort to avoid waste of electricity in the real life, there would be a huge drop in the overall energy consumption.

The notions on savings, the strategies of resource-sharing and collaboration with other members which have been acquired during the gaming session may then be applied in real life by players, bringing a real change. If there is only one player doing this the change will be small, but if there would be thousands, millions of players then the change will be perceived on a large scale.

Too often, today and in the past, talking about games and play has evoked the image of the passage of time in a frivolous and ineffectual way. Only recently this image that lack qualifications is being replaced by more positive concepts (Fink, 1956).

Relevance of social component in the game universe was developed together with the will to cooperate of the players. With the advent of modern technology (we talk of mass media like television and computers), social life is dramatically changed. The one-player game industry had been enormously growing at the end of the Seventies, but quite soon the need for a social component within the game emerged. Industrial production of personal devices brought each of us almost literally too close to ourselves in a particular, individual dimension (Flusser, 2004): playing chess with a video game console instead of doing it with a

16 The Power Struggle is one of the five super-treats in the simulation game SuperStruct, developed in 2008 by the Institute for the Future. The challenge for this treat was to imagine "how can players reinvent their way to create and consume energy?"

real opponent is a clear example. Players have substituted the playmates with virtual figures generated by the game system. Interactions between the player and the fictitious opponents works thanks to the feedbacks (score, rewards or punishment, audio-visual or written answers to actions and so on) that have been received from the gaming system, which make the relations and the exchanges truthful. Who hasn't ever played on PC or console with someone sitting around and giving good or bad advices or screaming "BE CAREFUL"?
Entertainment industry clearly understood the opportunity for a new type of multiplayer games: the MMORPG, or Massive(ly) Multiplayer Online Role-Playing Game. In that way game industry continued to produce increasingly advanced PDA (Personal Digital Assistant), but the social component sought by the player was satisfied by the integration of online connection technologies, thanks to which players can be virtually (always) connected with a huge number of users worldwide.

Very important for the evolution of the game industry, in particular videogames and Pervasive games,[17] is the user-centered approach which is common to many fields of Design. We can conclude that every game, from the boardgames to the videogames, from the card games to the Urban Games, has a social component. The game assumes opponents and allies, who can be virtual or real; even the solitaire card game implies a sort of competition towards yourselves, based on your own limits. With the arrival of modern technology (we talk in particular of mass media like Internet) these opponents and allies can communicate on a global level and their interaction change.

1.2.1 Pervasive and Urban games and the magic circle

In recent years a new typology of game has been developed, which personally strikes my interest due to the fact that it revolutionizes the spatio-temporal dimension of the game. Games expand themselves to urban spaces, assuming new dimensions also in the social sphere. Playing in the city

17 The concept is deepened shortly in the text, at paragraph 1.2.1

makes it possible to interact with its constitutive elements and above all with the inhabitants.
The paragraph explains what a Pervasive game (or PG) is, which are its main features and its relation with players. It introduces a subset inside the macro-category of the PG: the urban game. The first part of this paragraph is a study of the concept of the *Magic Circle* (Huizinga, 1938; Salen, Zimmerman, 2004), from its creation to the actual interpretations and on its importance in designing a good game. It is crucial to know these topics to realize a well-designed urban game which is able to attract people, keep their attention and create a long-lasting bond with users.

The magic circle

The magic circle is a theoretical construct conceived by Johan Huizinga ([1938] 2002) to describe a possible game space; he made a list of phenomena that includes game spaces and even real-world spaces. The list is the following:

> «The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play- grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart» (Johan Huizinga, ivi: p.10).

Many researchers and game designers took the concept of *magic circle* from this list, to depict the space where the player is immersed during the play experience.[18]
In this sense, the magic circle reveals itself as the playground, the fictional dimension wherein the player is absorbed; it is the world created by the playful system and it is limited in time and space, within the boundaries of the game.
The *images 1.06 and 1.07* depict different shapes of the magic circle.
Following Huizinga's essay, the activities that occur within the edges of the game space are interpreted by players according to the constraints and rules offered by the game system and they are considered part of an experience

18 Eric Zimmerman and Frank Lantz started to use the concept of magic circle in 1999 during a game design class, to describe the artificial game space where the players are absorbed. In 2004 Zimmerman and Salen inserted the concept in their text Rules of play

Image 1.06: girl playing with a metal circle; Nationaal Archief of the Netherlands

beyond the ordinary life. Since the playing experience exists in a separate space from the reality, the game space is assumed as a possible world thanks to the make-believe state of a game, which is the awareness of a second reality (or a free unreality).[19]

Talking about the game as an extraordinary experience, external to the ordinary life, we have to consider that Huizinga analysis belongs to another historical and cultural moment, when the game still was not blurred with the daily life. In the Pervasive Games the magic circle boundaries expand in time, space and society, thanks to modern technologies, so that each daily action could be interpreted as a game activity.[20] We will see the three kinds of expansion shortly in the text.

19 Caillois quoted by Katie Salen, Eric Zimmerman in Rules of Play, 2004: p.76

20 Markus Montola, Jaakko Stenros, Annika Waern, ivi

Image 1.07: girl playing with a public urban game; Paris, 2013

The definition of game given by Salen and Zimmerman in 2004 (and that we examined in the paragraph 1.1.2) is close to the definition of a pervasive game: they read the concept of the magic circle as a conceptual border between reality and game, not as a boundary which divides the real life from the game activities.

When we talk about Urban and Pervasive Games, the exploration of the game world coincides with the discovering of the real environment which surrounds players: for this reason the magic circle has blurred boundaries.

The traditional meaning of the magic circle concept - born in 2004 when Salen and Zimmerman took the concept from Huizinga's essay (1938) to indicate the game space within their dissertation Rules of Play - has been criticized by many scholars. For example, in 2005 the game scholar and designer Markus Montola wrote a paper with the title *Exploring the Edge of the Magic Circle: Defining Pervasive*

Games, which described the role of the magic circle for this category of games. He argued that, while the regular game is played in certain spaces at certain times and by certain players - all these elements are defined before the game - in spatially, temporally and socially expanded games these elements may also be implicit and unknown to players.

After ten years from the publication of the essay *Rules of Play* (Salen and Zimmerman, 2004), Zimmerman released an article on the website *gamasutra.com* to clarify his vision on the magic circle concept. Huizinga identified the game space - which can have various manifestations, one of which is the magic circle - as a «temporary world within the ordinary world» (1938, ivi:p.26 Salen and Zimmerman took the concept from Huizinga's text not to indicate that games and life are two strictly separated worlds, but to explain that within the play experience some elements which belong to the real world change their function and role (and vice versa)[21] An example is the money used in the board game Monopoly (see *image 1.08*).

Zimmerman specifies that this does not mean that games and life are two strictly separated worlds.

In this sense the concept of *magic circle* - seen as a temporary world within which some elements that belong to the real space change their function and value - can be applied to different fields. For instance a tourist can be inside the *magic circle* while exploring a foreign city, because normal actions like walking or eating have an added value linked to the experience; the same can be said also for the artist while painting and for the author while writing, to mention a few more examples.

The rest of the paragraph is dedicated to the comprehension of the spatially, temporally and socially expanded games and to the relationship among players, game world and real environment. Some of the concepts contained in the following parts of the paragraph may be better understood after this reflection on the magic circle and its interpretation in the contemporary world.

---

21 Zimmerman specifies his interpretation of the magic circle within the article to stop the accusations moved by a large number of game scholars, designers and also students. They blamed Salen and Zimmerman to have taken possession of the Huizinga's concept to assert in their essay that life and game are two strictly separated areas (also if this was not the intention of the Rules of Play's authors).

Image 1.08: paper money in the classic edition of Monopoly

Pervasive Games

Pervasive Games (PG) are a particular type of games that penetrate the daily spaces and activities. A PG can overlap the real world with an information layer: the real environment can be read as an interface among the players' world and the fictional world (Montola, 2005; 2009).
Pervasive Games emerge from the real space, theoretically in every moment of the day and in every place.
An appropriate example is the pervasive game *Killer: the game of assassination,* [22] in which players are professional killers under cover, living their normal in which players are professional killers under cover, living their normal life as workers or mothers while secretly preparing to hit a target assigned by the gaming system.
To recognize their target killers receive information on the victims, for example a picture, a name or an address. They also have secret weapons, for instance a water gun, that they should be ready to use when they are close enough to their victims. In a game like *Killer*, players move in the physical space, maybe through very long distance. It means that their movements in the real environment are flanked by the game activities.
The game designer Markus Montola (2009: p.7) defined PG as a form of culture that exists at the "intersection of various contexts, for instance city spaces, performing arts

22 Game designed by Steve Jackson, 1st edition 1981.

and technologies". They are mixed-reality events: they blend the activity of play - defined by Huizinga as an experience outside the ordinary life - and the real environment.

Gameplay occurs in the real world, not in a fictional one. Therefore, a game has results on culture and social networks.

Pervasive Games can be played alone, but most of them require cooperation between people, who often don't even know each other outside the gameplay, and relationships can continue after the end of the game, expanding the social circle of the players.

Game actions are often blurred with daily activities and here is the big difference between "traditional frames" and pervasive games: the first have a well defined default interface, while the second are more unpredictable, with a higher level of uncertainty.

Of course, in every game there is a certain level of unpredictability, because if the winner was already declared from the beginning no other competitor would play.

«Pervasive games consciously exploit the ambiguity of expanding beyond the basic boundaries of the contractual magic circle. This often leads to the point where the game interface is completely ambiguous: Any action could be a game action, and any sensory observation by any participant could be seen as part of the game»

Montola (2005)

Pervasive Games can be played alone, but most of them require cooperation between people, who often don't even know each other outside the gameplay, and relationships can continue after the end of the game, expanding the social circle of the players.

Game actions are often blurred with daily activities and here is the big difference between "traditional frames" and pervasive games: the first have a well defined default interface, while the second are more unpredictable, with a higher level of uncertainty.

Of course, in every game there is a certain level of unpredictability, because if the winner was already declared from the beginning no other competitor would play. But Pervasive Games have an extra oomph.

Markus Montola (2009) sustained that this oomph can be identified as a spatial, social and temporal expansion.

> **Social expansion** makes it possible to build social networks with people all over the world, players who do not know each other outside of the game experience, but who cooperate towards the same challenge.
> Spatial expansion brings the game (considered by Huizinga as an "extraordinary" activity) inside the daily life, breaking the boundaries between living and playing.
> Temporal expansion inserts the playing activity among other daily actions, blurring their borders.

These three forms of expansion are interlaced and the games can be played by everyone, in every place and in every moment: game actions are often indivisible from other activities.
Games based on location system, called location-based games, are supported by localization technologies, for instance GPS, wi-fi connections, Bluetooth, NFC disposals or Ultra-wideband radios, but existing technologies cannot guarantee a non-stop playing experience.
In fact, games based on GPS or Internet connection may be subject to slowdowns or interruptions when the satellite coverage is not optimal: this means that designers must build their Pervasive Games by providing possible solutions to these emerging problems.
In order to recognize the data layer which overlaps the real spaces and objects, there is an interface that interconnects the two worlds. In this way real objects can be seen as game input or as sources of information.
The gameplay of Pervasive Games is sustained through the utilization of technologies and networks which belong to the environment the game is being played in. In the Pervasive Games the interface can take advantage of digital or analogical devices which establish the level of interaction among players and the game space – real, fictional or a mixture of both the typologies. The designer plans the interface and the interactivity of the system according to the game dynamics and purposes.
The designer can also decide to involve players actively in the system, to support the existence of the game itself while playing it; for instance during the project *Investigate your MP's Expenses* players have been an essential component of the game system. Participants were involved in a gaming experience that was supported by they

themselves. The journalistic inquiry launched by the British newspaper *The Guardian* involved local participants in a pondered selection of important documents to help during a real investigation on the politicians' expenses. At the end of the experience the players' contribution was crucial to incriminate politicians who had used public money for personal purposes.[23]
Moreover, some games use technology to reach a specific target audience: it's the case of *Demor,* a shooter game for blind people based on sounds.

Demor is a 3D location based shooter game which is equally enjoyable for both blind as sighted players. The main aim of the game is to entertain players, but it is also an attempt to improve the integration of the blind and visually impaired people in the 'sighted' world; game dynamics are built around the hearing sense.
In the *image 1.09* a player is guided by electronic devices which map the area and guide him with sounds.
Other games were born to build communities around the same topic, working both as social binding agent and as a medium for the players to express themselves.
Concerning the social expansion, Pervasive Games have the great power to bring together different players towards the achievement of real, common objectives, so that the group can take advantage of the best skills of every participant: it is the collective intelligence which derives from the collaboration among players towards a scope. The co-op game strategies (collaborative) are modes of play emphasized by the contemporary game industry, as McGonigal argued in her essay (2011).

Going back to the initial statement on games as a new medium, the Montola's definition on Pervasive Games makes it much easier to understand how these games are able to become part of our lives, transforming unpleasant or boring everyday activities in gameplay opportunities (McGonigal, 2011).

23 More explanation on the case study *Investigate your MP's expenses* can be found in the paragraph 2.1.

Image 1.09: Demor gaming session; photos by Rob Voss

Urban Games

The category of games called Urban Games considers the city as the game space.
They can be identified as a subset inside the macro- category of Pervasive Games, because they have the common feature of the penetration in daily spaces and activities (it is the concept of spatial expansion; Montola, 2009). The boundaries between the game experience and the real life are blurred because the game space coincides with the real environment. Whilst Pervasive Games work overlapping a layer of data upon the real environment, Urban Games consider the city space as the playground. It is a spatial expansion which brings the game experience inside the daily life and blends it with the surrounding world.
In the book *Pervasive Games* (2009), Montola, Stenros and Waern give a description of Urban Adventure Games: they combine stories and puzzles with city spaces. It means that this kind of games bring the players to explore places with cultural-historical value following their stories and learning pieces of information. Solving a puzzle usually gives players a clue to find other locations. The story is

composed by fragments which are hidden around the city and that players discover solving clues and puzzles. The background tale which leads the game can be real- based but also completely fictional or a mixture of both types.
Urban Games can have different declensions; within Montola's essay (ivi, 2009) we saw the category of Urban Games based on Adventure, which usually engage teams of players that compete to reconstruct the background story of a location faster than the other competitors.
Often Urban Games can take the shape of treasure hunts, where players collect objects and information around the city. In any case *competition* is a powerful tool to attract people towards the education on cultural, historical and artistic information which are part of a location but that are usually "hidden" to the eye of a distracted observer.
The majority of urban games have a strong social components; players can cooperate to find and solve clues to beat the other participants. But the motivations to play are different: the will to explore a city, the wish to discover local tales, the desire to have fun with friends and relatives and the prospect to win a prize, to mention a few.
In summary, urban games penetrate the city, creating a layer of game information over the real environment. In this way they have the opportunity to propose an entertaining way to learn cultural and historical facts about a location, playing with friends and relatives to solve tips and puzzles. It is the case of the games *ConQwest* and *Alla Riscossa*, whose description is located at the end of the chapter in the Case Studies forms.

1.3 The rewarding system

Earlier in the text I have examined the topic of *fun* and how it engages the user to undertake a play experience. I have also analyzed the concept of *flow* and the game designer's task to *balance* the challenge proposed by the game system and the ability of the player.
Now I can just deal with another fundamental component of the game, which is the tool able to maintain the fun over time and to keep the player inside the flow channel: the rewarding system. This paragraph is indeed dedicated to the analysis of the rewarding system and the comprehension of the right balance between rewards and punishments; my

reflections on the topic are based on the essay *The Art of Game Design* by Jesse Schell (2008)[24]. It is important to implement in a game system the right balance between these two typologies of outputs (positive and negative), to create a positive reinforcement of the players' behavior during the game.

Since gaming is a voluntary activity which implies an effort to overcome unnecessary obstacles, the fundamental question is: why should a person want to do so much effort voluntarily, when work and life rhythms are already so tiring? What is the reason for spending more and more time playing games? Where does the lusory attitude come from?

As I have introduced in the paragraph 1.1.2, to each successfully achieved task within the game system corresponds a chemical reaction of the players' brains: the release of hormones makes the player feels satisfied and proud (McGonigal, 2011: p. 47). This makes the game a "need". Once a player has received these chemical substances, his/her body asks for others; inside the game system it can receive them just reaching another goal.

The game system warns the player on the achievements and defeats with various kinds of feedbacks (for example audiovisual). Each input of the player within the system generates a "reaction", which can be positive or negative.

At the end, all the voluntary effort of a player is addressed to get the positive instantaneous feedbacks, which can be of various nature: experience points, scoring, improvements of the player's avatar, level up and game resources, to mention some examples.

A game can have the great power to awake our ludic spirit and our optimistic attitude towards the capabilities we possess. It is able to capture our attention in several ways, for example proposing suggestion of alternative worlds, or creating an online network of players from all over the world.[25] For example, the *World of Warcraft* game uses a rewarding system based on these characteristics: it is based on the exploration of an alternative world, inhabited by

---

24 The paragraph is based especially on two of the lenses listes by Schell (2008).
Lens #40: The Lens of Reward (p.191)
Lens #41: The Lens of Punishment (p.194)

25 Players are playing alone, but at the same time they are connected with a hug amount of other players all over the world. It is the concept of playing alone together concept, Morrill 2005.

the players' avatars[26] and and on building relationships with other players, in order to collaborate to complete missions that would be impossible for a single player (Mcgonigal, 2011).

As I have already mentioned, the game is a system where the player's input is followed by an output, in a status of balance (which has to be carefully planned by the game designer) between punishments and rewards. After having overcome with success an obstacle, the player will receive positive feedbacks that immediatly shows his/her improvements (Schell, 2008).[27]

At the opposite, every player's failure will be punished: for example affecting the pride, losing points or virtual lives, declining game progress or restarting a level.

Regarding the balance between the two kinds of outputs, Schell (2008) argued «Balancing rewards is different for every game. Not only does a designer have to worry about giving out the right ones, but giving them at the right times in the right amounts.» (ivi: p.191). As Raph Koster argued in *A Theory of Fun for Game Design* (2005) «Failure must have a cost. At the very least there is an opportunity cost, and there may be more. [...] Next time you try, you may be prepared differently» (ivi, 2005: p.122).

«Punishment must be used delicately, since after all, players are in a game of their own free will. Balanced appropriately, it will give everything in your game more meaning, and players will have a real sense of pride when they succeed at your game»
(Schell, 2008:p.194).

Rewards and punishment must be balanced and considered, to keep the player inside the flow channel (Csikszentmihalyi, 1990: p.74), in order to avoid a state of boredom or frustration.

Talking on the rewarding system, it is important to remember that the game is a system which cannot create value outside the game world. For instance, the Monopoly paper money is indispensable to win the game, but it is absolutely useless in the real economy.

---

26 The avatar is the character which represents the player within the game world. It can be of various types, for example realistic, fictional or related to the game world.

27 Lens #57: The Lens of Feedback (p.230)

The game resources assume a very important value for the players during the play experience, although they have no significance outside the ludic system. This is part of the contract created between the player and the game system, within elements that in the real life have no meaning assume a value.
The reward system is critical to make a good game, because it is the basis of the user experience.
It is fundamental that inputs given by the player to the game system generate an immediate feedback, showing to the players how their actions are important and able to modify the game experience.

A rewarding system can recompense the players with different feedbacks; some kinds of positive rewards are listed below:

- **>** scores to accumulate during the game experience, that will compose the final scoring;
- **>** game "currency" to buy resources and abilities;
- **>** experience points (called XP) which are necessary to level up;
- **>** "level up", which usually implies an increase in the users' skills but also a parallel growth in the level of difficulty of the game missions;
- **>** game resources accumulated during the game (inventory items) and which serve to increase specific skills/powers or solve missions;
- **>** social relationships with other players;
- **>** new challenges to tackle, with more arduous obstacles and superior difficulties;
- **>** improvement for the game's avatar.

Players can be deprived of each of these prizes as a punishment for wrong action taken inside the game system. Throughout the paragraph we analyzed the role of the reward system in a game. To design a good system the game designer has to find the right balance between punishments and rewards. This can be a crucial element for the creation of a play experience which keeps the players inside within a state of flow during the gaming session, without the risk to lose their attention and commitment. It is one of the fundamental elements to consider while designing a game system.

CASE STUDY #1. CONQWEST

NAME	ConqWest
LOCATION	Ten cities in the USA
AUTHOR	Qwest Communications International Inc.
YEAR	2005
TOOLS	Semacodes; smartphone; inflatable totems

GAME MODE

Team treasure hunt which uses semacodes spread around the city to create an augmented-reality game space

DESIGNER'S GOAL

To promote the Qwest wireless services

PLAYER'S GOAL

To conquer the treasure, by collecting semacodes (which have a scoring value) around the city

GAMEPLAY

Semacodes are “public secrets” which work as pieces of the treasure with a scoring value. The first team who collects five thousand points wins. To gain scores around the city teams must conquer the urban areas To occupy an area the group move its totem inside it

STRONG POINT

Totems create a team image and a meeting point for players. They attract the attention of passersby, working as advertisement for the game and for the financial sponsor

WEAKNESS

Players must have a mobile phone with a camera (at least one per each team)

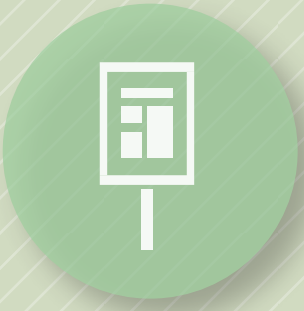
CASE STUDY #2. ALLA RISCOSSA

NAME	Alla riscossa
LOCATION	Milan, Genoa, Naples and Padua
AUTHOR	FAI, supported by Esterni
YEAR	2009
TOOLS	Clues based on the urban environment

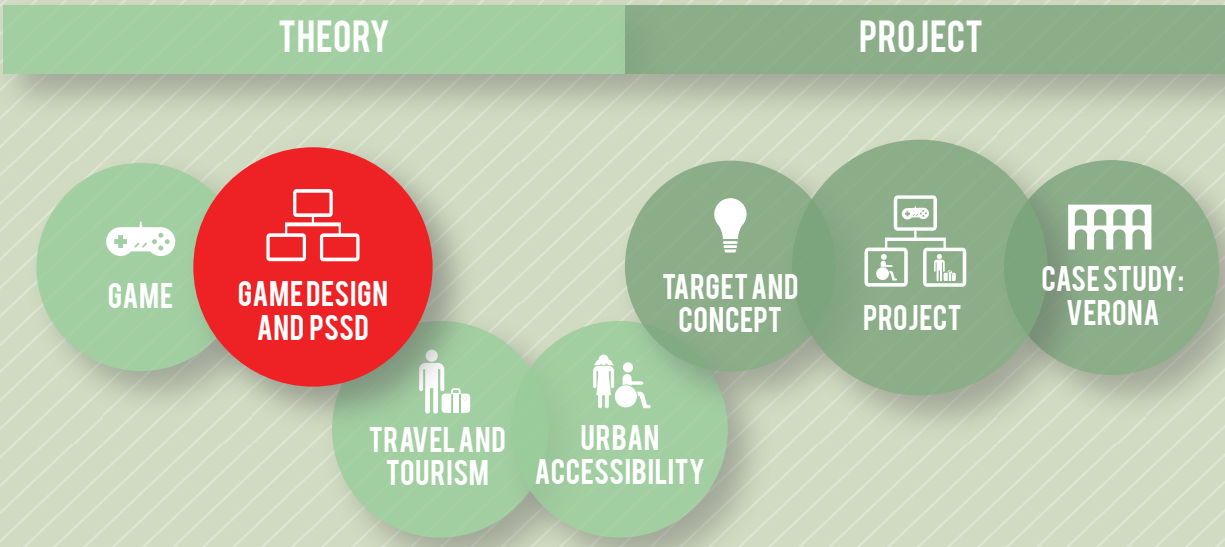
GAME MODE	The game defines itself as an environmental assault game (a urban treasure hunt)
DESIGNER'S GOAL	To provide an opportunity to regain the city and its spaces, discovering unusual aspects of the city
PLAYER'S GOAL	To overcome a series of challenges linked to spots around the city to win the final prize (a cruise with Costa Crociere)
GAMEPLAY	The game is played by teams that compete to overcome a series of missions which can be textual, photographic or video challenges (for instance the recreation of the Fourth State by Pellizza da Volpedo)
STRONG POINT	The game had a lot of success in the past editions, because its urban approach involve people to explore the city and to discover its spaces
WEAKNESS	The spots are very far: this can discourage some people to finish the race






2. GAME DESIGN AND PSSD



Service Design is a recent, fast growing and evolving discipline. It emerged in the '90s as design contribution to a changing context where value creation and exchange within society and economy was moving toward a more intangible dimension. Today, according to many influential voices, it has definitely turned into a paradigm of contemporaneity, and an indispensable part of the culture of any designer, particularly through its contributions in expanding our thinking and practice on dealing with ecosystems, sustainability, behaviour and social change, and longer-term strategy.
Services are special artefacts co-created and co- experienced with, by and among the people that the services are for: the blurred boundary between providers and "users" is one of the distinctive characteristics of today's more experimental services, as well as a brand new issue for designers.

Anna Meroni, Mark Vanderbeeken (2011), Course introduction for Master of Product Service System Design

The definition which opens the chapter is a brief introduction to the discipline of Service Design; it lists and explains the elements which make of this discipline an innovative design train.

The recent origins of Service Design makes it a "paradigm of contemporaneity" (Meroni, Venderbeeken, 2011), an important element for the design of systemic offerings which meet the needs and expectations of contemporary user.
At this point of the dissertation it is essential to explain what a system is: the Zanichelli dictionary (2002) defines a *system* as a "Plurality of material elements coordinated to form an organic complex" or even a "collection of authorities, mechanisms, structural elements and similar intended for technical uses".
The same dictionary gives numerous definitions of service, but in my opinion the most interesting describes the goals of a public service. I'd like to report a part of this description "Series of performances organized on a large scale by the State, by a public body and similar, intended to provide for the needs of a Community [...] Set of people, offices and funds allocated to provide these performances ".
This definition – although lacking in some aspects, which I will treat shortly in the text – describes the service as a system of tools, structures and figures cooperating to provide solutions for problems that concern the community. This is the aim of the Product Service System Design methodology which proposes systemic solutions to meet the users' expectations. However, a service does not necessarily supply the answer to a problem; it can also satisfy a desire of the target range or it can even act as a critical tool which fosters users to reflect on current issues. This last feature of the service – inserted inside a system of tangible and intangible products, figures and infrastructures – is a very important element to which I dedicate the reflection of the Chapter 2.

In summary, this chapter examines the discipline of the Service Design, the multidisciplinary design approach of the Product Service System Design and the role the game can play inside this system. The process of analysis is supported by a selection of case studies: the aim is to outline a strategy to integrate the disciplines of Game and Service Design into a system.

2.1 Game as a Service System Design element

In order to identify the points of convergence between the disciplines of Game and Service Design, it is fundamental to introduce the multidisciplinary design approach of the PSSD, its main characteristics – Intangibility, Heterogeneity, Inseparability, and Perishability, which compose the IHIP paradigm of services marketing (Lovelock and Gummesson, 2004: p.21) - and its methodologies, its role in the society and the relation with users.

The acronym *PSSD* stands for Product Service System Design. As for all the complex and articulate disciplines, it is difficult to provide a definition that results clear and complete. In particular the Service Design discipline has born recently (around forty years ago), in view of the significant change that has affected the product-service system offering of companies and public sector; it needs a short and concise explanation which makes it comprehensible by a wide audience.

Politecnico di Milano has introduced this discipline as a Master degree course, to educate new professionals who - according to the introduction made by the scholar Stefano Maffei on the university website - will expand the understanding, manage the new models of experience and interaction with services (physical and virtual touchpoint). I'd like to report a brief part of the introduction which appears on the polidesign website, to better explain the discipline:

> *«Service Design operates in this context by proposing an integrated and multidisciplinary design approach to create solutions blending material and immaterial components (for example, communicative identity, or the physical and virtual 'touchpoints' that evidence a service's features). Hence, service design generates systemic, complex solutions which*

acquire material form in distinctive kinds of service experience and interaction incorporating the user's viewpoint into the redesign of corporate or institutional delivery» (Maffei on *polidesign.net/en/servicedesign*).

This brief definition introduces that service design provides systemic solutions, blending tangible and intangible components; it is a process of planning infrastructures, tools, figures and products of a service system, to improve its quality in the interaction with users. The discipline organizes the interactions between service providers and customers, to meet the needs of users and the social/ economic interests of the suppliers.
In the introduction to the essay *Design for Services* (Meroni, Sangiorgi, 2011) the sustainable design strategist Ezio Manzini argued that services are hybrid artifacts made by different elements which interact to form a whole. For the complex structure of the Product Service System Design it can be difficult to plan the relationship among the figures (service providers and customers) and tools of the system. To help in designing a service system there are many tools which guide designer from the research phase to the concept o f visualization; these tools (for example schemes and maps) helps to build the relationships between people and elements which compose the system, making them clear for designers, providers and final users.

«Complex, hybrid artefacts. They are made up of things – places and systems of communication and interaction – but also of human beings and their organisations. [...] Like all complex entities they are largely un-designable»

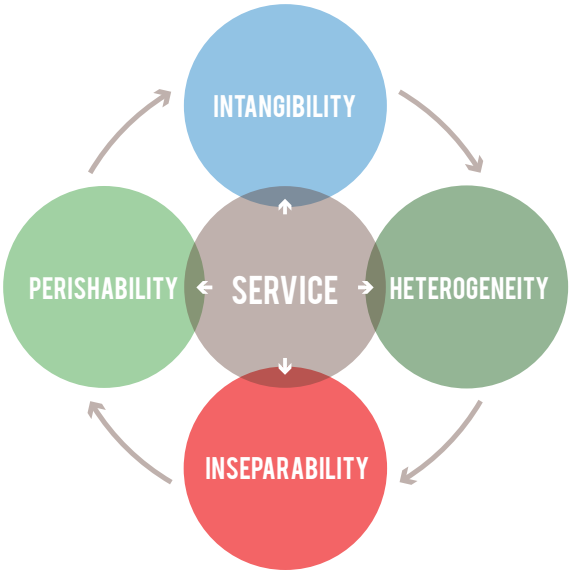
Meroni, Sangiorgi (2011)

In order to plan the relationships between users and tools, it is necessary to define the figures that compose the system. On the ground of the service design activity, there is the need to focus on a defined target, to study and analyze customers' behavior, their needs, desires and motivations. In this practice, designers are supported by the tool of the "personas", fictional characters created to represent the different user types within a certain target. The target analysis is the focal point of the PSSD process, which is an interdisciplinary approach interconnected with

methodologies of other fields, for instance Ethnography, Anthropology, Psychology and Education.
The Service Design methodology starts in the research field, which is composed by an initial phase of Desk Research (consulting texts, articles, online sources and case studies) and followed by the Field Research, which includes live examinations of the customers and their surrounding environment (which could be physical and virtual), and uses methodologies such as interviews, questionnaires and shadowing, just to mention a few. The research phase is then synthesized to generate concepts and service ideas. As I anticipated earlier in the paragraph, designers usually visualize their ideas, trough sketches, journey maps, graphs, narrative storyboards and videos. Sometimes the concepts are co-designed with customers, through appropriate tools like issue cards, rough prototypes, role play games, mind maps, group brainstorming and storytelling.
A service should be designed to be user-friendly and relevant; PSSD may create new services or improve existing ones in different ways, for example augmenting the accessibility and the ease of use. Service design can involve products and intangible elements including communication, environment and even behaviors. According to the IHIP paradigm of service marketing (Lovelock and Gummesson, 2004: p.21), which is depicted in the *image 2.01*, the major features of a service are: Intangibility, Heterogeneity, Inseparability and Perishability.

>Intangibility: unlike tangible products, users cannot touch, smell, taste or see a service before deciding to buy it. Users can make assessment based on past experiences, word of mouth or the service location.
>Heterogeneity (or non-standardization): to explain this feature of the service is worthwhile to make a comparison with a product; if the quality of a product does not change during time (for example, a customer can be sure that every bottle of Coke he buys will have the same characteristics), for a service the quality perceived by the user depends on the interactions between service providers, employees and users. These interactions can vary from a customer to another and from one day to another (this feature belongs to the services which presume a direct interaction between customers and workers); for this reason it is difficult for a designer to plan quality standards and often the service experience does not remain constant in time.

IHIP MODEL



SOURCE: LOVELOCK AND GUMMESSON, 2004

Image 2.01: Lovelock and Gummesson, IHIP model

>Inseparability: the service provision and its consumption are inseparable; customers have to consume a service in the place of provision. For instance a dentist has to be physically present in his studio to provide a service.
>Perishability: services are more perishable than Perishability: services are more perishable than physical artifacts, because they cannot be stored for sale in the future. A service exists only at the time of its production. This is the feature of the non- ownership (or inability to inventory): differently from tangible artifacts, the consumers do not own the service, they pay to use it.

The researcher and management consultant Richard Normann[28] and other authors, for instance Pierre Eiglier (researcher in the strategic marketing of services) and Nicola Morelli (service, industrial and strategic designer), emphasize that services come to existence at the same moment they are being provided and used. Consequently, a designer

28 Richard Normann (2000).

Image 2.02: the SuperBetter challenges

cannot precisely forecast, neither the result of the interaction between users and service nor the emotional value produced during the service experience. The customers' behavior can be studied during the research phase but customers have a high level of freedom; this means that the service can be perceived differently from user to user.

The discipline of Design uses some tools which have been built over years and that have been shared and widespread among designers of various fields. They help to figure out the plausible interaction between the service and the end-users. To design a service it is necessary at first to identify the *personas*[29], then to define possible scenarios to verify their actions and the consequences, in order to plan the organizational structure.

29 According to the essay written by the researchers and game designers Bertolo, Mariani (2014: p.167) the method of the personas allows designers to simulate the users through the invention of archetypal characters with clears and well defined goals and needs. They are the focus of the user-center design, to develop a user experience.
The method has been created by the software designer Alan Cooper in 1999, as an interaction design tool. In the service design it is used as a tool to define the target range needs, goals and desires and to visualize their interaction within the game system. Personas are fictional characters, but they are based on real needs and goals. They are used to see a project from the point of view of different archetypal characters; personas are planning tools for the designer and communication media for the entire construction team, whose members could identify with these archetypes.

The following text is a definition of the Service Design field written by the professor for Service Design Birgit Mager[30]

«During the last three decades, economic conditions have changed fundamentally in western industrial nations. Without doubt, a fundamental change from a manufacturing society to an information- and service-based economy is discernable. (...) Within Service Design, Service Interfaces are designed for intangible products that are, from the customer's point of view, useful, profitable and desirable, while they are effective, efficient and different for the provider. Service Designers visualize, formulate and choreograph solutions that are not yet available. They watch and interpret needs and behaviours and transform them into potential future services. In the process, exploring, generating and evaluating approaches are used similarly and a redesign of existing services is just as much a challenge as the development of new innovative services» (Mager, 2000).

In light of this definition I find interesting, for the purpose of creating a parallelism between Service and Game Design, to report a brief quotation from the essay *Reality is Broken* by the American researcher Jane McGonigal (2011). In her opinion game is "the most important medium of the twenty-first century" (ivi: p.11) and game designers have discovered "a real opportunity to be of service, to band together, to contribute to a larger cause. (...) We've identified key innovations in the emerging landscape of alternate reality design. And we've tracked how game design is creating new ways for us to work together at extreme scale, and to solve bigger real-world problems" (ivi: p.99).

The game becomes a systemic element, with a clear and precise objective, which could be the healing (an example is the game *SuperBetter*, designed by McGonigal for the patients to turn recovery into a multiplayer experience which engages friends and relative in a series of daily missions, see the *image 2.02*), the battle against hunger in the world (for instance the project *freerice.com,* which has been developed by the United Nations World Food Programme as a game to donate free rice to hungry population, by solving puzzles) or the scientific research (like the game *Fold it*, where players help the scientific research solving protein-folding puzzles at fold.it/portal).

30 Extract from the Design Dictionary, Mager (2000)

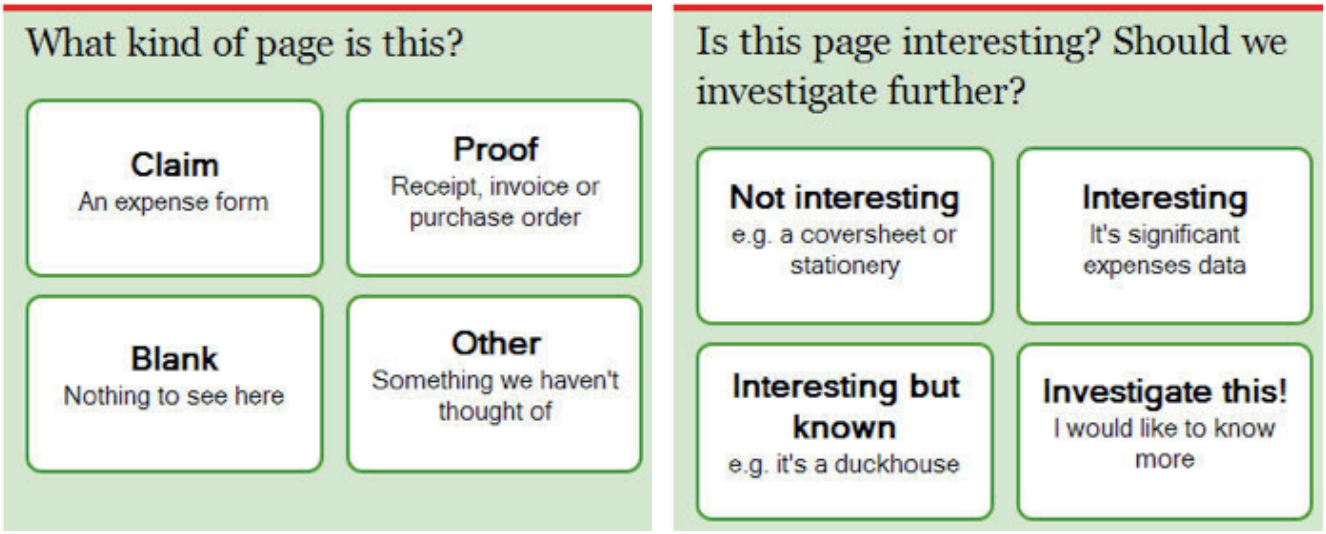


Image 2.03: Investigate your MP's expenses

Looking at the diffusion of the game in various fields of the society and daily life, such as those listed previously, we can think of a parallelism between the game system and the service system; in the McGonigal's vision of the game as a medium that blends reality and fantasy, communicating knowledge and contents (this vision is shared by Flanagan in her essay *Critical Play*, 2009) and bringing players to collaborate towards the achievement of epic goals (the topic is deepened at paragraph 1.2), game reveals itself as a systemic element of an action with a real world impact.
I will introduce two case studies to better explain the concept of game as a generator of awareness for players on issues that belong to the real life: *Investigate your MP's expenses*[31] e *Quest to Learn*[32].

Investigate your MP's expenses

It is collocated in the political field; the project was created on June 2009, during the scandal of the public expenses in British parliament, as an online investigation.
At the base of the game there is the designer's purpose of scrutinizing and validating the numerous documents and tax receipts provided by the members of the British Parliament; indeed, without the contribution of the citizens it wouldn't have been possible to review all these documents.
The editor of the newspaper Guardian asked Simon

31 www.the guardian.com
32 www.q2l.org

Willison, a software developer, to convert all the documents on the public expenses that the Government had made public (almost five hundred thousand pounds/ euro) into virtual files and to publish them on an online platform. In this way people from all the UK had the possibility to fully read the documents and filter the futile information from the data to investigate further, as shown in the *image 2.03.*

More than twenty thousand people joined the project that led to the resignations of several politicians. It was the first massively multi-player investigative journalist project in the form of a game, with a clear mission and a tangible output. Players felt they were making teamwork towards a common objective - often in games the designer's purpose is different from the players' goal, as we will see in the paragraph 5.3, but in this project the goal coincided - and that their effort gave tangible results. It was a project based on *crowd sourcing* (or sharing economy), which is a way to tackle a huge project inviting a large group of people to co- operate.

Quest To Learn

It is a school based on game whose aim is to change the traditional Education system, according to the needs of the new generations. Digital natives[33] grow up learning concepts through videogames, which are high-intensity engagement media and which provide an extreme, active and positive activation. Many scholars (Prensky 2001, Jenkins 2009, Salen 2008) argue that new generations have different needs than the previous ones, primarily as a result of the context in which they were born, grew up and as a consequence in which they are forming. The traditional educational system is unable to fit their learning capacity.

Quest To Learn (official website *q2l.org*) comes from a team of scholars, researchers, educators and professional game designers and it has been developed in order to cope with the actual educational gap.

Educational game is a growing field, but *Quest To Learn*

33 Digital natives have been described by the learning game designer Marc Prensky (2001), as individuals who have born and grown surrounded by digital technology.

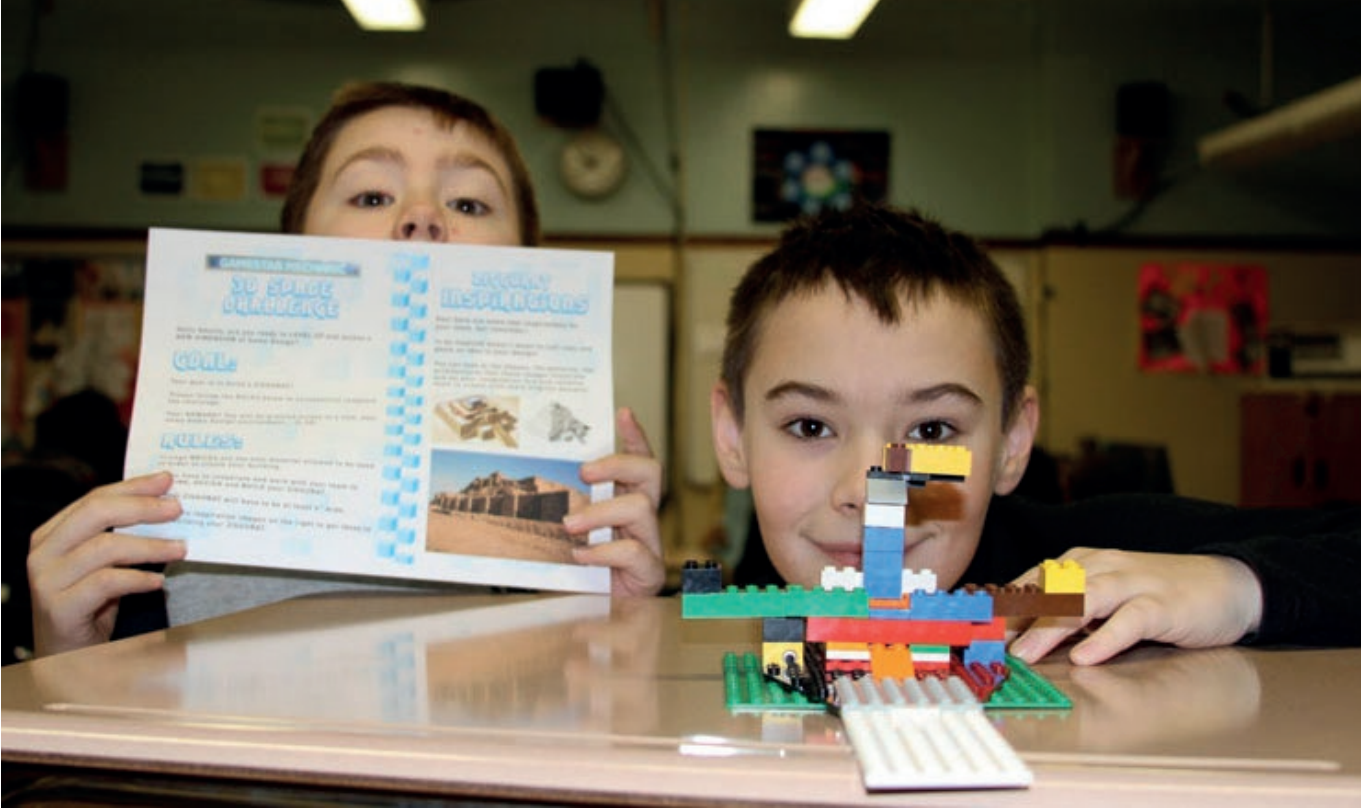


Image 2.04: kids learn while playing at Quest to Learn school

is not just a game designed to be used inside the school: it is the first game-based school in the world.
Graduation schedule is the same one used in the other schools, but the way students learn is different: they are engaged in ludic activities for the whole day, starting from the moment they wake up until they finish their daily homework. Competition can push students to a greater effort, even collaborating to solve tasks. Quoting McGonigal «in a collaborative game players rely on each other at all times to keep the game going, even if it's not working out in their favor. [...] gamers are honing their ability to honor a collective commitment. [...] Whether they win or lose, they're creating reciprocal rewards» (2011: p.269).
In the *image 2.04* two kids are dealing with an educational game mission, giving each other reciprocal help and sharing a common pride. Inside the teaching plan proposed by *Q2L* there are several missions to unlock, some of which are secret: this is an engaging way to incline students towards school subjects actively. In this way the notions will be deeply rooted in the students' memory and their motivation to learn will be stronger and more powerful.

The case studies - which will be explored in Case Study forms at the end of the chapter - have showed us how the game can work as a medium which is able to convey contents and knowledge, to stimulate players towards a critical thinking on actual issues and towards an active participation for the improvement of these issues (Flanagan 2009, McGonigal 2011). As I introduced earlier in the paragraph, if we look at the spread of game in various fields of the society, such as those listed previously in the case studies (healing, politics, science, education and learning, to mention a few), we can see that game can turn into a systemic element within the Service Design discipline.
This interdisciplinary synergy will be the main issue of the next paragraph.

2.1.1 The connection between game, design and users

At this point of the dissertation, it has been properly outlined how games can be important and useful media of conveying experiences with ludic aspects but also sociological and cultural features.
According to scholars such as Jane McGonigal (2011), with this paragraph I intend to explain how designers should consider the game as a constitutive element of a service experience, «a real opportunity to be of service, to band together, to contribute to a larger cause» (2011: p.99). In particular it is important to focus on why and how games could bring innovation in the discipline of Service Design.

Considering the game as a systemic element of Service Design, it should be supported by:

- **>** a detailed analysis of the target audience (and guided by a user-centered approach);
- **>** an analysis of the problems that the target is facing;
- **>** a research on the possible ways to solve these problems.

These are the theoretical basis to support the game as an element within a service system, creating a *Game Service System*. Since the service comes to existence at the same moment it is being provided and used (it is the feature of Perishability, which had been deepened in the paragraph 2.1) a designer should carefully study the interaction

between users, tools and service figures (especially with the employees), forecasting the result of the interaction between users and service and the emotional value which is produced during the experience; this forecast cannot be totally precise, because services are subject to the Heterogeneity (see paragraph 2.1). This means that customers' behavior can be analyzed during the design phase (for example using the method of personas, explained in the paragraph 2.1) but the service can be perceived differently from user to user and from one day to another.

In a Game Service System the designer has to consider the interaction between players, employees, playground (which in the case of an urban game is the city itself) and game system (which is composed by several elements, for instance dynamics, time, rules, obstacles and goals). Moreover, it is crucial to plan the right level of difficulty of the game, which has to meet the skills and resources of the identified target range (the concept is deepened in the paragraph 1.3).

The service experience has a lifetime, a location and a certain degree of uncertainty for the participants (due to the Heterogeneity of the service, distinct participants can perceive it in different ways).

Thinking of a pervasive game as a service element, the space, social and time boundaries will be blurred with the daily life of users (the pervasive games and their boundaries are explained in the paragraph 1.2.1).

Consider for example the health service system. A woman falls from the stairs, dislocating her arm; she will probably go to the Emergency Room, where she will be subject of medical examinations, receiving cares, medicines and advices on how to improve her condition at home. The service finishes once the patient is released from the hospital with her arm in place. Of course, the results of the service will be long-lasting, as the arm will get better over time, but the service is terminated.

On the other hand, with a pervasive game the service boundaries are not so well defined, but they tend to mingle with other humdrum actions (Montola 2009, Walther 2005, McGonigal 2011).

Resuming the service case study *Quest To Learn* (Q2L), it is easier to understand the concept. The teaching approach consists of a game system within a school. But this is not

limited to the school timetable: it pervades every aspects of the students' life, from the moment they wake up to the end of the day, with missions that can be solved applying the notions learned at school. The students of Q2L see the result of their study (and their efforts within the game system) materialized in rewards and good grades, which are positive feedbacks given by the system. The feedbacks system of the game is crucial and it has been introduced in paragraph 1.3.
Players have to see the result of their actions: when they give an input to the system, such the solution to a puzzle, the system should respond with an immediate output. These outputs, which can be positive or negative feedbacks, are important because they show to the players if their action within the game system were correct or not.

During a play experience the player is actively involved to pursue a final goal: it is the player himself that gets close or far from the goal, accomplishing right or wrong actions within the game system. This kind of involvement brings the players to a voluntary effort which is guided by their lusory attitude (Suits 1978), to overcome obstacles that are provided by the game system; players' efforts result in an increase of the skills relatives to the game (which can be for instance logical- deductive, physical or cooperative), and in the learning of notions and knowledge communicated through the game system.
In 2009, Flanagan described the feature of the game to convey contents, drafting the concept of critical p lay: a ludic practice can solicit a critical reflection on society and current issues. This approach is the engine for the innovation in the disciplines of Service System Design. In this way the game reveals itself as a strong communicating medium which uses an awareness strategy, conveying a critical reflection on actual issues (this concept is examined in the general introduction.

As a systemic element, the game connects the user with the service system, but also with spaces (real or virtual) where it takes place and with the other service figures (players, providers and employees), whether they are online or offline. It can also guide users to the awareness on actual issues and to a social commitment to solve them.
Both services and games are designed starting from a user-centered approach and aim to create a user centered

Image 2.05: the logo of the Games for Change association

experience. This trait " d'union" can lead the synergy between the disciplines toward a Game Service System Design (or GSSD, an acronym that I have coined to explain this multidisciplinary system). A good sample of GSSD is the work conducted by the association Games for change, which will be analyzed in the next paragraph (2.1.2).

2.1.2 Games for Change

The game can be seen as a constitutive element of the service experience; it is now important to go deep in the issue, introducing the meaningful and remarkable work of the association Games for Change, to support my thesis and its basis.

The Games for Change association[34] (G4C) has a strategy of games as elements of social impact. It is an emerging movement materialized into a non-profit organization (founded in 2004 and based in New York), which is dedicated to the use of games for tangible social changes and best practices. The community is a shared resource for organizations and private designers that embrace its vision.

Their mission is "Catalyzing Social Impact Through Digital Games": they want to create social impact games that serve as critical tools in humanitarian and educational efforts.

34 For further information, go on the official website gamesforchange.org

The concept of game as a service tool is an emerging trend in the discipline of Game Design. Game for Change has a European section (G4C Europe) with an open challenge for 2013: create a game that helps promote social change for the better. The aim of the competition is to explore the power of the game as critical tool to create real-world impact. Games are leverages for social good, media for bigger service systems.
Games teach and influence players; service designers should take this opportunity and design games which can lead to social changes in various fields. Games have the power for social impact and G4C understood this feature. Its strategy is an example of synergy between different fields: the game design and the social commitment. The purpose of my thesis project is to take advantage of this multidisciplinary strategy to create a game-service system.

CASE STUDY #3. QUEST TO LEARN

NAME	Quest to Learn (Q2L)
LOCATION	New York, USA
AUTHOR	John D. and Catherine T. MacArthur Foundation
YEAR	2009
TOOLS	Institute, with trained professors

MODE	Institute where students learn through a series of instructive games
DESIGNER'S GOAL	Shaping the Education system on digital natives' needs
PLAYER'S GOAL	Learning in a fun, entertaining and educational way
CUSTOMER JOURNEY	Students subscribe to the school; their curriculum vitae are examined by professors; students which correspond to the Q2L ideal student can attend the academic year. During the lessons (and doing homework) students deal with educational games to solve, developing skills and knowledge
STRONG POINT	Q2L is not just a servce or a game: it is a school based on games, whose aim is to change the traditional Education system
WEAKNESS	Not all the students can access to the Q2L school

CASE STUDY #4. INVESTIGATE YOUR MP'S EXPENSES

NAME	Investigate your MP's expenses
LOCATION	Great Britain
AUTHOR	Guardian newspaper
YEAR	2009
TOOLS	Online platform; archive of documents

MODE

The game defines itself as an environmental assault game (a urban treasure hunt)

DESIGNER'S GOAL

Create a collaborative investigation with citizens, to analyze and filter documents on public expenses made by politicians

PLAYER'S GOAL

Contribute to investigate on the scandal of the public expenses in British parliament

CUSTOMER JOURNEY

British adult citizens could subscribe to the platform and read some documents from the archive, giving their feedbacks on their relevance for the investigation

STRONG POINT

The project worked as an online investigation which involved the whole population of Great Britain in a crowd sourcing project which led to the resignations of several politicians

WEAKNESS

There were not filters to establish the reliability of the participants: they could also use the service to "hide" some documents, classifying them as not interesting

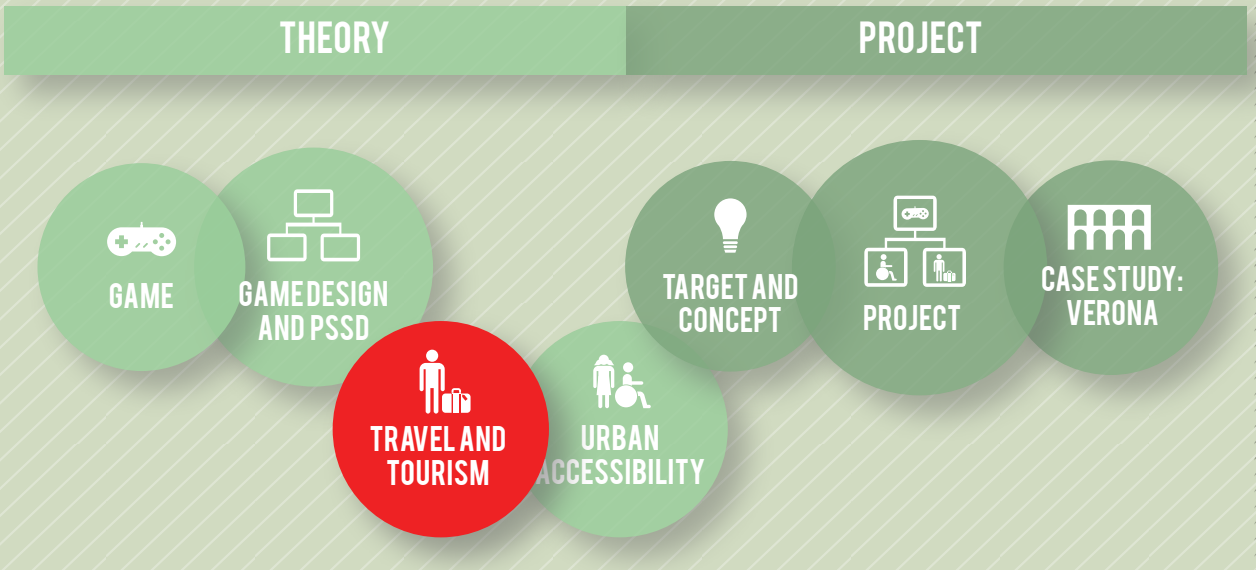








3. TRAVEL AND TOURISM



Verb (travels, travelling, travelled; US travels, traveling, traveled)
1 [no object, with adverbial] make a journey, typically of some length:
we travelled thousands of miles
2 be successful away from the place of origin

Oxford Dictionary

Act of traversing through a geographic region or moving from one place to another. This can be temporarily, as is often the case, and can be for a short period of time. Salespersons often travel to different regions in order to generate sales with another company for example.

Business Dictionary

Travel is the movement of people between relatively distant geographical locations, and can involve travel by foot, bicycle, cars, train, boat, airplane or other means, with or without luggage, and can be one way or round trip. Travel can also include relatively short stays between successive movements.

Wikipedia

The Italian tourist system is a very interesting sector to examine with a Product Service System Design viewpoint, because there are many emerging trends in this field, which need to be satisfied by a designed solution

As I mentioned earlier in the text, the Service Design discipline have an interdisciplinary approach, which is sharpened in the sector of PSSD, a system of products and services, where elements and figures which come from different environments work together towards the realization of an offering, able to:

- **>** satisfy the customer's need;
- **>** meet the desires and demand of users;
- **>** generate a critical thinking on an actual issue.

Service Design is a discipline of recent origin, as I have enunciated in paragraph 2.1, which has been designed to satisfy the demand of a contemporary audience that requires complex solutions, no longer made just of products, but composed by elements of product and service. Service Design operates in every area of daily life, using different technologies and making use of infrastructure and public or private spaces of various types.

In my opinion, it can be interesting to design a systemic solution in the field of tourism, and more in general in the sphere of travelling. In this chapter I deepen the reasons which led me to consider the tourism – in particular the Zero mile Tourism[35], as we will see shortly in the chapter – as a main design element.

It is crucial to make an analysis on the travel, in order to deal with tourism as a key element of project. The analysis aims to discover the various types of journey, to understand what pushes the visitors to embark on a journey and what the consumers search from a travel experience.

In the chapter I will define a taxonomy for travel, taking in consideration various aspects of the trip.

As I have already said, I have introduced the chapter with three definitions of travel, which I

35 The Zero mile Tourism is dedicated to the discovery of hidden interesting place on a local level; users are both visitors and citizens.

have selected for their heterogeneity: the first of the list comes from the Oxford Dictionary, a reliable source of knowledge; the second definition has been taken from the business dictionary, which is a database of over 25,000 definitions on business-related topics (including management, small business, economics, human resources, entrepreneurship, recruiting, and corporate strategy); the last explanation is a Wikipedia entry, co-created by people.

Also if these definitions belong to diverse fields, they all attest that to travel is the act of moving from a place to a relatively distant location, with different purposes and transportation modes. In the chapter I will analyse these differences.

Travel has always been an important part in the life of the human being: the evolution wanted us to be traveller[36]. The first form of travel for the mankind has been the migration, a strategy of survival shared by humans and other animals. We can say that the journey is one of the main drivers of historical and social evolution. In fact many places of worship and historical interest are born during these mass displacements, as meeting points among the nomads. The "act of moving from one place to another" has always brought to changes in the features of a society. In the history of the mankind different forms of travel have born, reflecting desires, needs and problems of the age in which they have arisen (as we can see shortly in the paragraph 3.1).[37]

Who travels is the subject of a personal change, a loss (temporary or permanent) of the own social identity which leads to an evolution in the traveller's individuality (and wider a change in the society). Travelling has always been considered as a rite of passage, and the traveller is both bearer and subject of transformation.

In the past ages humans used to move for specific reasons, for instance the research of new sources of food and water (migration), for military reasons

36 Bruce Chatwin (1997: p.123). English writer.

37 Eric J. Leed (1991). Historiographer at the Florida International University.

or religious purposes.[38] In this eras journey were usually very long and they induced humans to learn new languages and traditions.
As I anticipated earlier in the text, I find the topic of travel interesting, because it can be considered as a moment of scission-aggregation of people and cultures. Travellers move from their home towns (scission from their culture, communities, language and roots) toward unknown places (aggregation with new lifestyles). Many services have born around the topic of the trip, over the last centuries (for a brief history of the journey evolution, see paragraph 3.1): for instance the travel agency, the shelter in all its variations (hotel, B&B, hostel, mountain dew and so on), the guidebooks for travellers and the booking websites. Tourism has always been a golden goose for the global economy, although nowadays it is in a downfall-phase, especially in those countries that do not meet the travellers' demand, as we will deepen in the paragraph 3.5.1.

In summary, the aim of this chapter is to analyze the travel, understanding why people travel and what visitors look for during a journey. To examine this features if the trip I examine the evolution in the journey's morphology, making a taxonomy for travel. It is equally important to analyze what visitors know about a location, in the different phases of the journey (from its planning to the conclusion).
The main goal of the chapter is to provide an analysis of travel and tourism. The last part of the chapter is focused on the tourism, in particular on the actual situation of tourism in Italy, to understand the request of the contemporary traveller.

38 Michela Zucca (2001). Anthropologist.

3.1 The evolution in the journey morphology

To analyze the travel and the tourism we should, at first, to study its evolution over time: the development in the motivation of travellers, on its duration and typology, the change in the target range and the addition of infrastructure and material to support the traveller.

Writing this paragraph I referred to the text written by Pio Trippa, *Storia del viaggio e delle sue motivazioni, dall'antichità al ... turismo* (2010). Trippa is a researcher in the field of travel and the ex-director of the ENIT (the Italian national agency for tourism).

The earliest forms of society were linked to the human nomadic condition, which was bonded to hunting, collecting and shepherding. This nomadic dimension lasted until the Neolithic era, when humans started the cultivation of vegetables, which led people to take a sedentary lifestyle. From this moment the travel (intended as a movement from the homeland to a different location) was considered by the society as an unconventional social component, against the stationary habits. With this perception of the trip, nomad populations started to be seen as a dangerous social alternative, because since they have no bond with a particular place, they are difficult to control. In opposition to this lifestyle it was born the concept of "civilization", which assumed a long-lasting bond with a certain place.

As time goes by, this perception was replaced by the identification of the nomads' poverty as a approximation to purity. In the Middle Age, the long journeys made in poor conditions and by feet assumed a new meaning: the pilgrimage. It is the journey to sacred destinations, which had its moment of greatest prominence in the Middle Age. This particular journey took place in many countries of Europe. It was a rude and laborious experience through unsafe places, for instance woods and mountains. The main target of these journeys was the pilgrim, but also students from all over the Europe were attracted by the pilgrimage, because it was a way to socialize with other travellers and with local inhabitants.

It could be considered as the ancestor of the modern tourism and a tangible sign of how the concept of travel has changed

over time in the society: no longer a nomadic activity, but a sort of mass travel to expand the knowledge and discover new places and cultures.
During the Sixteenth Century the religious purpose of the travel was flanked by other interests, such as the curiosity for the city monuments and the local traditions.
Furthermore, after the discovery of the Americas people had also the possibility to make overseas trips. This phenomenon was initially accessible just for high class people, followed soon by artists and middle class individuals; also students used to travel - often with the task to compile a daily diary, in order to contribute to the expansion of local knowledge.
From this moment on, travelling became more comfortable and accessible, a moment of pleasure able to enrich a person's knowledge without modifying its habits (as occurred at the downing of the travel). The biggest evolution of the mass tourism was born with the Industrial Revolution, which opened the possibility to travel also at the working class, which had conquered the right to leisure. The English entrepreneur Thomas Cook saw the great business opportunity to offer organized trip to a mass market of working-class people: he opened the first travel agency, with the aim to offer a comfortable entertainment journey away from home, but without losing the own habits. For the first time low class people and women were allowed to travel. The contemporary culture brought a strong confidence in the human sciences, which have been able to open the boundaries of communication and transportation, creating new services around the primordial concept of travel, making use of new infrastructures and technologies to create a virtual nomadism. The virtual trip is linked to the nowadays habits and life rhythm: the leisure time lacks and it is often occupied by activities linked to new media, especially the laptop and

But the true travellers are they who depart
For departing's sake; with hearts light as balloons,
They never swerve from their destinies,
Saying continuously, without knowing why: 'Let us go on!'
These have passions formed like clouds;
As a recruit of his gun, they dream
Of spacious pleasures, transient, little understood,
Whose name no human spirit knows.

Charles Baudelaire (1857)

the internet connection. In contemporary society travel is mostly a form of leisure and pleasure, but the reasons to travel are various – as we will deepen in the paragraph 3.2.3.

3.2 A taxonomy for travel

Travelling assumes different features depending on the user, the duration and the reasons which push the people to travel, to mention a few. I have developed a taxonomy for travel, based on the main features of trip, to identify these features and outline the main typologies of journey:

- > the phases that compose a trip;
- > the location;
- > the motivation;
- > the duration;
- > the typology of traveller;
- > the mean of transport;
- > the safety during the journey;
- > the materials to support the travel and the user;
- > the tricky moments of the trip;
- > the "back-of-stage" side of a trip, the problems that are hidden or ignored by tourists.

The taxonomy must be introduced by a consideration; it is appropriate to distinguish two ways for travelling: the physical trip and the mental journey. The analysis will focus on the physical travel, but it is fair to say a few words to describe the mental journey. A person can travel with her fantasy, dreaming of parallel worlds. And these places can be visited at any time and without limits. Absorbing books, music and good gameplay are media to expand people's mind and let their thinking fly. In contemporary society new media foster people to virtually travel; the project Twinity (held by ExitReality), for instance, aims to create virtual, navigable versions of the main tourist cities across the world. It was launched in 2008 with the release of Berlin (depicted in its digital version at *image 3.01*), soon followed by other cities like Singapore, London, Miami and New York.

The virtual journey cannot be considered as a mental travel, like the ones induced by a good book or documentary; it can be interpreted as a hybrid between the physical and the mental trip, because people "travel" around virtual cities using

Image 3.01: the city of Berlin on twinity.com, in 2008

their avatar, without really moving from their home.
After this very short introduction on the mental and virtual trips, I will examine the main features of the physical travel.

3.2.1 The phases of a trip

One of the main features in the morphology of the travel is its partition in phases, from the planning of the journey to the homecoming of the user. A typical journey is composed by several phases, which can be clustered in four main moments.

> The first phase is dedicated to **"what happens before the travel"**
At first the traveller plans the trip (where to go? when? better alone or in company? what is my budget? how many suitcases do I need?). It is the moment to gather information on the destination, reading books and reviews and consulting internet, also looking for advices from other travellers. If the chosen location meets the user's expectations on it, users will probably search online for travel promotions, before to buy the trip.

Image 3.02: souvenir shop in Matera, Italy

Organize a trip means: choose the mean of transportation, book a place for the overnight and plan a tour among the main tourist attractions (for instance using a guidebook or hiring a local guide). These elements can be purchased separately or together, because many websites allows the possibility to buy all-inclusive solutions (flight + hotel) with a low cost. There are different ways to purchase a trip: offline, at the travel agencies, and online, on dedicated websites.
Another substantial phase during the preparation of the trip is the luggage packing. First of all the travellers must be informed on the destination weather conditions. If the climate is different from that of their own country there could be necessary some shopping, to procure suitable clothes and products.
Moreover, every nation has its own laws and regulations. In some cases documents are required by local authorities (for instance ID card, passport, visa), to let the foreign travellers visit the country. Traveller must know and obtain these documents previously.

> The second phase is dedicated to **"the transfer"** to the destination.
Travellers go to the place of departure, which could be for example an airport, a station, a harbor or also a private house (if the trip will be by car or by taxi). Some of this places request a check-in phase which is followed by security control (body scan and X-ray for the bags). The next step is the embarking of the luggage, if expected by

the chosen mean of transportation and the boarding. After that, travellers can start their trip to the journey location. The phase of transfer could be critical for some users: for example many people suffer of anxiety during the flight. Other travellers consider this phase the starting point of the experience itself.

> The third phase is dedicated to **"the permanence"**
It starts with the arrival to the destination; here it starts the real experience of travel, which depends on the reason the leads the trip and that will be analyzed in the paragraph 3.2.3

> The last phase is on **"what happens after the journey"**
After the journey experience the travellers should return at home; this is the phase of the transfer to the starting point. After the comeback travellers usually distribute gifts and gadgets to their friends and relatives, as a sign of their travel (the *image 3.02* depicts a suovenir shop's). Another moment traditionally shared is the photographs and recording view; in this way relatives and friends have the possibility to take part in the trip. In the actual age this tradition is becoming weaker than in the past, because people use to share their pictures online (for instance on facebook).

Tourists have also the opportunity to share their advices and reviews on the location with other people, thanks to the websites and blogs for the peer-to-peer data exchange (see the paragraph 3.2.8).

3.2.2 The location

The destination of a travel depends from many factors: the users' tastes and expectations, the time at their disposal, the season, the budget and the number of travellers, for instance. The choice of the destination is a crucial phase in the planning of the trip, because it shapes all the other choices (the mean of transportation, the overnight, the duration and the luggage, to mention a few).
People can travel far away, in exotic locations on the other side of the world or even within their own country, region or town (this particular form of local tourism is called the Zero

mile Tourism).
The main goal of local visitors (citizens included) is the discovery of curiosities linked to different fields like history, culture and art. Every location hides anecdotes which are unknown by the majority of people. For example a public park, a fresco or a statue can hide an interesting tale or legend. This particular form of tourism has been developing over the last years, mainly to face the economic crisis and the inability to undertake expensive trips to far destinations.

3.2.3 The motivation to travel

People travel for different reasons. Every person has her own motivation to travel, and from the main goal of the trip depends all the other feature of the journey (especially destination and duration). I have made a list of the main motivations that drive a person to have a trip.

> Business trip
A reason to start a journey could be the job. Many workers have to move from their hometown to a different city, frequently or just occasionally.
Some business fields are based on the trip itself, for example the itinerant salesmen. Usually these employees return home within a single day, but sometimes the trip duration could be longer. For some professions the travel can be medium-long lasting: for example some architects must work abroad also for weeks or months, to follow a project. Some employees also live in the city where they work during the week while in the weekend they move to their hometown.
> Transfer for job research
This journey can imply a home change, temporary or not. When the job research takes place in a foreign country, some documents are required, for instance the working residency permit. Usually when a person moves for job research, the situation is not well defined; the job could be found in a different location and this requires a new transfer. The person can also not found, and this requires a homecoming.
> Voluntary work
The voluntary work consists of a helping or supporting activity, implemented by private entities, generally no-

profit organizations (NPOs). People can spontaneously decide to join this activity; doing this, they can undertake long or medium term trip to far destinations. This requires the transfer to another country, or sometimes toward another continent (with many implications: identification documents and vaccines, for instance). The main reason to undertake this experience is the will to help in solving big problems, which can be related to various issues. The main ones are the social justness, the safeguard of nature and the humanitarian help to populations in difficulty.

> Pleasure trip

This type of travel is commonly associated with holidays and leisure time. It consists into visiting a location – for instance a city, a state or a theme park - as a recreational activity. People undertake this kind of trip to entertain themselves with different activities, usually related to food, music and sunbathe.

> Adventure journey

This kind of trip is a niche activity. Many tourists, especially in recent years, deal with this type of journey to attempt exciting experiences; for example their aim could be to arrive to a particularly winding river where they can row, or to explore the Virgin Forest. These activities are always done under the guidance of an expert in the field, avoiding risks to the users' safety.

> Trip for sport reason

Speaking on sport trips we refer especially to those journeys undertaken to do sports that would not be possible in the traveller's country (for instance for reasons linked to the weather conditions). For many of these sports, for instance scuba diving or paraglide, it is required the presence of an expert guide. Sometimes sportsmen must previously take a license attesting the ability to tackle a sport safely. For example climbing the Everest Mountain requires advanced skills and local guides, the Sherpa.

> Extreme/shock tourism

This is an emergent tourism niche, which engages travellers to extreme and dangerous places and events. It has deep roots in traditional activities like the Pamplona bulls ride. Some destinations can be the deserts, the jungles and the tallest mountains, but also places devastated by atomic bomb. The attraction is in the risk, which activates the adrenaline rush. This particular form of tourism does not require a plan on all the trip details, like the overnight place

Image 3.03: urban explorer in Hobart, Tasmania

and the transportation; the adrenaline is also activated by the uncertainty.

> Urban exploration

Urban exploration is an emerging trend – like the extreme tourism which we saw earlier in the taxonomy. It consists in the discovery of the man-made environment through unconventional tourist paths. It is often flanked by other hobbies like photography or the discovery of urban art (see *image 3.03*). It also involves a risk, because sometimes people visit abandoned ruins or trespass into private properties. Some of the mainly visited spots are drains, member-only areas in public spaces, working buildings, subway rails and abandoned places. The phenomenon is increasing, especially in the USA, where is born a TV series on this topic, *Cities of the Underworld.*

> Zero mile Tourism

This particular type of tourism is dedicated to the discovery of interesting place on local level, which often are hidden or unexploited. Users are both visitors and citizens, whose aim is the discovery of local culture, art, anecdotes and curiosities. In the *image 3.04* a local visitor discover the artistic side of his town.

Image 3.04: project of Zero mile Tourism "Milano e Oltre"

> Visit to friends or relatives

Friends and relatives are the best local guides to discover a new city. Visiting friends is mostly associated to a pleasure trip, but there could also be special occasions (to which I have dedicated the next voice of this list).

> Special occasions

Virtually every person, at least once in its life, faces a journey tied to a unique event. Some circumstances are for instance wedding, funeral and graduation ceremonies. These are typically short term journeys, aimed to celebrations and festivities more than to explore new locations.

> Study trip

This type of journey is born to give students from all over the world the possibility to study in different countries, learning languages and traditions. This kind of trip gives the students the opportunity to be immersed in new cultures, to know people and also to open new working occasions, especially for the university exchange programs. Some high schools and universities provide scholarships and funds to support economically these students,

> Cultural trip

The cultural trip can have different aims: from the knowledge of a new culture (for instance for anthropological reasons) to the discovery of local art; from the study of a new language to the development of a project (for example, some service designers study closely a new culture to gain awareness on issues and propose ad-hoc solutions).

> Pilgrimage

In the paragraph 3.1 on the evolution in the journey's morphology, I explained how the pilgrimage has been a fundamental step in the development of the modern trip conception. Nowadays its significance is changed. Of course the religious purpose is still strong for some pilgrims, but for many travellers it is an occasion to explore the destination in an alternative way.

> Travel for war or legal reasons

As a consequence of wars or natural catastrophes, it can happen that a large number of people must seek refuge in other countries. Refugees often need a new home for a long or medium period of time. The hosting country provides infrastructure, volunteers and goods to help them.

There are other legal reasons which push people to visit another country; an example could be the trip made by homosexual couples to obtain the legal marriage or the child adoption, because some countries do not allow them these rights.

> Travel for medical treatments

Sometimes people undertake trips for health reasons, for instance moving to destinations with a more favourable climate or which offer medical treatments not allowed (or too expensive) in their country of origin.

> Transfer of residence

A travel can be temporary or permanent. The case of the transfer of residence belongs to the second category, since it is frequently a one-way trip. When people move to a new residence, usually it is for working or family reasons. Moving to a new house means to relocate objects and furniture collected over years and to build new social communities.

3.2.4 The duration

From a user perspective, a journey could be a lifestyle, a path or a temporary situation. The duration of a journey is directly linked to the motivations which push the person to travel.
Basically there are five main typology of travel, depending on its prolongation.

- **>** The short-term journey lasts between a week and a dozen of days. This is the case, for instance, of the week with the family at the sea.
- **>** The medium term trip can last up to one or two months.
- **>** The long-term journey is usually dedicated to job or study reasons and it can be protracted from six months until one year.
- **>** The one way trip (a permanent change of residence), which is usually due to a transfer for business or family reasons.
- **>** The journey could also be a transition, an intermediate step during a longer trip. It could be a moment of break during a very long trip by car, for example a visit to a friend which is on the road for the final destination, or again, it could be an intermediate stop, part of a bigger plan (for instance the visit to Italy within the exploration of Europe). This type of trip can have a different duration, which depends mainly on the time visitors have at disposal and on their budget.

3.2.5 The typologies of traveller

An essential element to consider building a taxonomy for travel is the traveller. We can start considering the number of people which undertakes a trip and the nature of these individuals.
A visitor can travel alone or with other people, for instance relatives, partners, friends, classmates, colleagues and also groups of tourists (as in the case of trips organized by local associations). Tourist chooses to travel alone or in company with others according to the motivation which pushes him/her to undertake the journey and on what he/she is looking from the trip itself. In addition, users can have different tastes

Image 3.05: stereotypes of tourist categories; n.p. author

and nature: the person could be adventurous or planner, she can have different goals - a cultural interest or a job purpose for instance - she can even be a photographer or an artist looking for inspiration. Every individual has a particular predisposition to travel and he organizes the trip according to this. In the paragraph on the motivation to travel we can see how different people are predisposed to different kind of trip. For instance an extreme travel (see the paragraph 3.2.3) will meet the expectations of an adventurous person who is not looking for an ordinary touristic trip. He will rather search the adrenaline of a journey exploring the Virgin Forest, resting on a sleeping bag and eating local specialties.

Another typology of traveller is the "Zero mile Tourist", a local visitor who can be both a tourist and a citizen of the city; his/her aim is to discover culture, history, art and tales on a local level. This kind of visitor is increasing of number in the last years, as a reply to the economical crisis which hit Europe and the rest of the world. In this situation many people cannot afford to undertake expensive travel to far and "exotic" locations. Local tourism offers many possibilities to visitors of various kinds. Local visitors can make tourism with no need to move from their city, cutting costs on transportation and

overnight. Local tourism often offers alternative guided tours for tourists, focused on the discovery of local culture, made by anecdotes, tales and legends.

3.2.6 The means of transport

Very important, during most of the phases which compose a journey (see paragraph 3.2.1), is the choice of the mean of transport. There are three fundamental modes of transport: by air, by land and by sea. Every category is composed by mass or private transports.

> The first category comprises airplanes, helicopters, funicular railway and extreme transports like hot-air balloons, dirigibles and paraglide, to mention a few.
> The second one includes rail, road and off-road transports, of public or private ownership. The most common ones are car, bike, bicycles, train, subway, bus and tram.
> In the third category of transports (by sea) we have mainly ships, boats and motorboats.
> There is also an additional category, which is the one based on human or animal-powered transport.

These categories can be combined during a long trip, for example the first part of the transport can be done by car, the second by sea and then again by car. To each mean of transport are associated different technologies and infrastructures, besides some regulations. This is the reason why some of these require a driving license or an insurance to be used or driven.
An emergent category of transport could be identified as the "private transports sharing", starting from the car-sharing or the bike-sharing. Some websites or infrastructures allow people to share, for instance a car, and to divide the expenses of the oil and the toll road.

3.2.7 The safety during the journey

The safety of the visitors is a very important issue for the local municipalities of touristic locations. To have access in some

countries, travellers must obtain certain documents; this is one of the main measures adopted by government to control and regulate the entrance and permanence of visitors in a destination. For instance, for a member of the EU it is required an Identity card to travel around Europe and a passport to visit the other countries. But some nations require additional certifications, for example a Visa.

The issue of safety is necessary to protect travellers abroad and during the transfer in case of unexpected incidents, injuries, crime and violence. Some advices commonly given to visitors - especially abroad - concern the documents (leave a copy of your passport to someone you trust) and the health (be sure to obtain a health insurance which is valid in the visited country); it is also suggested to search for a national embassy in the foreign country.

Earlier in the dissertation I have introduced the main means of transport during a trip (paragraph 3.2.6); I'd like now to include the three main statistics on the safety of various type of transportation - see *image 3.06* - based on a survey made in 2000 by DETR (the Secretary of State for the Environment, Transport and Region).

Image 3.06: security of means of transportation

Besides the people's safety, an additional topic is the "security"

DEATHS PER MEANS OF TRANSPORTATION

	DEATHS PER BILLION JOURNEYS	DEATHS PER BILLION HOURS	DEATHS PER BILLION KILOMETERS
BUS	4.3	11.1	0.4
RAIL	20	30	0.6
CAR	40	130	3.1
BICYCLE	170	550	44.6
AIR	117	30.8	0.05
WATER	90	50	2.6

SOURCE: DETR, 2000

of the luggage. For example, if a traveller does not receive his/her suitcase back after a flight, it is a task of the airline to find it and to deliver it at the address indicated by the user, or at least to refund the loss. But also this measure requires the users to have insurance which cover the risk.

3.2.8 The materials to support the traveller

Since the first organized tour, which can probably be identified with the sacred route tracked by the Empress Elena in the Middle Age for pilgrims who wanted to follow the places where Jesus lived, travellers have been provided with different kind of supports.

At this moment of the dissertation it is fundamental to analyze the main categories of material which support the travel: the "guide" tools (for instance the orientation material) can be tangible and intangible (virtual); another big resource for the travellers is the local people, which can be considered as a third category of supporting tools. The *image 3.07* depicts the main categories of tools for travellers, with some case studies.

Tangible materials

This category includes tools, objects and products which can be physically perceived by the users.
Since the earliest organized trips, people have created materials to support travellers during the journey. The inventor of the first planned travels was Thomas Cook, an English entrepreneur who, in 1841, coordinated the first tour for a group of people. He provided a train ticket and a daily meal for each participant. Given the great success of the experience, Cook decided to found the first model of the modern *travel agency*.
It has been almost two centuries that the travel agencies are the starting point for travellers; they can provide complete journey experiences and supply every kind of information material on the destination. Tourist agencies create different trip packages, based on the main interests of the travellers: for instance users can purchase an adventure package, a

MATERIALS FOR TRAVELLERS

ORGANIZE	ENTERTAIN	GUIDE	SOCIALIZE	SHARE	SUSTAIN	LEARN	TOOLS WITH NEGATIVE IMPACT
Travel agencies	Distraction Jetset	Paper and digital maps, with GPS	Meeting local people Lookals, Gidsy	Food review Foodspotting	Eco camping WWF summer camp	Guidebooks	Stressful security control
Online travel agencies yalla yalla	Pastime Crosswords	Social travel Tripadvisor		Archive of attractions Buildings	Ethic tourism agencies	Documentaries	Queue at tourist attractions
Luggage tracking Worldtracer	Recreational activities Group games with Entertainers	Tourist info points	Locate friends Foursquare	Feedbacks Tripadvisor	Sustainable guidebooks The Ethical Travel Guide	Museum	Delay with public transportation
Money exchange Travelex	Movies and music on plane	Dictionary	Fun with friends Seek Bou Journey	Private blogs	Zero mile Tourism Milano e Oltre	Local guides	Projection of dramatic - thriller movie
Tour guide Guide me right	Sport facilities	Guidebooks Passport to...	Fun with other travellers Day in the Cloud	Photos archive Flickr	Social awareness Half the sky movement	Alternative tour WHAIWHAI	Architectural barriers

Image 3.07: table of materials for travellers

romantic solution for couples, or an offer for family travel.
When people arrive to the destination (and also before the transfer) they can buy a map of the location - which can be a paper or a digital tool. It is a fundamental orientation tool., together with the road maps, for the transfer to the selected location.
If travellers prefer to plan the whole experience, they can take advantage of a wide assortment of travel guides, both physical and digital. Among the numerous book series, we can find the Routard, the Lonely Planet, the National Geographic and the Michelin guide, which are famous on international level. Each one of these guidebooks is created to satisfy a particular aspect of the travel, for example the Michelin is a gastronomical guidebook. Some users like to watch documentary on the travel destination, to discover in advance the local culture, nature and history.
Very important for a trip abroad is a translator device which can be a dictionary or a smart phone application. Sometimes the translation is committed to local friends or guides. Many touristic cities offer services for visitors, for example season tickets for transportation or coupons to visit the main attractions. These tools can be bought in loco - at the tourist information points and on travel agencies - or online.
For many people, the information point is a crucial element at the beginning of the journey: here tourists can find useful fliers, brochures and maps.

Before to start the trip, users must obtain the documents required by the hosting country. They have also to pack their luggage and provide them with a label with the traveller's personal data, in case of loss. If the tourist would lose something during the journey, he/she can visit the Lost and Found offices. In case of big problems, for instance the loss of the passport or identity card, tourists can address to the local Embassy of their country.
A foreign country often has different coins from the ones generally used by the travellers; tourists should change their money into local currency at the designed points.
An important element of support for the travellers is the insurance to protect from crime, illness and accidents. It must be stipulated before to start the trip.
At the end of the chapter you will find two case studies which provides different kinds of tangible tools, to guide the players during the visit of the location: *Seek Bou Journey* and *WHAIWHAI*.

Intangible material

Differently from the tangible material, the intangible tools do not have physical interfaces, but they rather use online connection technologies. They can be virtual or hybrid services, which mix the best features of physical and virtual material.
People can also alternate the use of virtual and physical tools; for instance tourists use paper maps, but sometimes they need digital maps which work simultaneous with the traveller's position, thanks to a GPS technology.
Internet could be a precious resource during the journey: for example tourists can use applications to find information on museums, attractions, restaurants, places to sleep and local transportation, through services of various kinds; people can check in real-time the schedule of the public transportation or track their luggage; some websites allow users to book and buy the transfer and the overnight. There are plenty of digital services to facilitate the journey, practically they can cover every requested function.
At the end of the chapter you will find a Case Study form on a service which belongs to this category, *The passport to...*

People

Travellers during the journey are supported by materials and by people. There are figures that support the service system in all its phases. From travel agency operators, to local guides, from airport employees to the cleaning men in the touris villages.
A big resources for visitors are local citizens and travellers who have already visited the location. They can give feedback on the city and the local services, in a peer-to-peer exchange of information: an online ad offline word of mouth. The most famous platform to exchange data on tourist attractions is Trip Advisor, where everyone can post advices on a particular location. It is depicted with a Case Study form at the end of the chapter.

3.2.9 The tricky moments of the trip

A journey is not only composed by beautiful and unforgettable moments. There are also moments of frustration, dissatisfaction and tedious waits.
A traveller who explores a city usually gets more tired than a citizen of the place, walking more and faster and standing up during long queues (for instance at the museums). Tourists' effort is remarkable, especially if the time to visit the location is restricted; and less time they have at their disposal the more is frustrating to waste it.
I know many people that, before a trip, buy pastimes (for instance books, crossword puzzles or games for portable consoles) to use during the transfer to the destination or while they are in the queue to visit tourist attractions.
As a conclusion of my taxonomy for travel I'd like to make a short list of the "dead time" of a trip:

- waiting at the airport for the check-in, the luggage embark, the security controls, the gate opening and boarding;
- waiting for the hotel check-in (and check-out);
- losing the luggage;
- following travel mates during activities they like, but which you find boring;
- losing the wallet or the identification document;

> waiting for the transportation (especially when they are delayed or canceled);
> staying in a queue on the highway;
> change the money;
> waiting on a queue to visit a museum;
> looking for a public toilet or a drinking fountain;
> losing yourself or a member of your group;
> asking for indications and information (sometimes this require to find a person who can speak your language, or at least a common language);
> having difficulty to access public spaces, especially for people with mobility impairments (temporary or permanent - see chapter 4.2.3);
> reading the map;
> booking a hotel/flight at the last minute;
> the list includes some of the main frustrating moments, and probably everyone can add some voices related to his/her own personal experiences.

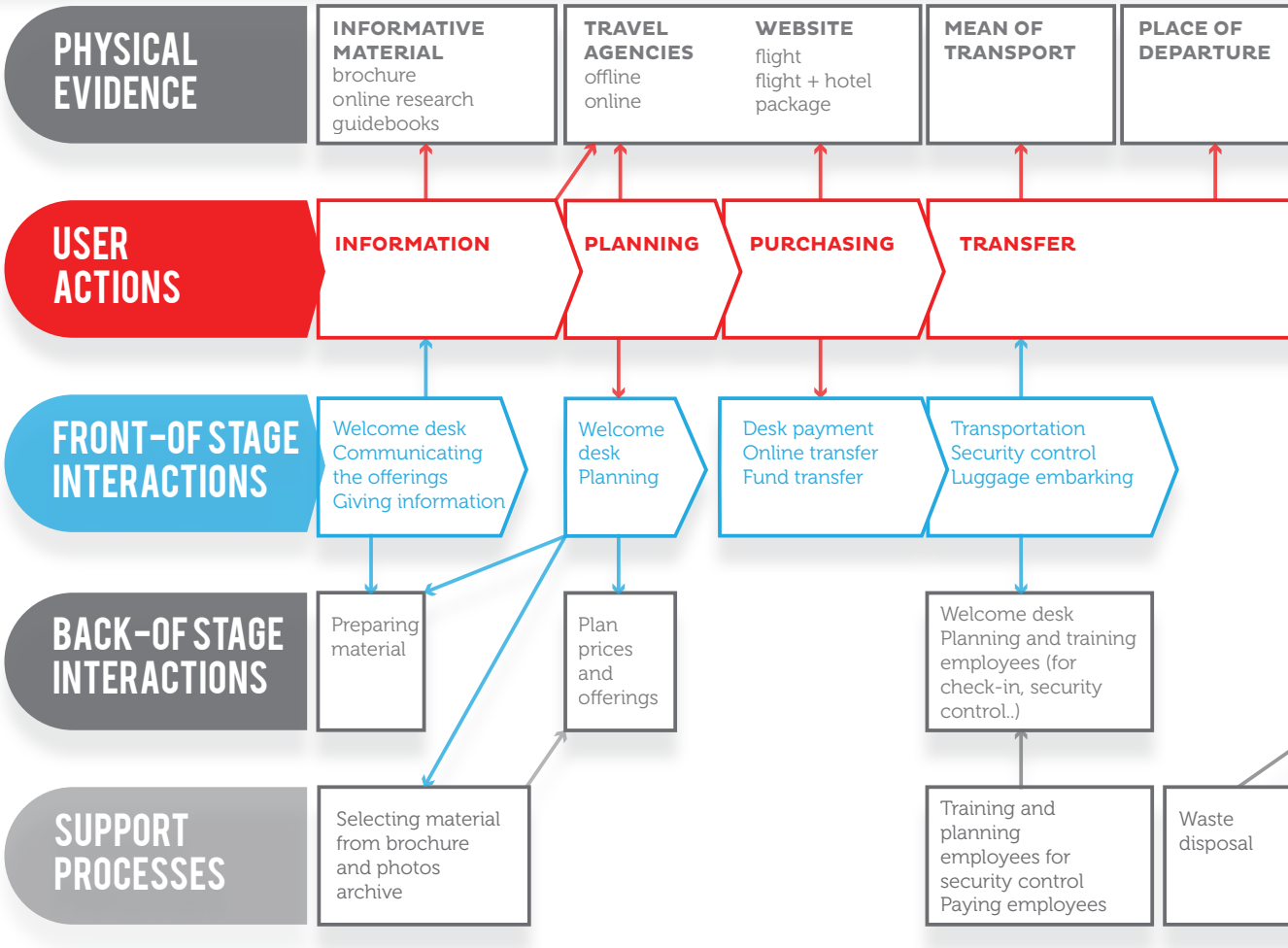
All these issues are fertile soil for the Service Design, which can provide solutions or foster critical thinking on them.
In my dissertation I focus on the issues which users with mobility impairments (of both temporary and permanent kind) must face during a travel, especially on their interaction with architectural barriers and on the diffiulty to access to some public spaces.

3.3 The back-of-stage of the tourist business

Not everything that happens during a journey is perceived by tourists.
According to my research on the topic, the tourism industry has two faces (which are depicted in the *image 3.08*).

> Front-of-stage interactions: that side of the service is composed by the elements which the visitors perceive during the journey.
> Back-of-stage: that face of the service is made by the elements which are hidden to the final users (from the preparation of the trip offering to the consequences of the travel).

SERVICE BLUEPRINT – A TRAVEL OFFERING



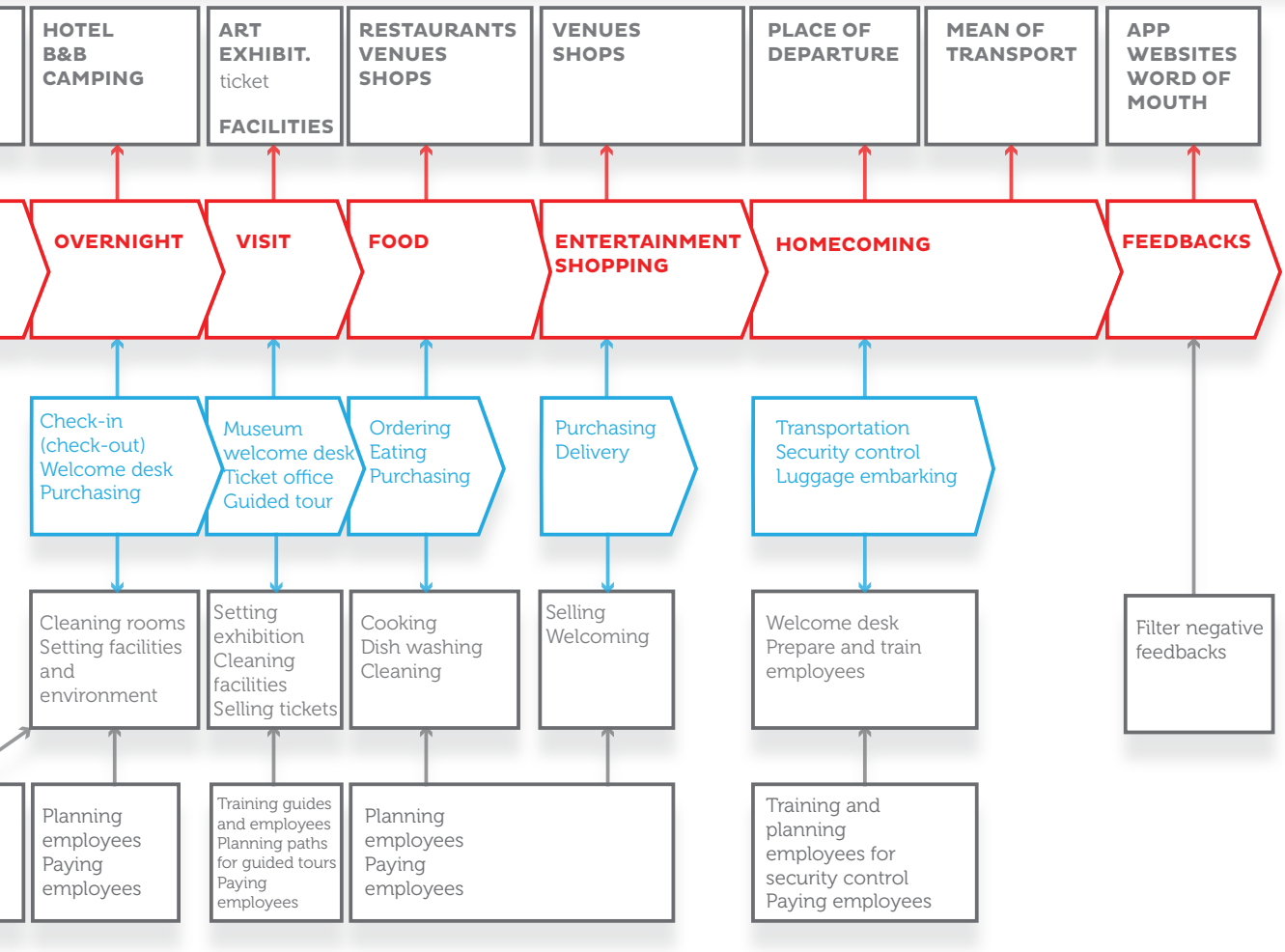


Image 3.08:
service blueprint
of a travel offering

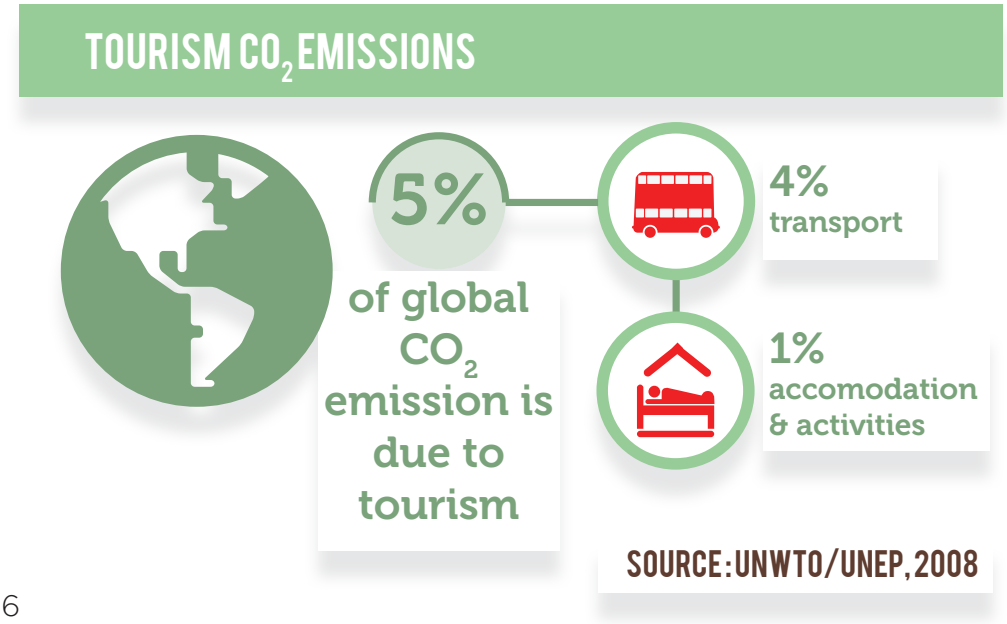
Visitors usually do not perceive the back-of-stage interactions; they do not think about people who work to support their journey, nor they see the consequences of their vacation (for instance the pollution generated by tourist resorts or the exploitation of employees, as we will see shortly in the text). Travellers should gain awareness on the mass tourism, on the attractions and routes which were created to attract tourists (and which do not belong to the local tradition), but also on the damages that it provokes to environment, local ecosystem and indigenous people.

Local governments and tourist corporations should light up the "back-of-stage" side of the travel business, creating an authentic experience. For instance, there are many tourism-related factors that are disturbing the global ecosystem.

The carbon footprint

The Travel Foundation has put in the public domain a report on the carbon footprint of tourism on the globe (as shown on *image 3.09*). Many tourism-related activities require fossil fuels or electricity, which lead to carbon dioxide and greenhouse gases emission.
The Travel Foundation is engaged to foster awareness on the

Image 3.09: tourist CO_2 emissions



global impact of mass tourism: if a great amount of carbon dioxide is generated in a location, its effect will impact on a global scale. The relationship between travel business and climate changes is reciprocal: tourism affects ecosystem and the climate changes affect the tourism (especially because many tourist destination depend on climate as a principal attraction). The UNWTO (United Nations World Tourism Organization) in 2011 published a paper on the global tourism carbon emission. According to the document, tourism produces around 5% of the global CO_2 production: the 4% is attributed to travellers' transportation and the residual 1% to the accommodation sector and tourism activities.

The transport pollution

As depicted in the *image 3.09*, the transportation emissions have the biggest impact on the tourism global CO_2 footprint. The main source of pollution is by air, followed by land transportation. A minor source of CO2 is the by sea transportation and the category based on human and animal-powered transport.
A large number of mass and private transportation bring other kinds of pollution, for instance noise, air and light pollution. An additional problem, of local dimension, is the traffic brought by the mass of tourists, an inconvenience for the local citizens.

Ecomostri

At the beginning of the Twentieth century the Italian government promulgated the first laws against the unauthorized building, to stop the phenomenon that was destroying the local environment. But in the Sixties we faced a new dimension of the scandal: with the explosion of the mass tourism (due to the possibility for the family to own a private car) entrepreneurs and private citizens started to build hotels and villages for the visitors.
The first Italian "*ecomostro*" (an architectural monstrosity that ruins the environment), in 1968, was the Hotel Fuenti on the Amalfi Coast, which is depicted in *image 3.10*. It was born as a hotel made by 34 thousand cubic meters of concrete, with a walking area of 20 thousand square meters, on an area

Image 3.10: Hotel Fuenti; from archimostri.it

subject to environmental restriction. It is just an example of this kind of buildings which exist all over the world and that continue to born and to destroy environment.

Holiday villages

Holiday villages usually are built close to the main environmental tourist attractions. Most of them are built without breaking the laws, but with no consideration of the surrounding environment and the local populations.
They are independent villages, built separately from the residential area.
Often they can be seen as legal "ecomostri", which cause a state of social exclusion: tourists do not have any relationships with local people (except for those who work in the village, for instance cleaning and cooking).
At this point of the chapter, it is crucial to talk of people who work in the holiday villages. According to ISTAT data, around the 8% of the global workers is employed in the tourism field. The high demand for holiday travels and tourist activities generate a fertile ground for the exploitation of workers who are at the bottom of the supply chain. They support the back-of-stage interactions. In the areas where the poverty is endemic, people work in low standard conditions and they are subjects of abuse, including harassment and sexual exploitation.[39]
Often workers have no formal contract and they work illegally. They have no legal protection and no rights: for instance they

39 Source http://www.tourismconcern.org.uk

Image 3.11: Thilafushi atoll, Maldives

have no permissions for holiday, sickness and no insurance. They must agree to these mistreatments, because they know they can be easily replaced by other employees. In the main tourist attractions people are employed seasonally and they have no guarantee for the rest of the year. All these factors infringe upon the Core Labour Standards of the International Labour Organisation[40].

According to the *tourismconcern.org.uk* reports, some of the countries which are mainly afflicted by worker exploitations are: Burma, China, Caribbean, Egypt, Mexico, Morocco, Nepal, Peru, Spain, South Africa, Tanzania, Thailand, Dominican Republic, UK and India.

Cultural shock of natives

Tourism can lead to the loss or change of local values, to cultural shock of local inhabitants.

A research led by UNEP (United Nations Environment Programme) lists some related influences.

> *Commodification*: tourism can turn local culture into commodities when customs and traditions are conformed to tourists' expectations. The result is a reconstructed ethnicity, sold as a product designed for visitors. In these circumstances traditional or sacred places and objects may not be respected.

> *Standardization*: tourist attractions run the risk of standardization in the attempt to satisfy visitors' desires. To meet their needs, food and drinks, infrastructures and

40 Source www.ilo.org

landscape must be adapted, because tourists look for recognizable facilities.

> *Loss of authenticity*: this is the "staged authenticity", a glimpse of the local culture performed for tourists, adapting their culture to visitors' tastes.

> *Adaptation to tourist demands*: many artisans have responded to travellers' demand for souvenirs and local arts and crafts, changing traditional design to meet the customers' tastes. The same could be said for food, festivals and sacred rituals.

Disposal of the garbage produced by tourists

I would like to introduce this topic with an example, depicted in the *image 3.11*.

The economy of the Maldives chain of atolls is mostly based on the tourism. Three quarters of a million tourists visit the islands every year (more than double the number of indigenous inhabitants) and ninety-nine islands on two hundred are supplied with tourist resorts. This mass tourism means a wide amount of garbage to dispose.

The solution adopted by the local government was to utilize a desert island, the Thilafushi atoll, as a dumping ground. 330 tons of wastes per day are deposited here, to be discarded and burnt. This combustion produces toxic clouds of CO_2 smoke, open fire and piles of garbage that float above the water. The island host toxic metals like asbestos, which penetrate in the soil increasing the pollution of the water. To discard the huge amount of rubbish the government host workers from abroad, for example from Bangladesh, who work in filthy conditions for a very low salary.

The situation is hidden to the tourists, who are used to visualize Maldive as covered of white sand by crystalline water.

This is one of the most resounding proofs of the tourism footprint, but similar situations are frequent.

Environmental/climate shock

Many tourist destinations have been subject of environmental changes. These are owed to the pollution and garbage produced by the local adaptation to the main visitors' expectations. Intensive mass tourism can lead to environmental disasters:

one of the main problems is the coral reef degradation. Some tourist resorts drain their liquid waste directly in the sea, contributing to the coral reef ruin. Activities like snorkeling and scuba diving contribute to the problem: visitors use to collect shells and corals, impoverishing the eco system and damaging the biodiversity.

Diseases

Very often a travel to an undeveloped country requires some protections against local diseases. Some illnesses come from not drinking water: 40% of people get diarrhea during a travel to an underdeveloped nation. Other diseases come from insects, especially from mosquito bites. Malaria, chikungunya and dengue used to be only a problem of tropical areas, but recently some outbreaks have occurred: malaria arrived to France and Florida and chikungunya expanded to Italy in 2007.[41]

Tourist sector should adopt a strategy of sustainability and responsibility to environmental, economic and socio-cultural aspects of the travel industry, The World Tourism Organization aims to foster a model of responsible tourism, whose main goal is to meet the expectations of the travellers with the needs of the hosting populations, in a situation of reciprocal respect. Its research is working to give travellers incentives to become more sustainable (for instance avoiding wastefulness of various products during the journey). Travellers and tourist agencies can use manuals on ethic tourism. One is *The Ethical Travel Guide: Your Passport to Exciting Alternative Holidays*[42], which lists around four hundred places around the world that host travellers in sustainable accommodation, supporting the local economy and community.

«Tourism is the temporary, short-term movement of people to destination outside the places where they normally live and work and their activities during the stay at each destination. It includes movements for all purposes»
Tourism Society of England

41 Declaration by Dr. Stephen Berger, founder and medical advisor for GIDEON. Source NBC, 2009.

42 Patullo, Minelli, Hourmant, Smith, Viesnik, Dall (2009). Edited by Earthscan

Image 3.12: main tourist's expenses

3.4 The difference between Travel and Tourism

At this point of the dissertation it is crucial to examine the differences between the travel and the tourism, their organization, goals and tools.
«Tourists are people who traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes»
World Tourism Organization

Tourism is an activity that implies a travel (with a short, medium or long duration) and which produces different kinds of consumption, for instance transportation, accommodation, meals, visit to museums and monuments and souvenirs. *Image 3.12* depicts some of the main expenses for a tourist.
Tourists are generally attracted by environmental, artistic and cultural goods. It is indeed essential for a tourist destination to find the right communication strategy to advertise the local resources, and the appropriate management to guarantee a pleasing sightseeing - in compliance with the expectations generated by the advertising.

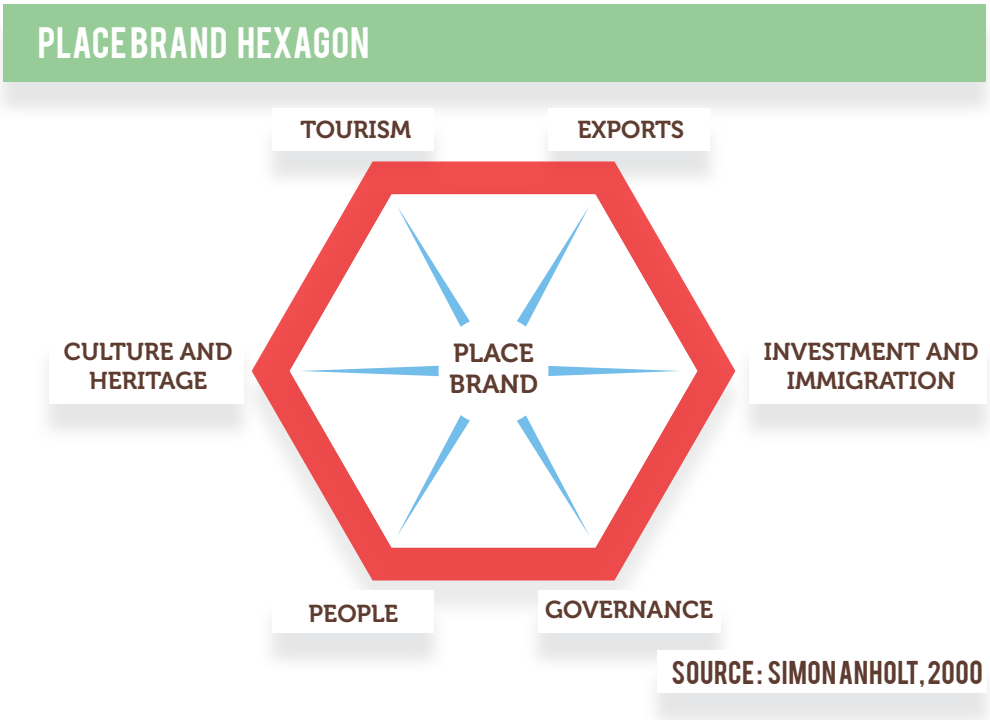


Image 3.13: Place Branding, based on Anholt (2000)

A weak or negative image may harm the tourist business of a city, region or State. To avoid this situation, which can damage the local economy, a location should improve the audience's perception, promoting its image. The discipline which studies and designs this phenomenon is the Place Branding, which has been conceived by the policy advisor Simon Anholt, who helps governments to develop and implement strategies for enhanced economic, political and cultural engagement with other countries

Place Branding is a branch of knowledge through which a city can launch a new campaign to attract tourists and investors. It is situated at the intersection of many others disciplines, for instance marketing, public policy, tourism promotion and international relations. To build an enduring place branding strategy, which captures and communicates the values of the city, it is necessary a coordination among the various stakeholders' goals. The municipality should invest for this strategy to establish a positive image in the mind of the audience, shaping the way the place is perceived and promoting good local practices in different fields, shown in *image 3.13.* The strategy can influence the perception of

the audience (both internal, the citizens, and external, the tourists) on the place. Edward Louis Bernays , the Austrian-American pioneer in the field of public relations and propaganda, once said «propaganda – not impropaganda»,[43] which means that a campaign of information about a place can influence the perception on it, but it must reflect the reality. A positive response from the audience accelerates the economic improvements of a location: the positive perception of a place by the internal audience build a long-lasting positive perception for the external audience and accelerate improvements in tourist business. A good designed place branding strategy will invite external audience to deepen their knowledge about a location, by visiting it. As Anholt argued, in an interview on the *Place Branding journal «Place branding is nothing less than macroeconomic, cultural and social dynamite»* (2004).

The travel (seen as a movement from a location to a destination) is just one of the element which compose the tourist offering: it can be supported with tools, for instance guidebooks, audiovisual material, signage and tour guides. As the geographer Raffestin argued, people can be tourists within their own city, because tourism is not a matter of mere movement, but it also may be a psychological transfer, a change of perception on a place.

After having analyzed the tourism and the relationship between the tourism and the traveller, it is essential to find a definition of the word "tourist". The word was used for the first time at the beginning of XIX century, coined by the Austrian economist Hermann Von Schullard to indicate the «sum total of operators, mainly of an economic nature, which directly relate to the entry, stay and movement of foreigners inside and outside a certain country, city or a region».

The tourist business is a system of request and offer of products and services. It is composed by different compartments: accommodation/overnight, food services, transportation, events organization, spare time activities, commerce, sell and rent of real estates, travel agencies, public services and public administration. All these elements are planned depending on the location which proposes the tourist offering. From this point of the dissertation I will analyze Italy as a tourist location, exploring the evolution of Italian tourism until contemporary age.

43 Edward Louis Bernays (1928) Propaganda and Impropaganda. American Library of Congress, Washington

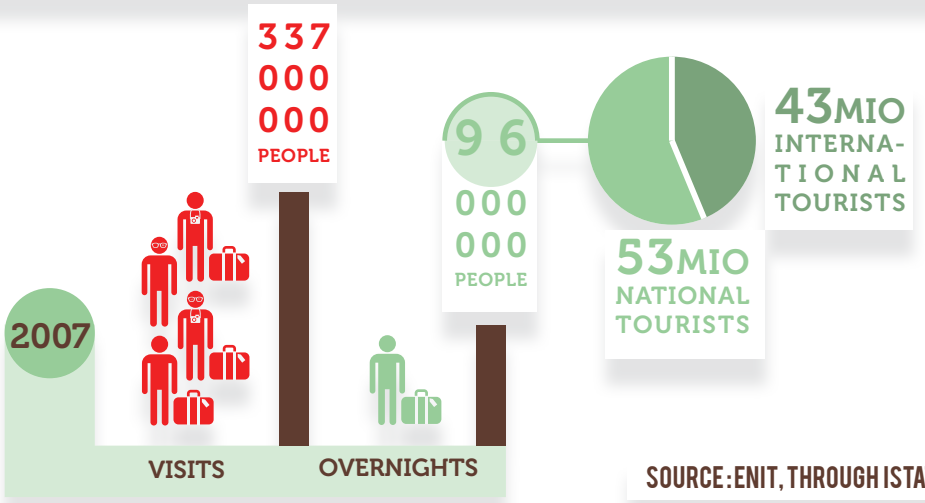
3.5 The history of Italian tourism

At this point of the dissertation I have explored the game and its integration into a service system; I have also analyzed the travel as subject of a systemic offering. Now, it is crucial to define the application of a Game Service System which offers a tourist experience to a location, which I identify in the main Italian tourist cities.

Italy has been a focal point for travellers since the Middle Age (as I explain in the paragraph 3.1), when pilgrims used to visit the country for its several places of worship.[44] The first organized trips were undertaken by students which used to travel around Europe, where Italy was a fundamental stop. It was the Grand Tour. It shaped the modern type of travel. Another typology of journey which has been crucial for the development of modern tourist offerings in the Italian peninsula is the visit to thermal baths, which started between the end of the nineteenth century and the Great War. Thermal baths brought the attention of travellers (aristocratic men) toward seaside and mountain locations.
The ENIT (the national authority for the Italian tourism) was funded in 1919, to foster the communication and commercialization of tourism. During the 20s and 30s also the middle class started to travel (after the conquest of leisure time and paid holidays); this brought to a diversification in the offer, with the birth of small hotels and boarding houses. After the World War II there was a boom of the mass tourism, which rotated around seaside locations, mountain destinations and cities of art. During the Sixties the Italian seaside resorts lose a segment of visitors who moved toward other European destinations, for instance Spain. To cover the loss, ENIT created new services that valued the historic and cultural properties of Italian cities and between the 80's and 90's Italy was the European nation with the highest number of international tourist arrivals. From 2002 the country started to lose mass visitors for the benefit of other nations.
Despite the ENIT strategy, in the modern Italian society

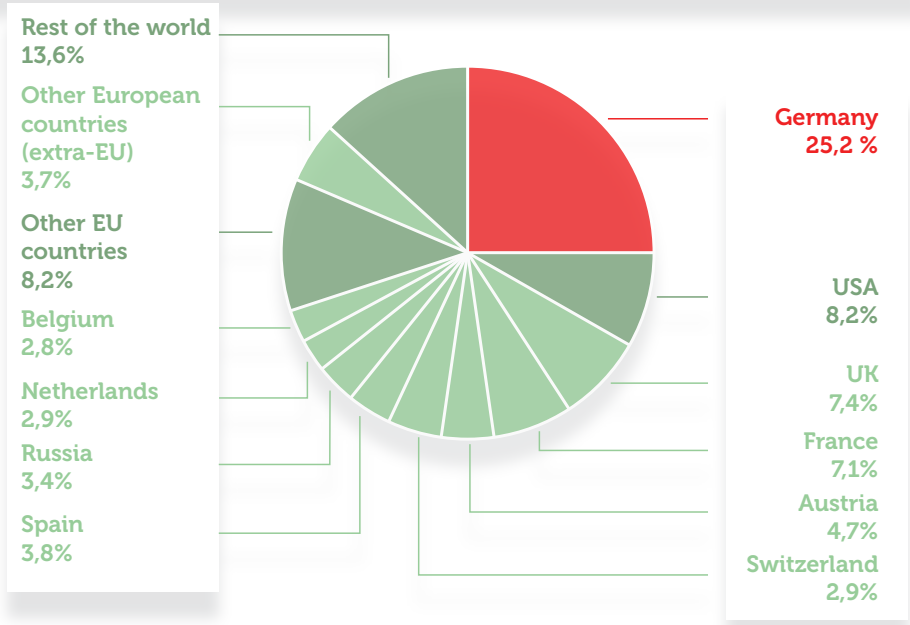
44 Candela, Figini (2012).Their essay Economia del turismo has been a source of inspiration for me, while I wrote this chapter.

TOURIST ARRIVALS TO ITALY



SOURCE: ENIT, THROUGH ISTAT

INTERNATIONAL TOURISTS TO ITALY



SOURCE: ONT, 2012

ARRIVALS AND PRESENCES OF INTERNATIONAL TOURISTS IN ITALY

YEAR	ARRIVALS	PRESENCES	AVERAGE PRESENCES	ARRIVALS VARIATION %	PRESENCES VARIATION %
2008	41.796.724	161.797.434	3,9 days	-2,5	-1,0
2009	41.124.722	159.493.866	3,9 days	-1,6	-1,4
2010	43.794.338	165.202.498	3,8 days	+6,5	+3,6
2011	47.460.809	176.474.062	3,7 days	+8,4	+6,8
2012	48.783.575	180.594.988	3,7 days	+2,7	+2,3
2013 (jan-aug)	35.329.729	134.498.437	3,8 days	+0,5	+0,02

SOURCE: ISTAT, 2013

cultural tourism had a slow development, despite the enormous potential of the Country. The economists Candela and Figini in 2012 identified the problem of Italian touristic offering: it depends from the lack of communication among the different stakeholders which are involved in the tourism business. As a consequence, Italy does not have a united communication strategy for the tourist offer, and this generate a confused perception of the location by visitors.
To foster again the visitors' interest, in the last years the tourism authorities understood the potential of niche tourism, augmenting the offer of wine and food tours, cultural festivals and experiences relative to Zero mile Tourism.
In 2007 national tourism had a big increase, as shown on *Image 3.14*. The average permanence for a foreign traveller during that year was four consecutive days (for a national tourist is about 3 days and a half) - see *image 3.15.*
If we analyze the ISTAT data depicted in the *image 3.16,* we visualize that Germany is a substantial market share in the tourism business, with the 25% of the international arrivals.
In the *image 3.17,* we can see the most visited Italian region is Veneto, which has a diversified tourist offering: Veneto has beaches, mountain, lakes and cities of art. In 2007 it hosted

Image 3.14: tourist arrivals to Italy

Image 3.15: arrivals and presences of tourists in Italy

Image 3.16: visitors from all over the world

INTERNATIONAL TOURISTS IN ITALIAN REGIONS

REGION	ARRIVALS	PRESENCES	AVERAGE PRESENCES
VENETO	10.230.469	40.387.375	3,9 days
LOMBARDIA	6.883.106	19.074.599	2,8 days
LAZIO	6.664.244	20.516.459	3,1 days
TOSCANA	6.448.902	22.307.426	3,5 days
TRENTINO ALTO ADIGE	5.190.906	25.772.989	5,0 days
EMILIA ROMAGNA	2.345.340	9.632.676	4,1 days

SOURCE: ISTAT, 2012

Image 3.17: tourists in Italian regions

more than sixty one millions of visitors, with a predominance of foreign tourists. The following regions are Trentino South Tyrol, Tuscany, Emilia Romagna and Lazio. These regions are not as subject to periodicity as the seaside or mountain destinations.

Talking about different tourist destinations, it is important to say that every tourist destination has a life cycle, defined as Tourism Area Life Cycle (TALC). In 1980 the professor of business Richard Butler defined six stages of TALC. The *image 3.18* is a scheme about the six steps of a TALC.

> **Exploration**: a small group of adventurous travellers explores a location, attracted by the local offer of a destination which is still uncontaminated by tourism. The area has a poor offer of goods and services for visitors and the contact between indigenous and tourists is high.
> **Involvement**: start up of local initiatives to promote the destination. It is the moment to define a tourist market and to decide the strategy to focus on a seasonal tourism or not. The private sector starts to invest on services and goods ad hoc.

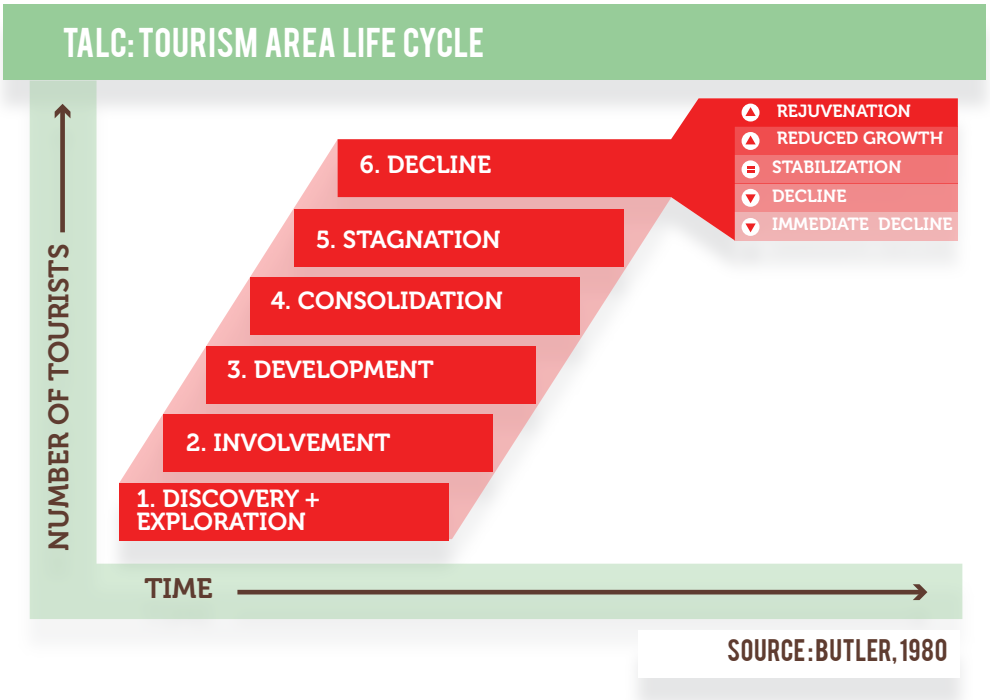


Image 3.18: Tourism Area Life Cycle - TALC

> **Development**: improvement of local infrastructures, which will face a peak of tourists during the high season. The public sector designs services and infrastructures to compete on international level with locations which have a similar offering. In this phase the location runs into the risk to lose its quality and purity (see the concepts of Commodification, Standardization, Loss of authenticity and Adaptation to tourist demands, deepened at paragraph 3.3).

> **Consolidation**: the stage of maturity brings lower growth of arrivals. The organization and management of tourism is captained by international societies.

> **Stagnation**: the moment that represents the maximum peak of the presence of visitors. From this point the destination becomes less palatable; it begins to rely on regular customers with the difficulty to maintain constant attendance.

> **Decline**: it is the last stage of a tourist destination, when the location loses tourists in favor of new destinations. In this phase visitors sojourn for short time; many resorts move to a new use and tour operators must offer alternatives to face the decline of attention.

Italy is located between the fourth and fifth phase. The arrivals and presences of international tourists have increased since 2010, as you can see in *image 3.16*, but after an initial peak of visitors the numbers have started to stabilize.
The Veneto region is in a good position within the Italian tourism framework, compared to other regions. It is at the first place for the number of arrivals and visits, and also for the duration of the visits themselves. The most visited cities in Veneto are Venice and Verona. The *image 3.17* presents data on the first six regions for number of visitors. We notice the large decline in visits between the fifth and the sixth region, Trentino and Emilia.
The data concerning Veneto show as the region is still in the intermediate phase between the Development and Consolidation (the third and fourth stages of the TALC). Despite this, the tourist offering in the Veneto region - and more in general in the Italian peninsula - does not offer a diversified and personalized product. Every traveller has his/her own interests that lead the choice of a destination. In 1974 the researcher in the tourist business Stanley Plog elaborated a classification of tourists from a psychological point of view. They are positioned between two extremities:

> the **psycho-centric** visitor, who tends to be cautious, planner and who goes periodically to safe and well-known destinations;

> the **allo-centric** tourist, who places the other visitors' needs at the centre of his interest. He is adventurous and inclined to discover new destinations;

> between the extremities there is the majority of tourists, the **medio-centric** person who changes his priorities from travel to travel.

These typologies of travellers look for different offering from a location, also depending from the season and from the time they have at disposal for the journey. It is important to understand this factor, to establish the high and low season for tourism. It is also fundamental to consider the influence of contemporary trends on the development of the tourists' preferences. Every location should keep in consideration the evolution in the visitors' tastes to diversify the local offering and meet the users' needs.
The decision to visit a certain place arises from the image that the tourist has of it, which is made through a process of information and learning (and via promotional messages)

through different media – internet, guidebooks, travel agencies and word of mouth, to mention a few.
Every tourist has specific preferences that not always find compensation in the offer of the destination. To avoid this problem, the location should diversify its offerings; and to avoid the dissatisfaction of the visitor it is necessary to focus on a good advertising strategy which provides the right information. Advertisement has the power to influence the mental image that the tourists have on a location: this is both a strong point and a risk, because it needs to have a fair returning between the built image and the reality.

Seasonal tourism

Traditional tourism is a seasonal phenomenon, because the appeal of some areas (for instance lake, mountain and seaside locations) depends on the weather conditions. In addition, travels are tied to the paid vacations, national festivities and school closing. Many infrastructures close during the low season periods (or change their function) and public transportations reduce their regularity.
The crowds of visitors during seasonal peaks may have a negative impact on the environment and a period of off-season break can be a way to allow the environment to recover its balance. It can also have repercussions on the community and on the visitors (crowding, traffic, lack of parking lots, air and noise pollution and queues are just some of the issues). But not all the tourists have the same seasonality. Some local authorities work on deseasonalisation politics, offering for example excursions on mountain routes during summer. Another strategy is the proposal of Zero mile Tourism offerings, focused on the exploration of the cultural side of the location by citizens and local visitors.
In conclusion, in the contemporary age an area should not focus on a tourist monoculture but it would diversify the offer with alternative attractions and tours, to satisfy different kind of visitors also during the low-season period. The strategy of diversification must have a quality standard, to create different tourist products which have a high standard of excellence, an added value and a sustainable impact on the location. These tourist packages, especially those who create Zero mile Tourism, must be supported by the local communities, government, travel agencies and associations, to create a unified and coherent communication strategy.

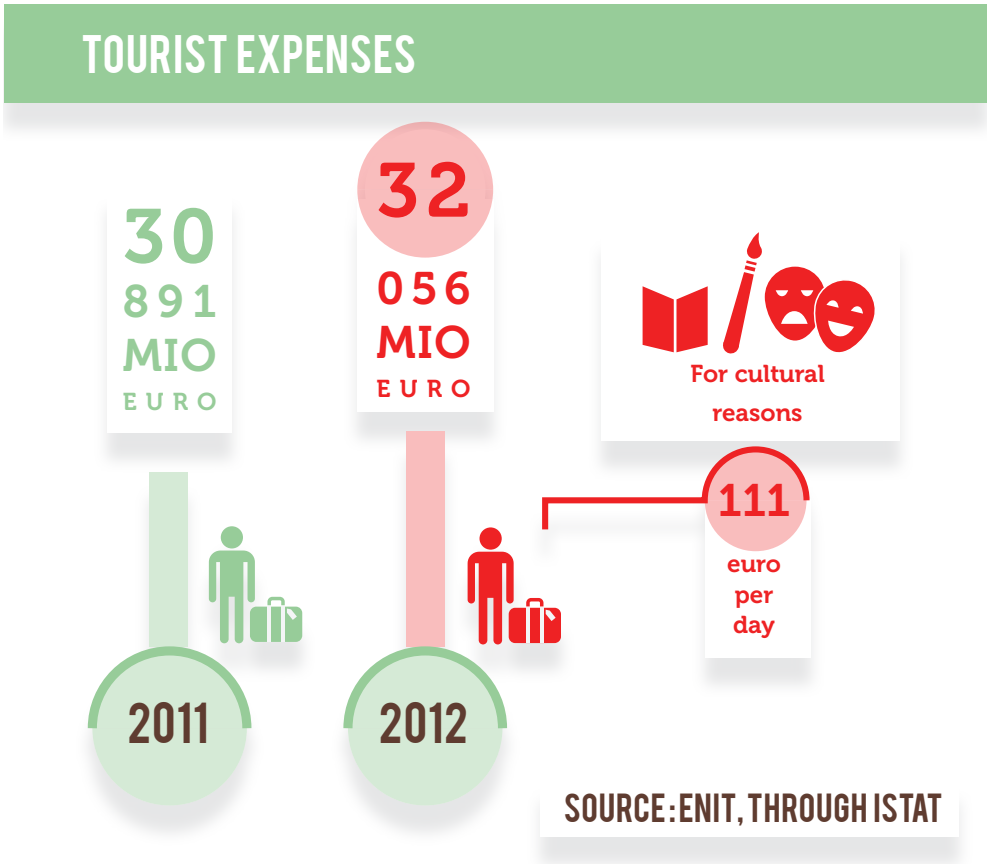


Image 3.19: tourists expenses in 2011-2012.

The current situation shows a lack of travel planning and a general indifference by the public sector (municipalities). The tourist sector misses an operating Committee that deals with tourism planning and with a strategy of coordinated and integrated communication, to attract local and international tourists. Alongside the development of a coordinated touristic product it is necessary to diversify the offering, taking advantage of local activities, history and culture.

Web tourism has complicated the work of travel agencies introducing the "auto-producing visitor", a traveller who produces the holiday package by himself, buying the factors that compose it: the mean of transport for the transfer, the accommodation, the food, the ticket for museums, the sightseeing and so on. Often self-produced journeys begin when the visitor wants a certain type of experience

which is not available on a locality (or not for sale on travel agencies). However, a tourist may need online intermediation of an institution that can combine various elements of travel, creating a complete offer. Some agencies search lower-priced offerings on the web, although the price is increased by the brokering. Auto-producing the tourist package is an emerging trend in the global market and the number of visitors who choose this option is increasing.

3.5.1 Italian tourism nowadays

Italy is one of the first destinations for the global tourism, because it is exceptionally gifted with environmental and artistic-cultural goods. Despite this, the Italian tourist system had a decrease in the last years. From 2004 the visitors' request has changed: if in former time mountain and seaside locations were hosting travellers for relatively long stays (for example during the summer vacation, which oscillates between May and September), nowadays the visitors prefer a series of short trips in different locations.

The image 3.19 depicts the tourists expenses in 2011-2012. Between January and December 2012, international tourists spent 32.056 millions of euro in Italy, more than in 2011, when the incomes were around 30.891 millions. The biggest segment of visitors is made by tourists with a cultural interest, whose average expense is reckoned to be around 111 euro per day.[45] Italy still has an important role in the international tourism, but struggling to keep pace with the growth of the sector and it tends to lose market share against its traditional European competitors, highlighting a remarkable loss of competitiveness.
However, tourism represents an important sector for our country, with a significant weight in the national economy. Its actual contribution to the gross domestic product (GDP) amounts to more than 130 billion euro (around 9% of national production), with almost two millions of employees. Tourism has also a significant potential in terms of communication and intercultural integration, two important elements in a world that has become global.

45 The data in this paragraph are extracted from the document Turismo Italia 2020 (2013).

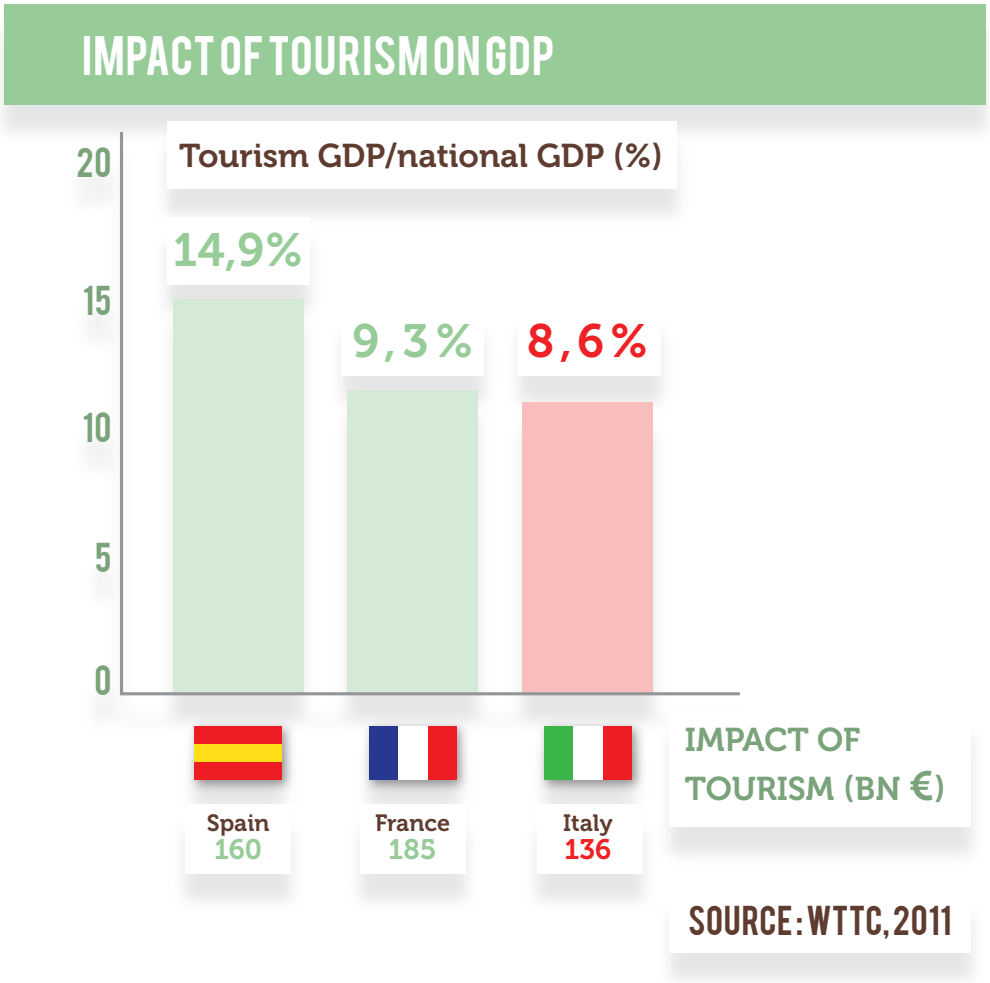


Image 3.20: impact of tourism on GDP

Tourism offers great opportunities for the enhancement of national artistic and historical heritage, both regarding the disclosure of territorial identity and the attraction of new resources for its preservation and revaluation. The main issues of the Italian tourism industry are the promotion for international tourists (which actually is extremely fragmented), the limitations in the ability to build competitive tourist products, insufficient infrastructure, inadequate personnel training to the global market and the difficulty to shape the offer on the emerging trends. It is necessary a cultural change, which starts considering tourism as a great opportunity for the country. Travel agencies must work together to improve

the field on a national scale. The change implies to deeply understand the visitor's request and to shape the offer on it, creating modern travel packages which start before the reservation and finish after the homecoming.
International travellers are fundamental for the Italian tourism industry because they are the engine of growth, as the forecast on the domestic tourist demand show that it is not growing[46]. To evaluate the competitive position of Italy in the tourism sector, the national authority defined the main competitors of the country, an arena that includes Western Europe ad Mediterranean (Turkey, Morocco, Croatia, Cyprus, Egypt and Tunisia). The *image 3.20* shows the ranking of the first three destinations in the "competitors' arena" and their GDP.
Italian government designed a plan for the period 2010-2020, predicting a yearly growth for international tourism equal to 2,9% in terms of number of travellers and around 4,8% in terms of the expenses. The plan aims mainly to involve:

- **>** local visitors involved with Zero mile Tourism offerings;
- **>** BRIC visitors (from Brazil, Russia, Indian and China).

Almost half of the increase is in the hands of medium-long range, especially the BRIC countries: Brazil, Russia, India and China.

3.5.2 Evolution in the tourism request

As I introduced in the paragraph 3.5.1, the main target for Italian tourism is changing: people who visit the peninsula are local tourists and visitors from BRIC countries. They are two typologies of traveller with many differences but a common goal: they both look for an authentic experience which guides them to explore the city and discover local culture and tradition. Moreover, they both prefer to self-produce their journey experience. They use internet as a main source of information and organization of the trip.
The role of internet has no precedents in terms of the

46 Considering the number of nights purchased in the hotel as an indicator of demand, in 2005-2010 the purchased overnights in Italy by Italian travelers grew of 0.3% per year, while those bought by international travelers have grown with annual rate of 2.2% (Istat, 2012).

wide range of offering, the ease of use (especially to find information and reviews released by other travellers) and the speed of research. Despite its role is fundamental in the modern tourism, internet is not very exploited by Italian tourist authorities and its use is often not handled wisely, creating customer dissatisfaction and casing of negative word of mouth.
Internet has reduced the brokerage of the travel agencies and tour operators, in favor of online purchasing. This was possible thanks to the wide range of products travellers can find online, also during high seasonal periods.

In this online dimension, the traveller's judgment has become fundamental for the success of a tourist product. The wide penetration of smart phones with internet connection has amplified the ease to access contents in real-time; this is the reason why it is fundamental for a service to gain visibility online, for instance on social networks or with an application for mobile devices.
Since the rhythm of daily life are frenzied, modern travellers look for short trips (for instance a week-end) which meet their tastes and expectations. It is very important for a tourist service provider to customize the products, to be in line with different users' taste (for instance the love for art, nature, wellness, food and wine or sport).

An emerging trend is the ethical tourism (called also responsible or green tourism), which I will examine shortly in the text (paragraph 3.5.4).

3.5.3 The role of Internet for the tourism industry

As I mentioned earlier in the text, the advent of internet has led to a radical change in the world of tourism. This medium is crucial both for visitors and for tour operators.

In recent years the tourist business has faced a gradual increasing in the number of suppliers which choose the network as a channel to gain more visibility. Audience looks for information online (always disposable in real time), more than in travel agencies and info points, so the tourist sector

had to adapt to the actual trend.
The role of internet is essential for the ease and speed of consultation (for tourists) and the possibility to change information quickly and with a low cost (for tour operators). Internet completely changed the timing and costs of tourist information.
Tour operators and workers in the industry of tourism are aware that the modern tourist, always more frequently, uses the internet connection to compare, select and book travel services. Through the presence on the network, tourism operators can develop a channel of promotion, distribution and marketing with reduced business costs.
Travellers gain information remotely, online, through paper guidebooks (or other physical tools) and with the word of mouth, and when they are enough informed on a location they can choose it as a destination. Travellers do not seek only information about the tourist attraction, but they usually compare different proposals in terms of quality and price. The research is directed to find the offering which better meets the necessity of the users, their needs and desires. Also the purchasing is generally accomplished online.
But also if Internet is a quick source to explore, it can generate a series of problems of information, confidence and time.

> With an online research, traveller could lose him/herself in the enormous amount of data, caught in a loop of links to other links, delivered as a tidal wave in the ocean of information.
> The problem of trust invests various fields. With the significant amount of information that a traveller can find online, it is difficult to filter those truthful from those built to attract tourists: it may happen that the offer does not reflect the reality. Additionally, it lacks a direct face-to-face relationship with the operator; the mode of relation changes and indeed also the level of trust.
> In regard to the time factor, users can lose time to extricate theirselves among the information and the feedbacks on social travel[47], a lot more than it would require to visit a travel agency

47 The term Social travel indicates the social networks for tourists and travellers; they are websites for the exchange of feedback among tourists. An example is the platform Tripadvisor, which allows users to view and release comments on tourist attractions and places. A screenshot of the Tripadvisor application is depicted in the *image 3.21*.

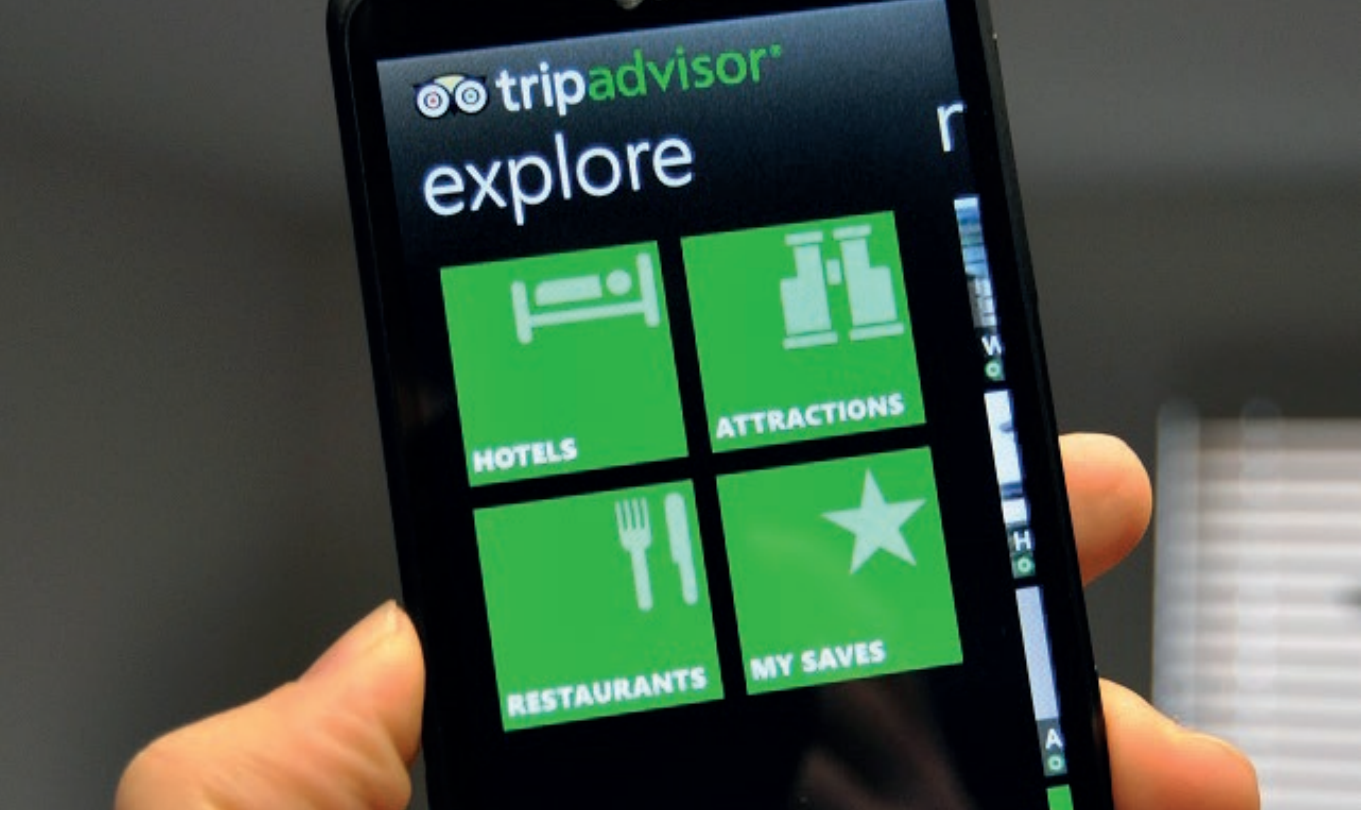


Image 3.21: Tripadvisor application

Speaking of comments and feedbacks posted online, it is notable how they represent for travellers a significant resource of information. The web peer-to-peer reviews (the online word of mouth) are a strong tool to attract the attention on a location, a monument or a place.

Recent surveys[48] indicate that the customers' word of mouth is able to move the decisions of more than a third of the buyers. The online word of mouth is the first preferred method of sharing experiences (56% of tourists read online reviews during booking). If the online experience (information and booking) is good the 32% of users is inclined to be loyal to the online travel agency; if the travel experience meets their expectations, the 41% of the users will return for next purchases.

On the other hand the 79% of consumers who have had a bad travel experience look forward to share the happening with future travellers (usually online). Municipalities and owners of travel agencies feel increasingly crucial their presence on

48 The surveys from which I have extracted the data listed in this paragraphis are: the research made by the British tourism agency Nucleus and the report made by Eyefortravel (a leading global media company specialized in business intelligence for the travel and tourism industry).

social media and mobile channel, not only for the business benefits and the profiling of new customers, but also because these are the modalities preferred by modern travellers to book and plan tours.

3.5.4 Sustainable tourism

As I mentioned earlier in the dissertation, a new trend emerging in the business sector is the sustainable tourism, which has different declination, from the Zero mile Tourism (which does not impact on the pollution created by mass means of transportation) to the green tourism (which wants to safeguard the environment of the location).
Tourism and environment have a reciprocal relation: tourism affects the environment and the tourist offering is influenced by its climate (also from a social and cultural point of view). Visitors affect the location and its communities, in space ad time - in the present and future - and their visit to a destination shapes the future experience of other tourists. The location can run into some of the environmental and cultural problems generated by mass tourism (they are explained in paragraph 3.3) or may be subject to a bad word of mouth, which distances the tourists from local attractions. In the dissertation, the concept of environment is understood in a holistic way, as a system composed of socio-cultural elements, natural and man-made resources. The philosopher Chris Cooper wrote «Environment, whether natural or man-made, is the key ingredient of the tourist product. However, as soon as the tourist activity takes place, the environment is inevitably changed or modified both to promote tourism and to build the tourist product» (Cooper, 1998).
Tourist and environment interact in three different ways: coexistence (when there are few connection points), conflict and symbiosis. Tourism can be *friendly* or *unfriendly* to the environment, the host communities and the visitors.
In 1972, during the Human Environment conference in Stockholm[49], it has been posed the condition that every kind of tourism progress must be compatible with the local wealth and culture, to stem the damage to employees, local

49 The first global environmental conferences namely the United Nations Conference on the Human Environment in Stockholm, June 5-16, 1972

communities, flora and fauna. In 1980, the Manila Declaration[50] deepened the question of the pollution produced by the tourist sector, introducing the concept of eco-friendly development.

90s began with a particular attention on the research of "green" forms of tourism in order to safeguard the destination and, at the same time, attract tourist flows. In the same years the Conference on environment and development of the United Nations in Rio de Janeiro launched the *Agenda 21*, a plan of environmental interventions to be implemented in the 21st century. It has a general program which calls every local authority to build a personal Agenda, in a situation of free and global partnership. Each town has an agenda to share with the others, in a collaborative project.

To follow the trend of environmental tourism, the offer operators adopted a Corporate Social responsibility, which is still a preponderant issue. Sustainable tourism[51] is identified as the set of activities able to meet the needs of the visitors, of the tourist industry and of the host communities, without compromising the satisfaction of the future generations' desires. Sustainability has a cultural, social, environmental and economic meaning.

When a location is subject to mass tourism, there may be positive or negative repercussions in both directions: the experience can modify the visitors' behavior and the natives' habits. Travellers can make some traditions theirs, for example the local diet; the risk is that a huge amount of visitors can bring the host community to distort its culture, shaping local offering that meets the target's needs. A positive side generated by mass tourism could be the restoration of traditions and artistic heritage.

It is crucial for the municipality of the travel destination to plan the tourist strategy, not to change tradition and local culture. The tourism scholar Alexander Langer argued «Tourism

50 Extract from the Declaration:

HELD at Manila, Philppines, from 27 September to 10 October 1980, convened by the World tourism Organization with the participation of 107 delegations of States and 91 delegations of obsrvers, in order to clarify the real nature of tourism in all its aspects and the role tourism is bound to play in a dynamic and vastly changing world, as well as to consider the responsibility of States for the development and enhancement of tourism in present-day societies as more than a purely economic activity of nations and people

51 The definition was outlined in 2002, during the Cape Town Declaration on Responsible Tourism.

is compatible with the environment only in homeopathic doses. The reciprocity aspect and the relationship with the indigenous community are essential. Otherwise, even the keenest of the eco-tourists can easily become an annoying, irritating and harmful Jiminy Cricket[52]».[53]
In 1989 the economist Adam Smith proposed a classification of the main typologies of tourists:

> **the explorers** are nonconformist and niche visitors, whose aim is to discover local traditions; they travel in small groups;
> **the mass tourists** are numerous and in a continue flux, they look for an experience which is similar to their culture;
> **the charter tourists** require a hosting environment which is practically identical to their native country.

The explorers are tourists which look for cultural tourism or "eco-tourism", which indicates the travellers' desire to visit a destination in its natural state (the local ecosystem, with its tradition, habits and culture). Eco-tourists help in the preservation of the socio-cultural environment; but despite it is a form of visit which respects the location, it could put a destination in danger, when it turns into a mass tourism phenomenon.
In regard to this issue, the expert of tourism management Cooper argued «the plague of ecotourism has spread far and wide on the most pristine areas of the country».
It is crucial to carefully plan eco-tourism strategies, starting with an analysis of the local resources which can be used with and for the visitors, without break the destination's resilience.
A particular form of Responsible Tourism is the *Social tourism*, which fosters the meeting between travellers and populations.
To meet the emerging trend of tourism, local authorities introduced strategies of de-seasoning and de-marketing, to move tourists flux towards low season periods and less famous destinations. Local authorities are also pushing towards the increasing of Zero mile Tourism offerings, which meets the goals of the responsible tourists involving local visitors and citizens in the discovery of authentic local culture.
To regulate the responsible tourism, the UNWTO association

52 A character from the Collodi's tale "Pinocchio", known in Italy as "Grillo Parlante"

53 Langer quoted by Canestrini (2002), translated by Candela and Figini (2012)

in 1999 promulgated the World Ethic Code for Tourism, which recognized the tourism as a factor of tolerance, knowledge and cultural growth. The local tourist offering should engage tourists to become travellers who actively explore the culture and history of the location; visitor should be «a subject that doesn't just consume the services that he prefers, but who pretends to contribute to define and sometimes to produce [...] tourist performance packages» (Zamagni, 1999).

3.5.5 What tourists do not know of Italy

As I mentioned earlier in the paragraph 3.3, not everything which compose a tourist offering is perceived by tourists. Every service has front-of stage and back-of stage interactions between employees, users, infrastructures and tools which support the user actions. Tourism industry chooses what show to the visitors: tourist authorities build their offer on the travellers' taste. The World Ethic Code for Tourism (see paragraph 3.3) aims to avoid that public authorities, shaping the tourist offering, change local tradition and habits to create tourist routes.
If tourist destination changes their nature to meet the mass market expectations, the research for authentic experiences - an emerging trend for modern explorer - is falsified. Talking about Italy, what visitors perceive on the peninsula? To they have a right conception on the country?
This is the main issue explored in the paragraph.

Tourists visit Italy mainly for its food and wine, the fashion (dress and design), the cultural and art sites and the natural location like seaside, thermal and mountain destinations. People from all over the world see Italy as an interesting destination to visit, but with several internal problems; the image 3.22 is a caricature of the way people of other countries see Italy.
Travellers from other countries visit Italy having already a mental conception on it. The local offering can meet that vision (shaping the tourist product to meet the mass visitors' expectations) or show the authentic culture of the peninsula. Discovering the local culture, art and habits is the goal of niche tourists (the explorers); in most of the cases they

Image 3.22:
how people all over the world see Italy, from it.adviseonly

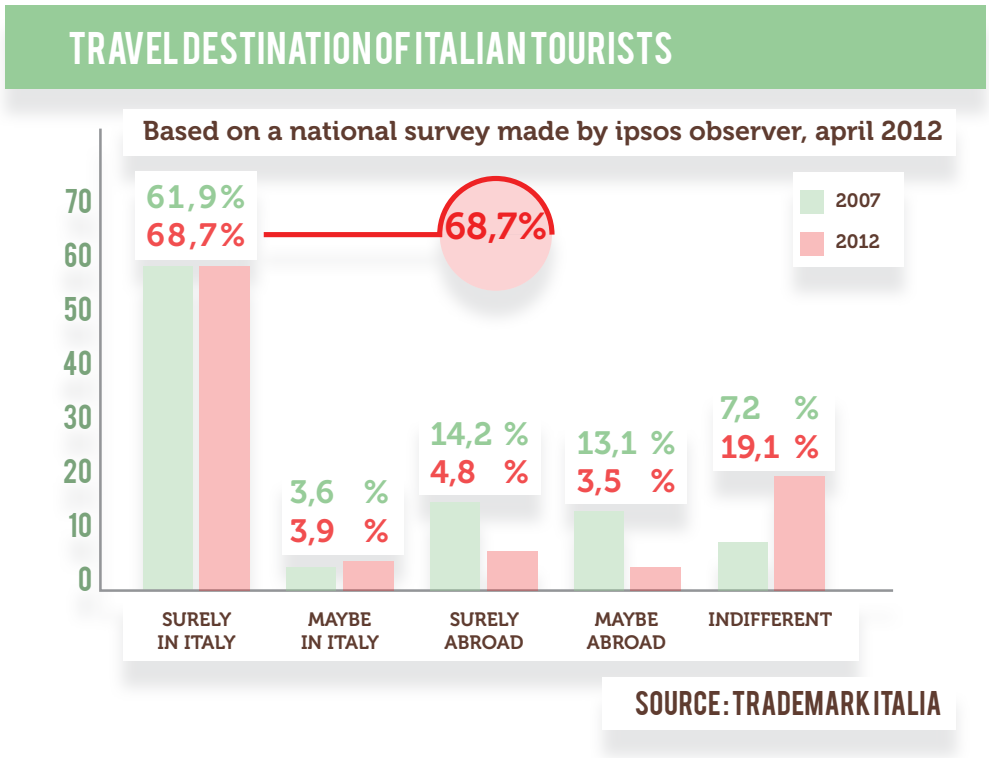


Image 3.23: travel destination of Italian tourists

cannot make reference to traditional travel agencies, which offer packages to satisfy the mass tourism expectations.
All over the world travel agencies noticed the emerging tourist trend and they are developing innovative solutions for niche travellers. An example is strategy adopted by the tour operators in Beijing, which have organized since 2006 the project *Discovering Beijing through Seek Bou Journey*: it is a system which integrates game and tourist service, offering a treasure hunt with puzzles to resolve around the city, getting acquainted on local history. It is based on regional cultural elements showing the authentic habits of the host populations. The case study will be analyzed in depth with a Case Study form, at the end of the chapter.
Italian tourism has the opportunity to develop tourist products designed to meet the needs and expectations of the niche tourism (Zero mile Tourists), on a national level.
The *image 3.23* depicts the travel destinations chosen by Italian tourists: the 68, 7% of Italian people in 2012 chose Italy itself as a holiday location. Many Italian cities are taking advantage of that possibility, pointing in particular to the

emerging trend of the Zero mile Tourism, which has born for explorers who want to discover the culture, history and tales of close location, or also of their own city.
The local tourist is driven by a spirit of exploration and by the desire to actively participate in the life of the community.
The Italian State could exploit this possibility to relaunch the national tourist business, creating a network of local offerings that respond to a national unified anc coherent communication strategy.
The data presented in this chapter show that the future challenge of Italian tourism is to reach the niche tourism made by responsible local tourists: they are explorers who want to discover culture, art and curiosities on the location. Zero mile Tourism offering should be supported by a communication strategy which convey data on the authentic culture of the location, making «propaganda, not impropaganda» (Bernays, 1928). The strategy should be unified on a national level (promoting the product Italy) and adapted for every local tourist package; it must reflect the reality, shaping the users' expectations on the real offering. The correspondence between advertising and reality causes among visitors a positive word of mouth (through online and offline channels) which is the most efficient tool to advertise local tourism offerings.
These are important basis for the development of my project.

CASE STUDY #5. TRIPADVISOR

NAME	Tripadvisor
LOCATION	Globally spreaded
AUTHOR	Steve Kaufer
YEAR	2000
TOOLS	Online platform, feasible on smart phone, tablet and pc

MODE	Application for smart phone, tablet or PC
DESIGNER'S GOAL	Shape a network of tourist attractions to meet the needs of visitors and business manager
USER'S GOAL	**Visitors** have at their disposal feedbacks given by other visitors on tourist attractions, in every moment **Business owners** advertise their offering on a global network
CUSTOMER JOURNEY	**Visitors** consult Tripadvisor website during every moment of the trip; they leave feedbacks on tourist attractions **Business owners** subscribe to the network, advertising their offering and receiving feedbacks from customers
STRONG POINT	The service provides a kit for hotel/restaurant manager which join the Tripadvisor network, to show they are present on the platform. Users can use the service in ever moment, if they own a PDA with an internet connection
WEAKNESS	Users can falsify feedbacks

CASE STUDY #6. THE PASSPORT TO...

NAME	The passport to...
LOCATION	There are different edition of the software, for many cities
AUTHOR	Lonely Planet with Sony
YEAR	2006
TOOLS	PSP (Play Station Portable), videogame

GAME MODE	ARG. The city is transformed into digital data communicated on the PSP screen
DESIGNER'S GOAL	Guide travellers through various cities with maps, thematic tours and photos
PLAYER'S GOAL	Explore the city using the PSP as an interactive guidebook
GAMEPLAY	Pictures and descriptions are linked to important locations on map. Players can make a list about favorite places and plan the daily activities of the trip
STRONG POINT	Tourist tours are fit to the users' tastes. The game is supported by a very famous console, which gives it more visibility Travellers can share online their experiene with other players
WEAKNESS	For the information to be real-time connected to locations around the city, there should be a GPS and WiFi connection

CASE STUDY #7. SEEK BOU JOURNEY

NAME	Seek Bou Journey
LOCATION	Beijing
AUTHOR	Changxun
YEAR	2006
TOOLS	Installations around the city

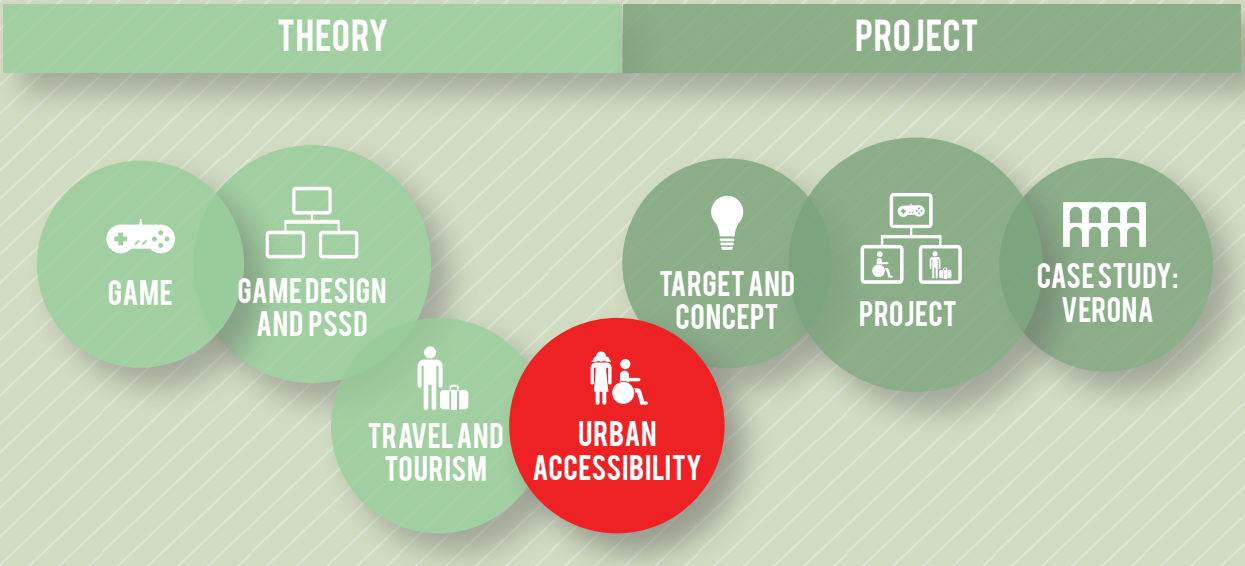
MODE	Reality based treasure hunt
DESIGNER'S GOAL	Shape a network of tourist attractions to meet the needs of visitors and business manager
USER'S GOAL	Design a game that will become the catalyst for the development of Beijing's Capital Recreational District
CUSTOMER JOURNEY	The treasure hunt proposes different tasks in every installation around the city. All together, the missions constitute a tourist tour
STRONG POINT	The game is based on regional cultural elements (different edition of the game have been developed for other cities)
WEAKNESS	The treasure hunt requires to players to move for long distances inside the city

CASE STUDY #8. WHAIWHAI

NAME	WHAIWHAI
LOCATION	Venice, Florence, Verona, Milan, Rome and New York
AUTHOR	LOG607 s.r.l.
YEAR	2008
TOOLS	Guidebook, SMS

GAME MODE	Clues hunt around a city
DESIGNER'S GOAL	Create an alternative travel experience
PLAYER'S GOAL	Players read the first part of a story; the following chapters can be unlocked through a clues hunt around the city. When they solve a clue, they send an SMS to the game account which send back a code to unlock the next chapter
GAMEPLAY	The game path is composed by different stages that hide the parts of a story (every tale is a coded message)
STRONG POINT	It is an adventure to discover a location, which can be personalized depending on the difficulty, the duration and the starting area
WEAKNESS	Players pay an extra for the SMS, whose average number for a game is 20

4. URBAN ACCESSIBILITY



[...] accessibility is defined as the potential of opportunities for interaction. This definition differs from the usual one in that it is a measure of the intensity of the possibility of interaction rather than just a measure of the ease of interaction.
In general terms, accessibility is a measurement of the spatial distribution of an activity (opportunities for interaction) adjusted for the ability and desire of people or firms to overcome spatial segregation.

Walter G. Hanse (1959), extract from the thesis
Accessibility and Residential Growth. MIT publishing

Accessibility: the possibility for persons with reduced or obstructed motor or sensorial capacity to reach the building and its environmental and architectural individual units, to enter easily and use spaces and equipment under conditions of adequate security and autonomy

Italian Ministerial Decree 236/89 (1989)

The accessibility of public spaces is a topic of great relevance and which should be taken in consideration by the public authorities, both in the field of the citizens' everyday life and in the tourist sector.
The concept of accessibility holds many issues, for instance the architectural barriers, the relation among the individual and the elements which compose the city urban tissue and obviously the topic of impairment. This chapter deepens these issues since, as I mentioned earlier in the general introduction to the dissertation, my aim is to design a Game Service System, within which the ludic paradigm acts as a medium able to foster awareness on the actual issue of Accessibility for All and to promote social innovation in this field.

The quotations which introduce the chapter derive from two different socio-cultural contexts (Italy in the late 80s and America in the late 50s) and they belong to different historical moments. The one dated 1989 is part of a national law, promulgated by the Italian government, which deepens and completes the previous definition which reflected on the gaps of interaction among users/spaces/environments and on the spatial distribution of activities within an architectural space. The Italian definition formalizes the concept of accessibility (on a national level) related to buildings and equipments. The term "equipments" here includes machinery, services and tools which can be used in the daily life by different types of users.

The design of daily objects, tools and facilities is the subject of the Design for All discipline which, according to Avril Accolla - a professor of the Politecnico's master course *Design for All* - treats in exhaustive way the human diversity, inclusion and equality (in an interview for *Radio24* on April 2012). The mission of the Design for All (DfA) is the improvement of the quality in the life of the individual, valuing the human diversity as an effective wealth. This discipline takes the human difference that we experience everyday and puts

it at the centre of the design process. DfA acts in many fields, to enhance various aspects of the daily life of the individual, from the entrance in a private building to the visit at public spaces for recreational purposes.

My strategy is to adopt this vision to plan a Game Service System that is set on Italian cities with a high tourist potential. DfA in this case will act with a strategy of awareness of the individual towards issues which affects not only the minority of citizens – people with impairments – but also able bodied people.
During the interview mentioned earlier in the text, Accolla talks of the architectural barriers par excellence, the stairs, and of how they can be obstacles for all the people who use wheeled vehicles, from the parent who pushes the stroller to the employee who brings up the cokes in the office to the disabled on wheelchair.
My service offers a tourist experience of discovering a city local culture through a series of actions that get the player close to the issue of Accessibility for All (a concept that I propose, applying the DfA approach to the field of urban accessibility). To plan the system which supports the offering it is necessary to answer a series of questions: *What is the accessibility? Who is the person with impairment? What is an architectural barrier and how does it obstacle daily actions?*

4.1 Urban accessibility

To examine the issue of urban accessibility we need to describe and explain in detail the terms “accessibility” and “impairment” A definition of impairment is given by the Italian Laws 18/1980 and 508/1988. Accessibility means to include all the people who are prone to physical impairments (mutilation, blindness, paralysis, deafness, spinal cord injury, muscular dystrophy, epilepsy and so on) and cognitive impairments (Down syndrome, developmental delay, autism, cerebral palsy, mental retardation, psychosis, mental illnesses and so on). The accessibility of private, public and semi-public spaces in Italy is based on the Constitution. The Italian legislation that regulates the accessibility and the removal of the permanent architectural barriers is the Law number 13 of 1989, which establishes procedures and terms of guaranteed accessibility to various environments, with emphasis on public places. This law grants private contributions for the removal of existing barriers on private buildings.
The Ministerial Decree (D.M.) 236/89, which puts the previous law into effect, is more precise in the identification of terms and concepts. In particular it explains the features which identify public and private spaces: Accessibility, Visitability and Adaptability.

> Accessibility: the possibility for persons with reduced or obstructed motor or sensorial capacity to reach the building and its environmental and architectural individual units, to enter easily and use spaces and equipments under conditions of adequate security and autonomy.
> Visitability: the possibility, even for people with reduced or obstructed motor or sensorial capacity, to access spaces of relationship and at least to access one toilet for every housing unit. This means that the person has a limited access to the structure, but it allows her every type of fundamental relationship.
> Adaptability: the possibility to change built space or structures over time, to make the building or a part of it easily accessible to people with impaired or impeded motor or sensory capacity.

The Decree establishes the standard dimensions and technical parameters in order to achieve the established quality levels,

for instance the minimum size of the doors and the slope of the pedestrian ramps. These laws must be respected by every new building, whilst in the case of renovation of old buildings they must be adequate to the D.M. 238/89, article 6. In regards to public buildings and public spaces there is another implementation degree. The Law number 41 on February 28th 1986[54] imposed to Local and Regional authorities to adopt a plan to demolish architectural barriers. If the municipality does not fulfill the requests, citizens would have various options: make a direct pressure to the Public Administration, recur to media reporting, sensitize the public opinion or write to the Mayor, according to the law number 241/90. The Italian law makes available different methods for citizens to give suggestions and make constructive criticism to the municipalities, in order to improve and solve daily problems.

Since the Eighties the Italian legislation has been looking towards the recognition of the inviolable rights for people with impairments; the laws and decrees which regulate their rights are protected by the national Constitution and they have priority over issues of architectural, urban or economical nature. For this reason the law 41/86 was made: the demolition of architectural barriers is a priority for municipalities, although it involves a significant investment of money. A city can be considered accessible when it provides barrier-free environments (from a physical and moral point of view) for everyone, including weaker population such as the elderly, children, parents with young children, pregnant women and people with physical, sensory and cognitive disabilities.

4.1.1 International Laws

Each State and every region have a local declination on the issue of the accessibility. A code which is shared by many nations is the *Convention on the Rights of Persons with Disabilities* drawn up by the United Nations during the Assembly in 2006. It indicates the path that must be taken by all the States to ensure equality and social inclusion of all citizens with disabilities. On February 24th 2009 the Italian Parliament accepted the Constitution as a national law.

54 Italian financial law 1986.

It is available online on the *un.org/disabilities* website and it is composed of fifty articles, but I am reporting just the five that are most important for the development of my project.

ARTICLE 1 – PURPOSE OF THE CONVENTION

The purpose of the present Convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity.

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others"

ARTICLE 3 – GENERAL PRINCIPLES

The principles of the present Convention shall be:

a. Respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;

b. Non-discrimination;

c. Full and effective participation and inclusion in society;

d. Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity;

e. Equality of opportunity;

f. Accessibility;

g. Equality between men and women;

h. Respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities

ARTICLE 8 – AWARENESS RAISING

States Parties undertake to adopt immediate, effective and appropriate measures:

a. To raise awareness throughout society, including at the family level, regarding persons with disabilities, and to foster respect for the rights and dignity of persons with disabilities;
b. To combat stereotypes, prejudices and harmful practices relating to persons with disabilities, including those based on sex and age, in all areas of life;
c. To promote awareness of the capabilities and contributions of persons with disabilities.

Measures to this end include:

a. Initiating and maintaining effective public awareness campaigns designed:
i. To nurture receptiveness to the rights of persons with disabilities;
ii. To promote positive perceptions and greater social awareness towards persons with disabilities;
iii. To promote recognition of the skills, merits and abilities of persons with disabilities, and of their contributions to the workplace and the labour market;
b. Fostering at all levels of the education system, including in all children from an early age, an attitude of respect for the rights of persons with disabilities;
c. Encouraging all organs of the media to portray persons with disabilities in a manner consistent with the purpose of the present Convention;
d. Promoting awareness-training programmes regarding persons with disabilities and the rights of persons with disabilities

ARTICLE 30 – PARTICIPATION IN CULTURAL LIFE, RECREATION, LEISURE AND SPORT

States Parties recognize the right of persons with disabilities to take part on an equal basis with others in cultural life, and shall take all appropriate measures to ensure that persons with disabilities:

a. Enjoy access to cultural materials in accessible formats;
b. Enjoy access to television programs, films, theatre and other cultural activities, in accessible formats;
c. Enjoy access to places for cultural performances or services, such as theatres, museums, cinemas, libraries and tourism services, and, as far as possible, enjoy access to monuments and sites of national cultural importance.

ARTICLE 19 – LIVING INDEPENDENTLY AND BEING INCLUDED IN THE COMMUNITY

States Parties to this Convention recognize the equal right of all persons with disabilities to live in the community, with choices equal to others, and shall take effective and appropriate measures to facilitate full enjoyment by persons with disabilities of this right and their full inclusion and participation in the community, including by ensuring that:

a. Persons with disabilities have the opportunity to choose their place of residence and where and with whom they live on an equal basis with others and are not obliged to live in a particular living arrangement;

b. Persons with disabilities have access to a range of in-home, residential and other community support services, including personal assistance necessary to support living and inclusion in the community, and to prevent isolation or segregation from the community;

c. Community services and facilities for the general population are available on an equal basis to persons with disabilities and are responsive to their needs.

According to the United Nation Convention on the Rights of Persons with Disabilities, tourism should be accessible for all. Public attractions, especially open-air, must be accessible and "visitable" by all the travellers and adapted to their needs, although in many cases they are not.
It is obvious that many ancient architectures cannot be restored and rendered accessible, or they would lose their historical value; however the municipality must, at least, take care of the accessibility of public open-air spaces and restore the urban fabric by eliminating architectural barriers that prevent the visit under conditions of equality for all the users.

4.1.2 Italian Laws and Decrees

At this point of the dissertation we can only examine the Italian context, the points of convergence and divergence with the international laws and the relationship of the Italian tourist business and the accessibility of the tourist public attractions.
The United Nation Convention issued in 2006 (for further information see the paragraph 4.1) has been adopted by the

Italian state in 2009. I have listed some fundamental articles extracted from it in the previous chapter.
Many years before the establishment of the UN Convention, Italy proposed a plan to eliminate Architectural Barriers (the PEBA[55] plans). PEBA appeared for the first time in the Italian law 41 on 1986 and it should be adopted by the municipalities not later than February 28th 1987,[56] on pain of sanctions from the regions. The following text is an extract from the document promulgated by the Regione Veneto, *Guidelines for the preparation of the plan of removing architectural barriers*:

> *«The Plan for the Elimination of architectural barriers provided by the article 32, paragraph 21, from the L.41/86 and the article 24, subparagraph 9, L.104/92, is basically a tool that will allow the various administrations a spatio-temporal control of the interventions aimed to the overcoming or elimination of architectural barriers, allowing the economic and organizational planning of the entire operation.*" (TdA, from the paper *Linee Guida per la Redazione del Piano di Eliminazione delle Barriere Architettoniche* issued by Regione Veneto in 2003)*»* [57]

In 1992 the *Legge Quadro* established the functioning of the integration operations relating to accessibility of urban areas "with particular reference to the identification and implementation of accessible routes, installation of audible traffic signals for the blind people, the removal of signage in a way that impede the movement of disabled persons"[58] (TdA, *Legge Quadro* 1992, Article 24, paragraph 9).

---

55 Piano di Eliminazione Barriere Architettoniche (Plan for the Elimination of Architectural Barriers).

56 Dispositions for the formation of the annual and multiannual budget of the State, article 32, paragraphs 21st and 22nd.

57 From the original text:

Il Piano di Eliminazione delle Barriere Architettoniche previsto dalla L.41/86 art.32, comma 21 e L.104/92 art.24, comma 9, è praticamente uno strumento in grado di consentire alle varie amministrazioni un controllo spazio-temporale degli interventi mirati al superamento o all'eliminazione delle barriere architettoniche, consentendo quindi la programmazione sia economica che organizzativa dell'intera operazione.

58 From the original text:

con particolare riferimento all'individuazione e alla realizzazione di percorsi accessibili, all'installazione di semafori acustici per non vedenti, alla rimozione della segnaletica installata in modo da ostacolare la circolazione delle persone handicappate.

Despite the legal regulations began in the late 80s, nowadays (almost twenty-seven years after the law)[59] just a small minority of Italian municipalities has adopted the strategy of adaptation.
Many tourist cities nowadays are not in compliance with the national laws on the accessibility for all and the general level of accessibility in the peninsula is low.
Often this situation is due to the presence of ancient buildings; they were built without respecting the accessibility for all, which is a necessity to the modern times.
Buildings which are actually under construction must be in compliance with the national laws that regulate the minimum level of accessibility for people with mobility impairments.

Despite this, many public spaces present difficulties during the access and the visit by people with motor disabilities. The PEBA (Plan for the Elimination of Architectural Barriers), which are being implemented since 1992, have not brought a homogeneous level of accessibility of the country, yet. Probably, this is a consequence of the European crisis that started in 2007: Italy has no funds to allocate for the PEBA.

4.2 Architectural barriers

Earlier in the text I have examined the topic of mobility impairments and the level of Accessibility for All of public spaces, which is ruled by national and international laws; at this point of the dissertation we have no choice but to introduce the concept of architectural barrier (a term that has been used in the paragraph 4.1).
It is crucial to establish what architectural barriers are, their role in an urban context and their relation with the accessibility of public spaces: as I said in the introduction of the chapter, these topics are fundamental for the development of my Game Service System, which can offer an experience of *critical play* (Flanagan, 2009) that uses urban game as a medium to lead players towards a reflection on the issue of Accessibility for All.

59 The law 41/86 is an enhanced remake of the Decree number 384 of the President of the Republic, issued on 27 April 1978 and concerning the removal of architectural barriers. The Decree was abolished and replaced by article 32 of the Presidential Decree number 503 of July 24th 1996.

Therefore, I'd like to introduce the official definition of *architectural barrier*, reported at the article 2 of the Italian Ministerial Decree number 236, 14.6.1989.
You read verbatim that architectural barriers are:

> physical obstacles which are a source of bother for the mobility of anyone, especially people who, for whatever reason, have a reduced or prevented motor capacity on a permanent or temporary form;

> the obstacles that limit or impede anyone a comfortable and safe utilization of parts, components and equipment;

> the lack of expedients and indicators that allow the orientation and the recognition of places and sources of danger for anyone and especially for the blind, for the visually impaired and deaf".[60]

According to the first two paragraph of the previous definition, architectural barriers may limit or prevent the comfortable urban accessibility to anyone, not just to people with motor, cognitive or sensorial impairments.
The Game Service System I am designing aims to lead public authorities to improve the urban level of Accessibility for All – able bodied people but also individuals with temporary or permanent impairments (the topic of impairments will be deepened in the paragraph 4.2.3). It will offer to local visitors (see paragraph 3.2.3 for a definition) a formative tourist experience, which conveys awareness on the actual issue of AfA and push the players to demand public authorities for an improvement on local accessibility. Public authorities will be the indirect target of my service offering, while the visitors the direct users. I will explain in detail the direct and indirect target, their role in the GSS, their goals and their relationship in the paragraph 5.1.

We can set the service offering starting from a particular

60 The original text is:
Per barriere architettoniche si intendono:
a) gli ostacoli fisici che siano fonte di disagio per la mobilità di chiunque ed in particolare di coloroche, per qualsiasi causa, hanno una capacià motoria ridotta o impedita in forma permanente o temporanea;
b) gli ostacoli che limitano o impediscono a chiunque la comoda e sicura utilizzazione di parti, attrezzature e componenti;
c) la mancanza di accorgimenti e segnalazioni che permettono l'orientamento e la riconoscibilità dei luoghi e delle fonti di pericolo per chiunque e in particolare per i non vedenti, per gli ipovedenti e per i sordi.

Image 4.01: photo from the reportage Disabili a Milano: il fotoreportage fra le barriere by Loredana Celano (2014)

location (in the chapter 7 I will examine the case study of Verona), but it will remain adaptable to different realities: the project is indeed a service framework, which can be applied to various environments.

4.2.1 Permanent architectural barriers

Architectural barriers can be a great obstacle for the Accessibility for All, in a permanent way or for a limited time. As we have seen earlier in the dissertation, the *architectural barrier* is defined as any constructive element that prevents or limits the fruition of places and services, especially for people with limited motor or sensorial capacities.[61]
However the concept of architectural barrier varies substantially from subject to subject; an urban element can be perceived as an obstacle by an individual or it can even go unnoticed by another person.

61 The complete definition can be read on the article 2 of the D.M 14.6.1989, number 236.

The right to freedom of movement and accessibility for all led to the research for common parameters that limit this subjectivity. On a normative level there are laws[62] to point out the elements which must be considered as architectural barriers and the construction criterions for their accessibility.

From the definition we can assume that each element limiting or impeding the fruition of a space or service is considered an architectural barrier. Examples of permanent barriers (as shown on *Image 4.02*) perceived by everybody are staircases, doors and narrow entrances, tight sidewalks, anti-parking barriers and ramps with high slope. There are also obstacles that are invisible to the fully able-bodied people, as the bar counters, high parapets that obstruct the visibility, sidewalks with a few distant ramps, bumpy roads and so on. After reading the paper on *Formative notebook of technical address for an internal use. The removal of architectural barriers in public space*[63], I came to the following conclusions: architectural barriers can be invisible - or in other words they may not be noticed - by fully able bodied people but also by public authorities.
Municipalities must consider that the city is not frequented by only one type of people: it is indeed covered, both for necessity and for recreational reasons, by many categories of citizens and visitors who may not have the total freedom of fruition. Often people associate the concept of disability to persons who use a wheelchair, but the disabilities are of various kind and degree (for further information, go to paragraph 4.2.3).

The elimination of architectural barriers should not be planned exclusively to meet the needs of a category of people, individuals with disabilities; it is a way to design a city for all, accessible for people with physical impairments, but also to elderly people, parent with pushchair, tourists with luggage, people who do shopping with trolley and workers carrying loads, to mention a few.
Many people do not notice the difficulties that individuals with impairments must face every day; for an able bodied person

62 See the chapter (4.1.2) - Italian Laws and decrees.

63 Edited by Maggiulli, Manzon, Massa, Orsini (2006), Quaderno formativo di indirizzo tecnico ad uso interno. L'abbattimento delle barriere architettoniche nello spazio pubblico.

the architectural barriers may be seen as obstacles just in a few particular moments, but they are generally perceived as simple urban elements (for instance, when an individual who lives at the third floor must carry a heavy shopping bag at home, the stairs seem to be insurmountable obstacles).

Image 4.02: permanent obstacles in the city of Verona

Empathizing with other people's limitations is a useful exercise to design a service on accessibility; it can lead to the reflection on an issue which is too often underestimated, but which is a central question for many people.
Designing a project which leads the user to walk in the shoes of people with impairment is a way to bring the attention of the majority on an issue which damages the minority of people, whose rights are often over looked (this concept is explained in detail in the chapter 5).
International and local laws on accessibility have created an exhaustive definition of architectural barrier and regulated the construction and adaptation of architectural and urban elements within public and private spaces. I'd like to list a brief series of parameters that rules their construction in compliance with laws on accessibility for all; these will help me to design an urban game project which leads users to walk in the shoes of people with mobility impairments, making them interact with urban elements - which are more or less in compliance with those decrees. The parameters in question are reported in the Italian Decree 236/89 for the overcoming of architectural barriers.

> Doors: the minimum light on the entrance door for every building and real estate must be at least of 80 cm; the light of the other doors must be at least of 75 cm and the height for the door handles must be included between 85 and 96 cm.
> Corridors and paths: they need a minimum width of 100 cm. There mustn't be variations of level, which can be overcome by using ramps
> Builders must provide, every 10 meters, an enlargement to allow reverse gear; the width of the corridor must ensure the easy access for a person on a wheelchair to the environmental units by which it is composed.

Designing a service for the city, it is crucial to define the urban criticalities. For instance the sidewalks must have a minimum width of 100 cm and the ramps must have a slope which is not superior to the 6%; despite this, many ramps have been built with a 8% slope that is too strenuous for the weakest users, like elderly people on a wheelchair with manual boost.
In addition, the ramps must have a parapet and a chromatic variation from the surrounding pavement to be well recognizable.

4.2.2 Temporary urban obstacles

As I mentioned in the paragraph 4.2, urban obstacles can be of different kind. The user who moves in public spaces has to face permanent obstacles, which are defined as architectural barriers, and temporary obstruction (as shown on *Image 4.03*). These can be occasional or recurring (which occur at time intervals, more or less regularly):

> occasional temporary obstacles are for instance vehicles parked on sidewalks or works in progress that restrict pedestrian areas;

> recurring temporary obstacles are those that repeat at regular intervals; they can be planned by public or private bodies and they are for example the deposit of the garbage on sidewalks on the day of the trash collection or the standing on the platform of the vehicles for goods loading/unloading.

Even if this kind of obstacles are perceived as temporary inconveniences, they can obstruct or slow the daily actions of the individual: for example a car which is parked on a sidewalk stops the passage of users and in the case of a person on a wheelchair, it forces her to get off the sidewalk and then to get on it again (which could be an arduous challenge if there are no ramps and if the individual is moving alone).

4.2.3 Mobility impairments

There are various types of permanent or temporary motor disabilities. In this text I will not examine in depth the subject, because it would need specific competences and an entire book to examine the issue. I chose to focus, for the purposes of my project, on a particular category of disabilities, the *temporary impairment* also called the "appendage", for instance the luggage for tourists, the stroller for parents and the shopping trolley.

People who are "influenced" by this kind of temporary impairment are, to mention a few, parents who move by pushing a stroller, or tourists with heavy luggage (as shown on Image 4.04).

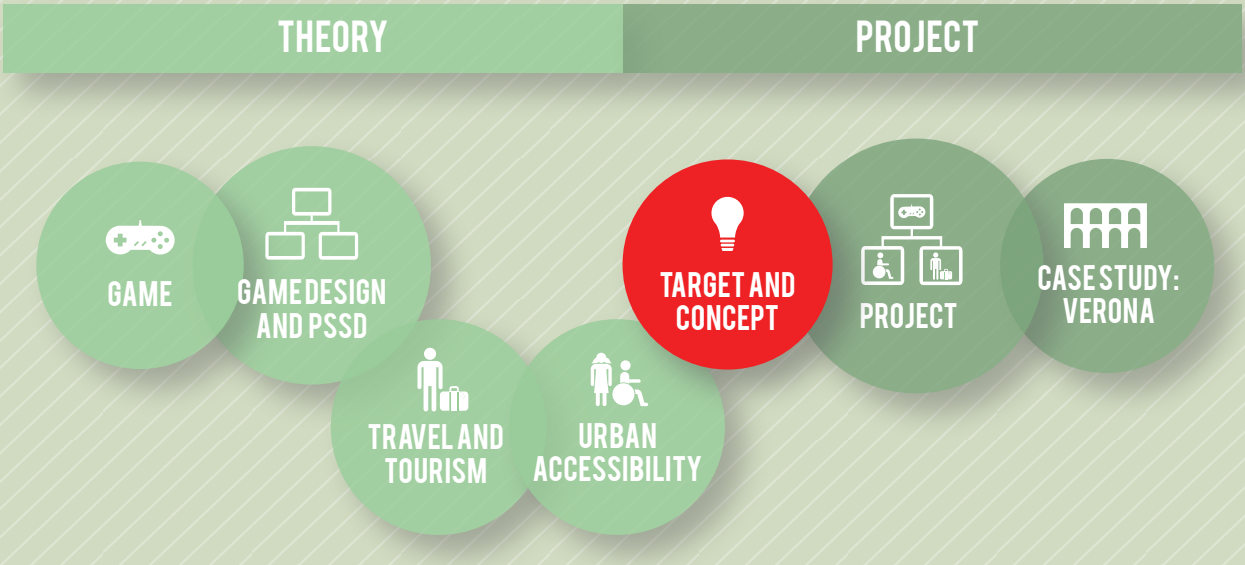
Image 4.03: temporary urban obstacles in Verona

Going to hit this target, I'd like to change their perception of the surrounding urban environment, which is made up of information and historical data, but it is also cluttered with physical barriers that are obstacles for many people.

The kind of tourist whose I am addressing the service to has no permanent mobility impairments, and usually he/she does not perceive as obstacles the architectural barriers, both permanent and temporary.

Image 4.04:
temporary mobility impairments

5. TARGET AND CONCEPT



All great changes are simple.
Ezra Pound

This world is but a canvas to our imagination.
Henry David Thoreau

TOWARDS THE CONCEPT

Before defining the concept which lays the foundation for the service system, I would like to drawn on the definition of Service System that I wrote in the paragraph 2.1 on the discipline of PSSD.
The Service Design researcher Daniela Sangiorgi in 2004 argued that in the Product Service System Design discipline, the System identifies the actors involved in the service creation, development and delivery: it describes the main figures involved in the service, with their roles and resources, and the existing relations between them, specifying their activities and aims in taking part into the service process. (Sangiorgi, 2004).

I'd like indeed to analyze the figure involved in the service I am designing, but I need at first to analyze some issues which have an essential importance for the purposes of my project.

The first issue is on tourism for people with motor disabilities.

How do tourists with mobility impairments travel? Which kind of choices and renunciations they must do to visit a city? And how tourism for visitors with mobility impairments is perceived by other people?

Travellers with reduced mobility capacities must always plan in detail their travels, because it is necessary for them to identify the accessible tourist attractions of the chosen destination and ensure on existing services in support of people with disabilities. A full able bodied traveller probably never thought on the existence of these issues, nor he/she will have to compare with them in the short term. How to do in order to bring people close to this issue?
My aim is to design a tourist offer for able-bodied people, which makes them identify with tourists with motor disabilities, making them discover the city from their point of view.

But why should a person agree to explore the city dealing with issues that she normally wouldn't face? And why should a person undertake an activity which presupposes unnecessary obstacles towards the achievement of a goal?
The answer arrives from Suits; in his essay (1978: p.39) he speaks of gaming activities and of the reason why players voluntarily agree to overcome the obstacles introduced by the game system. He argued that playing a game is a voluntary activity which involves efforts to overcome obstacles towards a goal. These are "unnecessary", built to distance players from the easiest solution (for further information on the topic, see paragraph 1.1.2). The same vision is contained in an interview made by Brandon Sheffield to Jesse Schell and reported on gamasutra.com [64]

> *Scheffield - I don't like negative reinforcement for not doing something that I should be enjoying. Why do you think people are so focused on that right now?*
> *Schell – (...) you've got to do anything that's going to keep people coming back. And some of those things are positive reinforcement, and some of them are negative reinforcement. Obviously if you have too much negative reinforcement, people leave. But if you have a certain amount of positive reinforcement, you can put some negative reinforcement, and people don't leave.*
> (...)

The type of relationship which exists between the player and the difficulties proposed by the gaming system is a crucial issue to understand, in order to build a service offering for tourists which is able to guide them during a sightseeing of the location and at the same time to make them aware on the issue of the Accessibility for All.
According to Suits (1978) and Schell (2013) people are willing to make an effort overcoming a game challenge, but without a balance between

64 The inteview has been taken on July 16th, 2013

Image 5.01: Accessibility for All in Robson Square, Vancouver, Canada

physical/logical effort and positive feedbacks from the game system[65] they step out of the flow state[66] and lose interest in the gaming experience. We have also to take in consideration the enormous power of *competitiveness* and will to win: in paragraph 1.3 I explained how the game is able to capture the attention of the players (of heterogeneous age, culture and gender) and keep it over time; a designer needs to find the right balance between rewards and punishments to keep alive the attention of participants (Schell, 2008). This proportion stimulate a positive reinforcement for players, which is the solution for attracting players towards issues which are not usual for them, although these matters require a certain amount of effort.

From this proportion it emerges the possibility to create an experience aimed to increase the individual's awareness on this question: creating a system which is composed by an urban game,

65 The topic of balance is deepend in the paragraph 1.3

66 The topic of flow is deepened in chapter 1.1.2

Image 5.02: two men help a person to enter in a building

a guided tour of the city and an experience of awareness on the issue of Accessibility for All (AfA).

Players will learn to recognize the obstacles which increase the difficulties of daily actions for people with mobility impairments. To understand the actual situation they have to be in direct contact with these barriers, making a voluntary effort while overcoming them. To balance this effort my aim is to provide a fun and informative tourist experience for local tourists who travel in groups, with friends or family, aiming to hit another type of "indirect" target, the Italian Municipalities, bringing to their attention local problems with urban accessibility. My thesis aims to build a service framework which can be adapted to many Italian cities (further information can be found in the chapter).
The game participants will enjoy the service for tourist purposes and for having a quality time with friends and relatives while visiting a place, but they indirectly will acquire a certain level of social

Image 5.03: a person who deals with a very long ramp

awareness, which will lead them to participate to a project of urban Redesign for All. This is possible thanks to the strong behavioral and emotional impact of game:[67] acting as an individual with a disability of motor type, the player will gain a whole new perspective, and he/she will understand how daily objects can be obstacles for people with disabilities.

The second issue is on how to protect the dignity of the individual?

It is not sufficient for a building, an urban facility or a public space to be "according to the law on accessibility" to guarantee the effective accessibility for all. Just because a building has a ramp for people with motor impairments it does not mean that it is accessible for all.
Often the ramps are too steep for the weakest

67 The concept of the emotional state of gameplay appears in Jane McGonigal's work. lvi: p.28

individuals (they have an average slope between the 8% and 6% as indicated by construction standards in the Italian Ministerial Decree 236/89; paragraph 4.1.2), for instance elderly people or individuals on wheelchairs with manual boost. In these situations they need someone to assist them and their independence is compromised. In the *image 5.02* and *5.03* we see people on a wheelchair, who face ramps which seem to be insurmountable. In the first picture the ramp is very long and winding and it requires a huge amount of time and a big physical effort. In the second image the user has to be helped by two people because the ramp is too steep and slippery.
I have found the pictures on a Facebook group created by users with motor impairment to show bad examples of "ccessibility for All"; it is called "*Wheelchair ramps and access from hell*".

The protection of the individual's dignity and safety is crucial within a civilized society. Ramps and other measures taken to improve the level of accessibility should always be designed from the point of view of the final users, with and without mobility problems. The ramp must be built for being accessible for all (from this context it emerges the discipline of Design for All[68]), not exclusively for people with disabilities. In my opinion it is unacceptable that in many public places there is a main stairway for the entrance and alongside a ramp for disabled people; it would be more appropriate that the main access was made up of a ramp which is equally accessible for all. I remember when the professor Luigi Bandini Buti[69] used to tell us, his students,

68 Design for All «improves the quality of life of every individual by answering his/her personal diversified needs and desires. DfA is design for human diversity, social inclusion and equality» (EIDD Stockholm Declaration©, 2004)

69 Luigi Bandini Buti is a professor at Politecnico di Milano, NABA, Academy of Brera, European Institute of Design, La Sapienza University and some international universities; he is an expert on international level about the discipline of Design for All (also called Universal Design). I

Image 5.04: Politecnico design building main entrance

how the ramp for the main entrance in the design building inside the *Politecnico di Milano* campus (in Bovisa) made him feel different. He preferred to use the stairs, also if with a greater effort, to protect his dignity. The ramp is placed laterally to the entrance stairs, it has a smaller door, a different route and it is surrounded by a white railing, as a sort of cage (see *image 5.04*).
When I arrived to Politecnico with my big suitcase (I was a commuter student) I preferred to carry it up the stairs instead of using the ramp, because I perceived it as an uncomfortable second choice.

The topic of the Dignity and Rights protection has a central role in the design of my project, shaping the service's purposes and the interaction between the offering and its users.

---

mentioned him at this point of the text because of his deep knowledge of the DfA discipline and for his great sensitivity towards the physical disabilities, also because he himself has a mobility impairment

5.1 Target

In the previous chapters I have done an analysis of the fundamental theories on the Game Design, of the meeting points between the game and the discipline of the Service System Design, the evolution and taxonomy of travel and the national (Italian) laws and decrees which regulate the level of Accessibility for All in the public spaces of the city. After the examination of these topics, I have grounded basis to design a service that interests these research areas: a system composed by elements from different disciplines, which will work together towards the realization of a project.

But before analyzing this system I have to answer some questions: *Which is my concept? Where is it placed inside my taxonomy for travel? Who is its target? And which are the game elements which will be inserted inside a service system, to generate an offering which is able to meet the target's expectations?*
In this chapter I will answer to all these questions and I will formulate a GSSD proposal: *GSSD* is an acronym that I have coined to identify my project, which combines the features of a Service System (for more information see paragraph 2.1) supported by the Game.
Designing a GSSD offering I will give a primary attention to the ethic and values which I'd like to transmit with my project, through a *critical play* experience (Flanagan, 2009). The main values are the awareness toward the issue of *Accessibility for All* and the respect of the individual's dignity. It is important to define the target range of my service, understanding its needs, desires and problems, to create a synergy between the values offered by the services and the users' request. In this way I can design the best-related offering.
The paragraph is dedicated to the identification of the target to reach with the service offering.

To design a good service it is indispensable to create an offering which responds to the needs of the target range, using a user-centered approach. Richard Buchanan, a professor of design, management, and information systems, re-elaborated the concept of user-centered design into a human-centered approach, which affirmates the individual's dignity.
This approach will lead me across the definition of my service concept. It will be built *ad hoc* for my target range, which is composed by two main macro-categories:

> the direct target;
> the indirect target.

Direct target

I have identified the direct target of the service with the local visitors of a tourist location in Italy. Local visitors are both tourists and citizens of a location whose aim is to discover interesting places and stories on a local level (this particular kind of tour is called Zero mile Tourism).
In light of the taxonomy for travel and traveller which I have developed in the paragraph 3.2, I identified the typology of tourist to which I address the project to, depending on the motivation to travel, the duration of the trip, the number of people who travel and the journey destination. I chose to design a service system for responsible local tourists.

«Human-centered design is fundamentally an affirmation of human dignity. It is an ongoing search for what can be done to support and strengthen the dignity of human beings»
Buchanan (2001)

At first I have to explain what my interpretation of a responsible tourist is. This particular kind of traveller is usually seen as a person who is sensible to the social-economical-environmental problems of a travel destination. From a cultural point of view it is equally responsible a tourist who travels to discover the real life, history, culture and tales of a location. The traveller I chose as user is a person who is interested in the life of the inhabitants of the location that she is visiting; this kind of visitor has a particular attention which can lead him/her to actively care on the urban and social accessibility of the location.

With a higher level of detail I identified these visitors as people who take a journey of short term, with an average duration of two days (usually a weekend).
The problem of the lack of time for this category of traveller is a central feature in the design process of a tourist service, which has a short time to engage and entertain the visitor.
In addition I have thought about the number of people I'd like to involve with my service, identifying as target range groups of people composed at least by two members. The minimum number is due to the game dynamics, which I will examine in detail in the paragraph 6.2.1. Groups of visitors may be of different kinds: relatives, friends, tourists from the same location or school mates. They have a common characteristic: the will to explore the city.
These groups of tourists have a common feature, but they have also particular necessities and restrictions. In the case of a group of visitors which engages in a journey of short duration the first restriction is the time, which is linked to the necessity of visiting the location within a few days – or maybe hours - without losing the quality of an interesting cultural tour. Often the lack of time brings people to hurry from a tourist attraction to the following one; this behavior can take the visitors out from the state of flow[70] linked to the journey. This is a big issue to consider while designing a service. Another issue is to find a tourist offering which satisfies all the group components, which can have different priorities. After having identified the direct target it's time to define the indirect target, how it is reached by the service offering and the relationship between the two categories of users.

The indirect target

The indirect target which the service offering wants to reach is the municipality of the city, in particular the local authorities which deal with urban accessibility. These public bodies have the responsibility of the elimination of architectural barriers in public spaces, according to the PEBA (Plans for the Elimination of Architectural Barriers; for further information see paragraph 4.1.2). Moreover they provide indications to citizens on how to eliminate architectural barriers in private spaces – in some cases with tax deductions - and they communicate with the audience listening to its advices and complaints.

70 The concept of flow is explained in the paragraph 1.1.2.

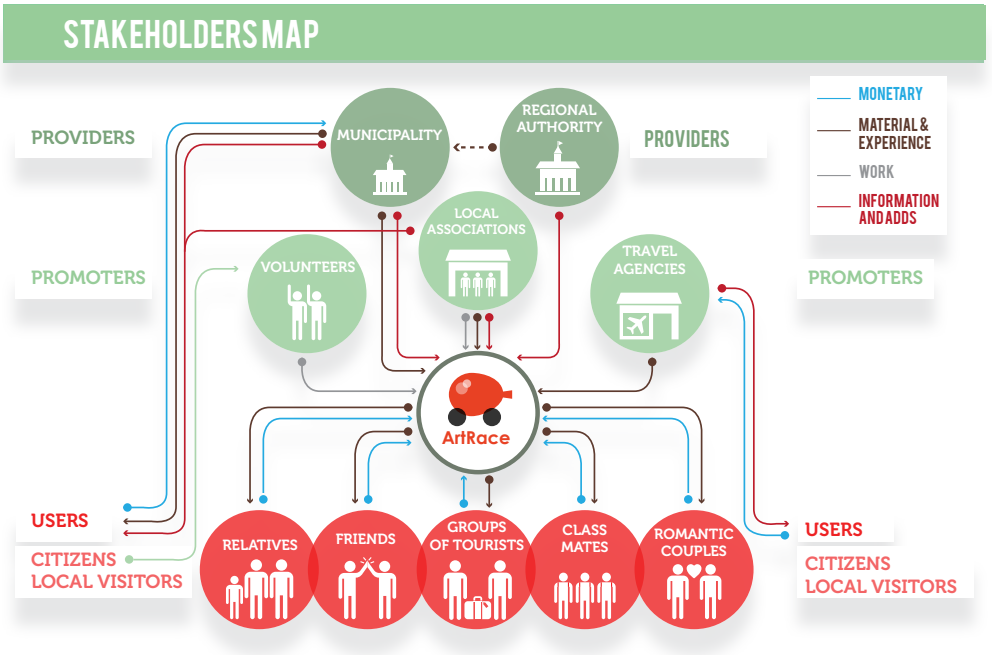


Image 5.05: stakeholders map

The service I am developing is a framework which could support the municipality of different locations in the management of the local administration, since quite often public authorities have not enough founds, employees or energies to manage this task: the inspector which accompanies every team of players (for further information see the paragraph 6.2.1 on Game Dynamics) maps the architectural barriers which obstaculate the players during the race and the same players verify the local level of AfA; at the end of every urban race, the inspector gives the map and a report on the experience to the authority in charge, which can take advantage of them planning public works to improve accessibility.
It is a kind of cooperation between different stakeholders - see *image 5.05* - towards the improvement of public spaces.
To implement the service offering on a location it is crucial to make a Desk and Field Research on the area, understanding the actual level of accessibility, the cultural and artistic attractions, the local stakeholders and the tourist offering, mentioning a few elements to consider. In the chapter 7, I make a research on the city of Verona, to understand how to apply the offering on the location.

In this paragraph I have identified the users of the service: the direct user is the local tourist, also identified as *Zero mile Tourist*, who travels in group (for instance with friends or relatives) for journeys of short duration; the indirect target is the public authority which deals with the urban accessibility of the tourist destination. But what is the relationship between these two heterogeneous groups of users? I will answer to the question shortly in the dissertation (at paragraph 5.2).

5.2 Concept

A good concept must be designed around a target range, its necessities, desires and restrictions. As Schell argued «You need to know these people intimately» (2008: p.69). In the paragraph 5.1 on target I've identified two categories of users who will perceive the service from two different points of view: direct users, who are the visitors of a location, and indirect users, the local public authorities.

After defining the target range of the service, its needs and its constraints, I am ready to design a service system which is able to attract users, to meet customer expectations and to propose an offer that has a positive impact on their experience. These are the contents of this paragraph.
The main goal of my project is to offer local visitor an experience of *critical play* (Flanagan, 2009) which uses the game as a medium inside the service system to communicate contents on the issue of AfA and to sensitize players towards a greater attention on the issue. It is focused on the role of the accessibility for Italian tourist cities, with a special attention on public open-air spaces and their accessibility for people with reduced mobility.
This thesis aims to design a tourist service system addressed to local visitors (the direct target), with the goal to make them aware on the issue of the Accessibility for All (AfA), and to local municipalities (the indirect target) about an improvement of the local level of AfA. The strategy of raising awareness – which leads my service - adopts a bottom-up approach which is defined in the paper *Design for Social Innovation*, written by Ezio Manzini in 2011; here the author argues:

> «actions from the bottom that give rise to promising cases of social innovations. However, [...] their possibility of long-term existence, [...] is often supported by information

exchanges with other similar organisations (peer-to-peer interaction) and by different kinds of intervention from institutions, civic organizations or companies (top-down interaction)»

In the discipline of PSSD the bottom-up initiatives indicate the services created by citizens to solve daily problems; my project forecasts an active participation of users to the "awareness strategy" of the service, to plan a bottom-up action which pushes local authorities towards awareness on their level of AfA. Local visitors take advantage of the tourist offering, contributing simultaneously to its existence.
Right here we can see the relationship between the two macro- categories of users, the direct and indirect target. Visitors who use the service have a key role in its functioning, attracting the attention of public authorities, organizations and local companies towards the improvement of Urban Accessibility for All.

How to achieve this mission? How to put in contact the direct users with the issue of the Urban Accessibility for All?

Local tourists can explore the city and discover its history through the service offering. The service system is composed by two basic components, which are the tourist urban team race and the online platform. These two components of the offering are two macro-categories which include elements with informative, identification, orientation, gaming and tourist purposes (for further information on the game material, see paragraph 6.3). The urban race leads users in the discovery of the city: it is the tourist component of the service offering and also a crucial element of the awareness strategy. Italian cities have a preponderante artistic component, which make the country an ideal location to visit. For this reason my service takes the name of *ArtRace*: it is an urban race which guides visitors to discover local art and culture. The naming of the service will be deepened in the paragraph 6.1.3.
Playing the game visitors walk into the shoes of people with motor impairment. I am talking of people on a wheelchair, but also elderly people, parents with strollers and tourists with heavy luggage, therefore basically everyone. The service system guides the local travellers during the visit of the city as an alternative sightseeing: they explore the location and

discover local culture and history; during the experience they gain awareness on the AfA issue, thanks to the forced contact with architectural barriers. Aware visitors can also contribute to establish the quality of the urban accessibility and report eventual problems to the public authorities. In this way the service will work as a quality certification concerning urban accessibility.
The platform is an organizing tool with a calendar of the planned tourist races; it is also a media channel which advertises the service and the hosting location (through pictures, videos and feedbacks) and a virtual meeting point for citizens and local tourists.

Through this paragraph I have established the base of my service system. Visitors help local authorities (the indirect target) to improve accessibility, enhancing its level for the inhabitants of the city and for future visitors. They explore the place into the shoes of people with motor disabilities understanding their difficulties while moving around the city. The visit is pleasing and amusing but it is also a way to gain awareness on the daily struggles that people with impairments must face while visiting a city. It is a *critical play* experience. Participants will try to be in close contact with the urban texture; it is not a carefree experience, because they will learn to face daily obstacles that normally they would not perceive as architectural barriers. This exploration implies mental and physical efforts: the service users' mood is the one of an explorer in an unknown place which can hide insidious elements. Players are led by the lusory spirit (Suits, 1978: p.40) to voluntary accept these obstacles engaging to overcome difficulties and reach the final goal.

5.3 Service goals

Planning a service, a designer needs to keep a constant coherence with his/her objectives. The aim of the designer rarely coincides with the motivation that pushes the user to purchase the service. The designer should carefully plan both aspects and find a common ground to balance the two scopes; these are the contents of this paragraph.

The image 5.06 represents the designer and users' goals:

> my aim as a designer is to offer a tourist experience

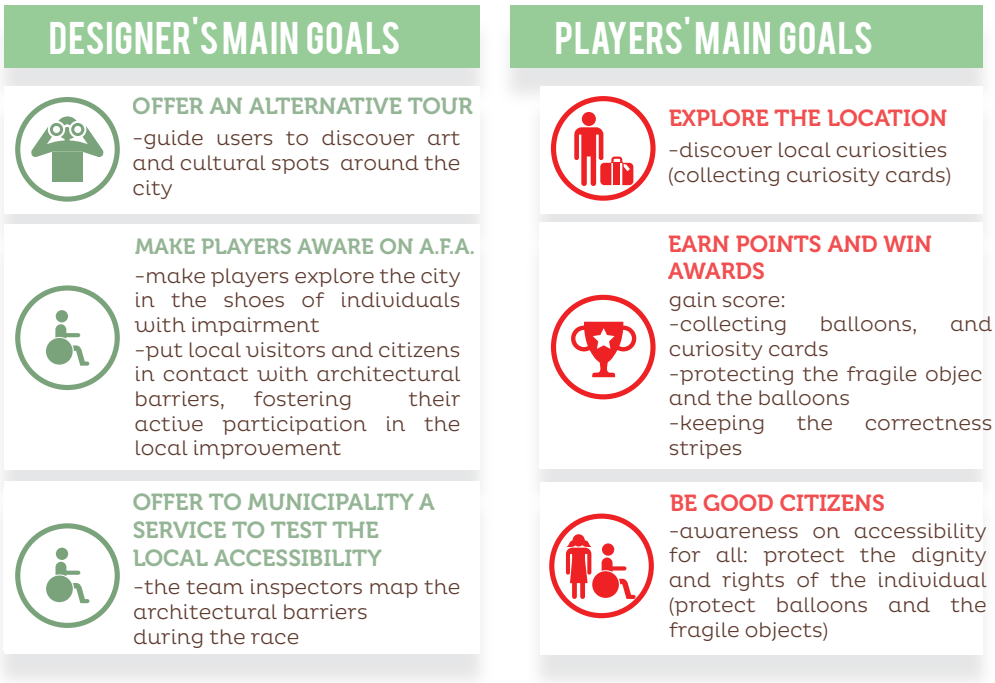


Image 5.06: designer and player's main goals

to sensitize the visitors of a city towards the issue of urban accessibility. Through the exploration of a location, visitors understand the local degree of urban accessibility for persons with reduced mobility.

> the players' main aims are: exploring the city and winning the race.

Together with the entertaining side of the service, at the end of the experience participants will be socio-culturally enriched as "better citizens". They will gain awareness on the matter of the urban accessibility for all and they will be people who care to report to the local Municipality problems and obstacles caused by permanent or temporary barriers.
At the end of the race players will be socio-culturally enriched: they will have learnt notions on local culture and gained a new perspective on the Accessibility issue. They will be better citizens.

Tester of local AfA quality

Another face of the service is the quality certification of the urban accessibility of a town. It is an actual mobility tracker

Image 5.07: a protest made by the citizens against the abuse of disabled parking in Lisbon, Portugal.

performed by the citizens and local visitors themselves and also by tourists coming from various environments. The service direct goal is to engage users with a cultural visit of a tourist location, and at the same time to bring them in close contact with its urban tissue and making them aware of its accessibility level. The awareness induces people to be proactive towards an improvement of the actual situation, moving a bottom-up protest. This protest movement (in the *image 5.07* there is an example of protest moved by people) aims to sensitize the public authorities towards a greater attention on the Accessibility for All and the protection of the individual's dignity and rights. If the urban quality will be perceived of a low level by visitors, the city's reputation might suffer as a result of a bad word of mouth, both online and offline.[71]

Pushing towards the popular awareness, the service wants to go indirectly to hit a second type of target, local public authorities dealing with urban planning and accessibility.[72] As a consequence it will be a task for the Municipality to maintain in time a high level of urban accessibility for all, avoiding citizens and visitors' dissatisfaction (and causing a bad advertisement due to a negative word of mouth). Of course occasional tourists will not be able to directly monitor the development of the local accessibility over time, but they

71 I have examined the importance of the online word of mouth in the chapter on Tourist, at paragraph 3.5.3.

72 Public bodies dealing with these issues may vary from province to province. Some cities have an Assessor to Disability and Accessibility in the municipal government.

Image 5.08: service functions

will have the opportunity to check the situation on the service platform in every moment. Both visitors and inhabitants of the location will perceive the improvement because it will facilitate the daily life and the exploration of the city. In summary, the functions of the service are divided in four categories (see *image 5.08*).

Accessibility

> Raise awareness towards the issue of urban accessibility.
> Bring a gradual improvement in the urban tissue of a city.
> Test the actual level of a city's accessibility.

Tourism

> Provide an instructive cultural tour of the city.
> Offer an alternative discovery of the location.
> Explore the urban tissue.

Advertisement

> Attract tourists.
> Enhance the reputation of the city between visitors and citizens.
> Generate a positive word of mouth both online and offline.

Game

> Collaborate with friends and relatives to complete the race.
> Win the race.
> Receive the awards.

Throughout the paragraph I have examined the service offering from different points of view. I have designed the service for a direct target made by local tourists, to hit the indirect target of the Municipality. Tourists purchase the urban race to explore the city in an alternative and amusing way; as a consequence they will gain awareness on local Accessibility for All. This will drive the local authorities to commit maintaining a high level on urban accessibility, improving visitors and citizens' perception of the city and generating a positive word of mouth – good advertisement for the tourist attractions of the city.

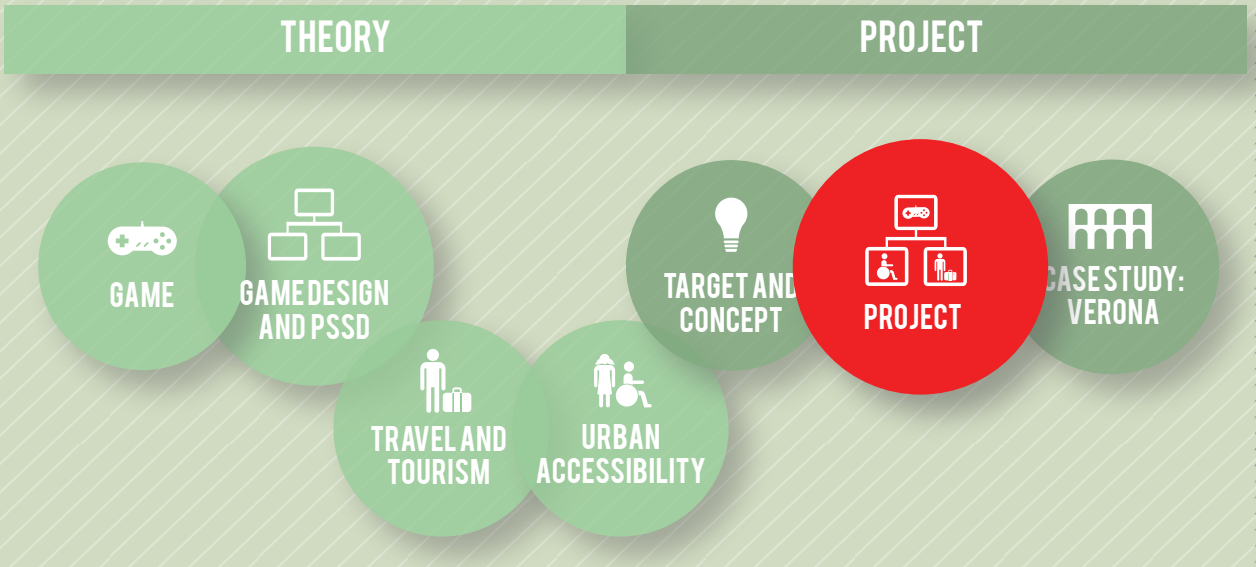








6. PROJECT


THEORY
PROJECT
GAME
GAME DESIGN AND PSSD
TRAVEL AND TOURISM
URBAN ACCESSIBILITY
TARGET AND CONCEPT
PROJECT
CASE STUDY: VERONA

Learning never exhausts the mind.
Leonardo da Vinci

Play is an integral and vital part of mental development and learning, and playful activities are essential aspects of learning and creative acts.
Flanagan (2009: p.4)

The project is the final part of my path as a thesis student, which I have been developing through sequential phases, from the study of the theory to the field and desk research, from the target analysis to the development of an innovative system that connects various design fields with aspects of the individual's daily life. This chapter is an in-depth analysis following the ideas introduced in the previous one (5) which explained the concept, in which I have defined the goals of my project and the values that I'd like to communicate through the Game Service System. I have also analyzed the motivations and goals which push the target range to purchase the service and the modality to get their expectations meet the set of values that I'd like to communicate them.

I have analyzed the elements which compose the service system: the tools and figures, their function and their relationship within the service system and with the users.
With this chapter I'd like to define a solid design framework, a gaming system composed by a set of elements that interrelate to form a *critical play* experience for responsible tourists, which make them aware on the actual issue of Accessibility for All (AfA). The experience is an alternative tour of a location which take the shape of a urban treasure hunt (an example of treasure hunt is Hunt the Goose, a service ezamined with a Case Study form at the end of the chapter); during the chapter we will understand how an experience of Zero mile Tourism can convey an awareness strategy on actual issues.
The offering is addressed to a direct target range, which is composed by Zero mile Tourists and citizens, and to an indirect target, the municipality of the location hosting the service which will gain several benefits, as we will see later in the chapter.

6.1 Context: a versatile framework

The purpose of the dissertation is to design a service framework which can be applied to many tourist locations in Italy. To reach this goal it is essential to understand how to create a template that can be adapted to towns with different histories, origins and spatial conformation, how the Italian cities are. In the paragraph I face the issue coming to define a framework of service system with the values and characteristics of the concept formulated in the chapter 5.

The project consists of a frame that includes fixed elements and guidelines for the construction of a service system which can be adapted to various cities. Each local version of the service will be made from the same basic components (which are based on the constitutive elements of the system), declined to better adapt to the culture and history of the hosting city. Using the guidelines, it is possible to create urban treasure hunts with different features within a single location, to diversify the offer in order to satisfy people with different needs and interests. For instance a local solution can offer two modalities of game: as you can see from the *image 6.01*, the modalities are the E*xploration* of the town (participants discover the city with no limits of time) and the *Race against the clock* (players have a limited time to complete the race). Before starting to work on the different declinations of the framework, it is necessary to prove its effectiveness and credibility. A method consists in the involvement of citizens in a location-based testing session of the service, since the citizens are the best experts on the location. A service that intrigue, satisfy and impress local inhabitants will be able to reach also visitors from other cities.
The service framework develops through three main phases:

- **>** in the prototyping phase the service is addressed to citizens;
- **>** in the short-middle period it will be addressed to local visitors - people practising the Zero mile Tourism - who live in the location but who wants to explore it and discover local curiosities, art and culture;
- **>** in the long term it will be developed an international version, to include also tourists from abroad.

Image 6.01: modalities of game

This short paragraph brought me to reflect on several issues. After I have identified the target range and understood how to realize a framework for a versatile tourist offering which can be adapted to various contexts, I have realized that in a prototyping phase it is advantageous an engagement of the location's inhabitants to verify the functioning of the service framework on a local base.
After a prototype of the service (see paragraph 6.4), and eventual improvements to give it an added value compared with traditional city tour, the consumer base will widen progressively to the visitors, even at international level.

6.1.1 Designer's goals

Earlier in the dissertation (in the Chapter dedicated to the concept development) I have highlighted how the consumer's needs and goals are different from the designer's objectives. I must therefore consider both sides of the coin: I have to carefully plan the service system depending on my goals and at the same time meeting the needs of the consumers, satisfying their necessities and expectations.
With this paragraph I resume the description of my design purposes, to better contextualize the following paragraphs (my goals are depicted in the *image 6.02*).

Image 6.02: Designer's main goals

Local users who visit an Italian city are looking for an engaging and informative alternative to the classic guided tour of the most famous attractions of the location. My aim as a designer is to provide an offering to satisfy this need, through a cultural tour which takes the shape of a urban team race that guides the participants along a path among the main tourist attractions. It is an urban treasure hunt: players collect objects and anecdotes around the city.
However my main goal is the *emergence* of a behavioral pattern throughout the gaming session: the awareness on the local degree of urban Accessibility for All - including both full-able-bodied people and individuals with reduced mobility.[73] Through the exploration of a city, visitors acquire information on the local history and culture and at the same time they are

73 Accessibility for All is deepened in the paragraph 4.1.

put in direct contact with the urban tissue and guided by the game dynamics towards the awareness on the issue of urban Accessibility for All (AfA). The tourist experience will sensitize the users to be "better citizens" who are interested in the issue of the accessibility and who care to report problems and obstacles caused by temporary and permanent architectural barriers to the local public Authorities. In this way participants will be proactive towards the improvement of the local AfA: the service experience works as an actual mobility tracker performed by the participants to the service who can establish the actual degree of urban Accessibility for All.

6.1.2 Target

Before to introduce the project I'd like to make a short description of the target range for whom I am developing the service system. This paragraph introduces briefly the target that I have established in a first phase of concept, and which I have explained in detail in the paragraph 5.1. It is essential to determine who are the users of the service and understand their needs, desires and goals to generate an offering that matches their expectations. In this way the system can convey other important contents within the service experience: it will provide an alternative travel experience that will lead users to explore a location through the medium of the game, at the same time bringing players towards a high degree of awareness on the Accessibility of the public spaces of a city for all, its residents and visitors.

The target range of the service consists of two main groups of users, which are the local tourists (the direct target of the service offer) and public authorities which deal with urban accessibility (the target which is indirectly hit by the service). Service offering is addressed to groups or couples of Zero mile Tourists (for further information, see paragraph 3.2.3): the visitors of a location and the same citizens. Local visitors aim to discover curiosities, anecdotes and stories linked to their own land. They look for a tourist package which is alternative compared to the traditional tours of the most famous monuments of the city. I am talking about responsible tourists, who care about the life of the inhabitants of the location and whose goal is to improve their daily life, enhancing the urban and social Accessibility

for All. Usually local tourists visit a location within a short period and their lack of time shape their vacation; they have to hurry up among the tourist attractions, losing the quality of a good city tour, or they can decide to focus just on an area of the location (for instance the city centre). Their first restriction is the time, but considering an heterogeneous group of people, for example a family, the second issue to consider is the difference among their personal tastes. Often family members share the same interests, but every person appreciates a different aspect of the journey: for example, the parents want to visit a museum, while the children prefer to play. My service offering integrates both aspect of the "ideal" visit to a location, the cultural side and the game aspect. The ludic side of the service system requires groups of visitors, at least composed by two members. The number of participants is directly linked to the game dynamics (see paragraph 6.2.1).

The indirect target is the local Municipality, which is hit by the service through the feedbacks, photos and videos made by the visitors during the race; on the service platform they can publish their experience with the tourist attractions and with the level of urban Accessibility in the location. Their feedbacks can be both positive and negative, generating an online word of mouth which can attract or repel future visitors.

In conclusion, the service offers an alternative city tour for local visitors with the purpose to sensitize the local Municipality towards a high level of urban Accessibility for All (a stakeholder map is depicted in the *image 6.03*). The project does not want to criticize the work of the public authorities. Of course, the Municipality should take care about maintaining a high level of satisfaction among visitors if it wants to attract tourists and enhance the tourism-related business; for this reason the urban accessibility level must be high and constant over time. The service aims to push every Italian city to enhance its local degree of accessibility, towards an ideal model of Accessible country.

6.1.3 Project description

I'd like to write a brief description of the concept - taking it up from the chapter 5 - to explain the relationship between the Game Service System (GSS) and service users.

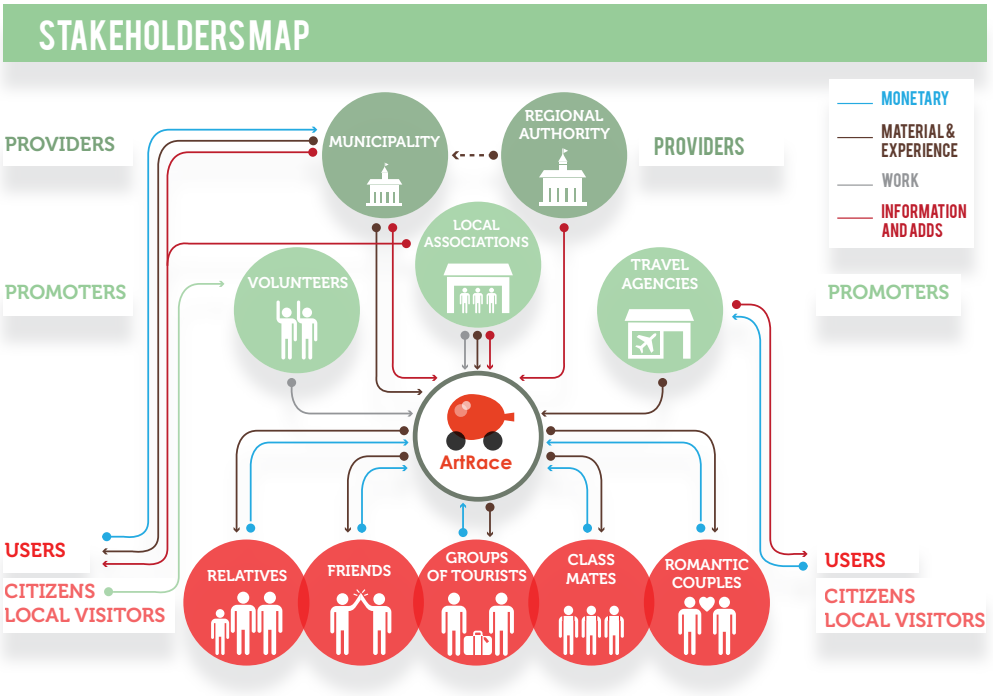


Image 6.03: stakeholder map

I have designed a service to satisfy the need of the target range that I have identified in the paragraph 5.1; it is a multi-faceted service that takes the features of an urban team race with sequential stages spread around the city. The race is as an essential part of the tourist service-system for local tourists and citizens.

The Zero mile Tourist offering[74] works as a framework which can be adapted to many local contexts. In the ideal scenario the service system will take place in many Italian cities, working as an alternative tour for visitors. However the service uses the artifact "game" as a medium to offer a critical play experience, which communicates to players contents on the issue of AfA (making players aware on the actual situation of the location they are visiting). In this way the service works as a "quality certification" for the city, to establish the local level of urban Accessibility for All. Visitors test personally the level of local accessibility thanks to the urban game; at the end of the play experience participants can share their satisfaction - or dissatisfaction - on the

74 For a definition of Zero mile Tourism see the chapter 3.2.3.

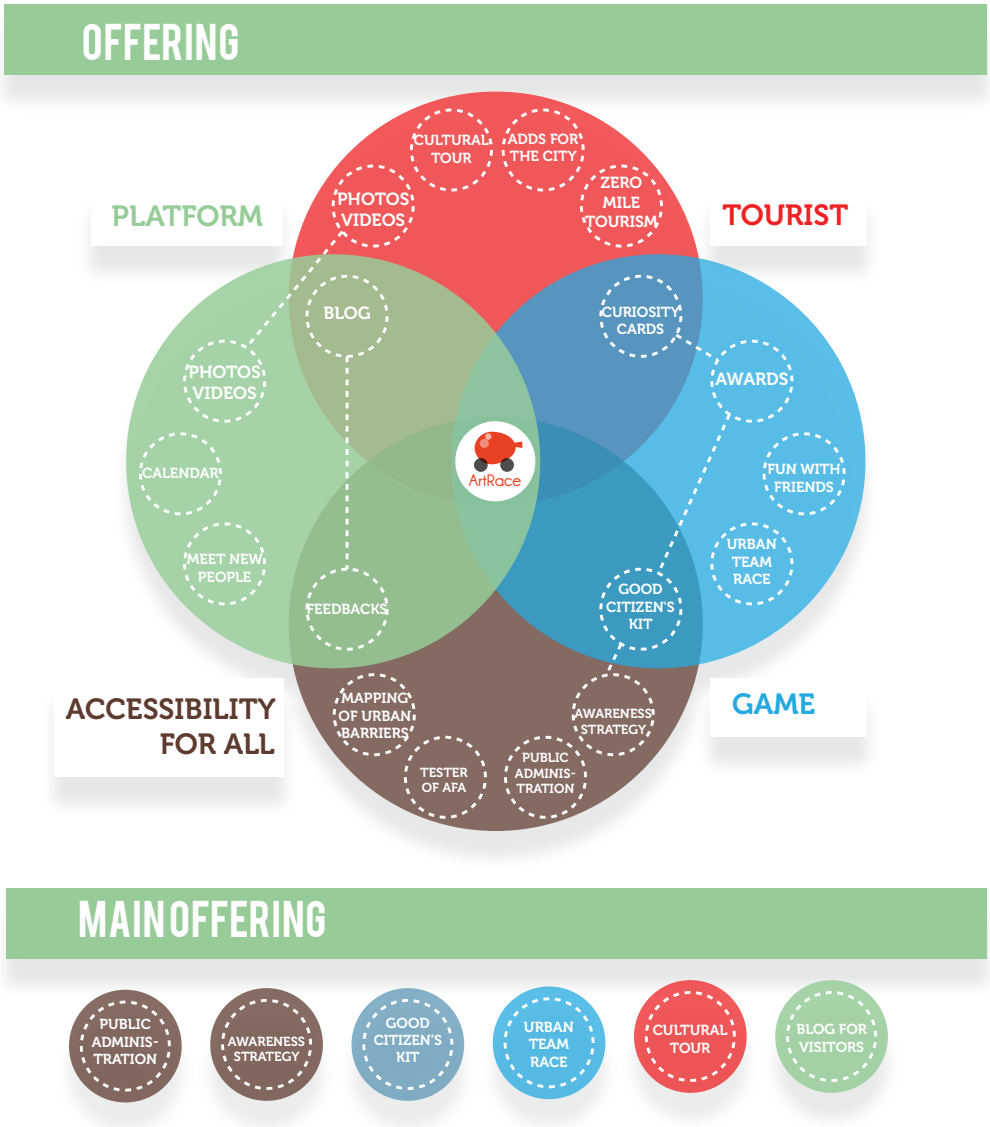


Image 6.04: Game Service System

accessibility of the location, posting feedbacks, videos and photos on the service website. A high level of dissatisfaction of local visitors and citizens can push the public authorities (the indirect target) to improve the accessibility of the city for inhabitants and future tourists.

The service users explore the place into the shoes of people with motor disabilities understanding their difficulties while

moving around the city. The visit is pleasing and amusing but it is also a way to gain awareness on the daily struggles that people with impairments must face while visiting a city. The *image 6.04* shows the main offering areas of the GSS.

Participants will try to be in close contact with the urban texture; it is not a carefree experience, because they will learn to face daily obstacles that normally they would not perceive as architectural barriers (for further information on the concept see paragraph 4.2). Their mood is that of an explorer in an unknown place that can hide insidious elements.
The photo feature depicted in the *images 6.05* and *6.06* is the realization of a project which aims to examine the actual level of accessibility in the city of Milan. The photo reporter Loredana Celano, in company with two friends of her (one with mobility impairments), had a classic tour of the city to determine at what point the elimination of the architectural barriers is arrived (for further information about PEBA, Plan for the Elimination of Architectural Barriers, see paragraph 4.1.2). She argued that the barriers should be reduced, also in view of the Expo 2015; the solution is close at hand, because often is enough a ramp. «Architectural barriers are also cultural barriers» Celano (2014).[75] But architectural barriers are a problem for citizens and visitors in many Italian cities. As I mentioned previously in the text, my service aims to create a strategy of awareness on the issue of AfA through a series of urban races; this service framework can have different declinations, depending on local art, culture, legends history and curiosities. In particular, I have tested the artistic declination of the service system, since the main task of users (which we will see shortly, in the paragraph 6.1.4) is the discovery of local pieces of art. For this reason I have called the service offering *ArtRace*.
In the *image 6.07* I have studied a temporary logo for this declination of the service, as an internal convention of the dissertation (probably with the realization of the service and the support of the municipality, the coordinated image of the ArtRace will be redesigned by a graphic design studio).

75 Extract from the introduction to the photo feature D*isabili a Milano: il fotoreportage fra le barriere* on *milano.repubblica.it*
«Dovrebbero essere ridotte drasticamente, anche in vista di Expo [...] questo progetto, che vuole essere di denuncia e di sensibilizzazione. Basterebbe davvero poco, spesso anche una semplice pedana, per consentire anche alle persone disabili di vivere in una Milano davvero a misura d'uomo. Le barriere architettoniche sono in realtà anche barriere culturali» Loredana Celano (2014)

Image 6.05: photo from the reportage Disabili a Milano: il fotoreportage fra le barriere by Loredana Celano (2014)

Image 6.06: photo from the reportage Disabili a Milano: il fotoreportage fra le barriere by Loredana Celano (2014)

ArtRace events are linked by a seasonal calendar of the offering which can be consulted online on the service platform. The platform is the long lasting side of the service, a virtual gathering point for users, a blog where visitors can exchange feedbacks on the experience and on the location, a catalogue of pictures made by visitors of tourist attractions and an archive of images and videos taken by citizens and tourists about architectural barriers. The archive on architectural barriers, in particular, is part of a campaign of awareness directed to the attention of the local Municipality, towards the issue of Accessibility for All.

The urban races give awareness to the participants about the issue, while the platform can work as an information point about local accessibility for all and its improvement over time. But obstacles at the urban accessibility are often temporary and caused by the same people (for instance drivers who park on the reserved parking lots for people with disabilities; see the chapter 4.2.2 about temporary obstacles), so it is important to sensitize not just the Municipality, but also the citizens themselves towards the issue of Accessibility for All.

6.1.4 User's goals

Designing my service system I have carefully planned the service tools and its dynamics in order to accomplish, through the offering, the goals that I have set as a designer. In the paragraph 5.3 I mentioned that the designer's purposes can be very different from those of the user who acquires the service. The user searches for certain aspects of the service that the designer creates to achieve other purposes, which

Image 6.07: temporary logo

Image 6.08: users' main goals

are more or less declared. An example is the urban game ConQwest (see the Case Study Form at the end of chapter 1) where the purpose of the players was to win the treasure hunt, while the aim of the designers was the promotion of company Qwest wireless service.

This paragraph wants to report the players'goals, to explain why they should buy my service (topic analyzed in detail in paragraph 5.3). *Image 6.08* depicts the users' main goals, which are basically exploring the city and winning the race - to win the race players must act as "good citizens", respecting the dignity and rights of the inviduals with mobility impairments. Groups of local visitors seek a tourist experience which leads them to discover real curiosities and anecdotes about the location they are visiting. They look for an amusing and entertaining experience, which satisfies their

needs, respecting their lack of time and meeting the interests of every member in the group. Zero mile Tourists can be subdivided into two categories, citizens and local visitors:

> citizens (inhabitants but also students and workers) have time to explore the location and they can discover different areas of the city in many times;

> visitors have a short time to dedicate to the exploration, so they usually visit the city centre and its main attractions.

Reflecting on the differences between these two groups of users, I propose two different modes of game - which I have introduced in the paragraph 6.1 and deepened in the paragraph 6.2.2 - corresponding to their needs: a modality of game is based on the deep *Exploration* of the city, without restrictions of time, for citizens and visitors without lack of time; the other modality is the *Race against the clock,* for visitors who have a little time for sightseeing. The game modalities have the same base (the service framework), but since their duration is different the tools will be used in different ways. They will be described in depth in the chapter 6.2.1 on game dynamics.

6.2 Service structure

A service is a complex entity, a set composed by various elements: tools, facilities and figures that interface with each other and with the final user. Therefore the designer must plan the load-bearing structure that links all the components of the system - see *image 6.09*.

As I mentioned earlier in the text (paragraph 2.1), the Service Design researcher Sangiorgi argued that «Service design is the activity of planning and organizing people, infrastructure, communication and material components of a service in order to improve its quality and the interaction between service provider and customers [...] In Product Service System Design, the System identifies the actors involved in the service creation, development and delivery. The System will describe the main figures involved with their roles and resources, and the existing relations between them, specifying their activities and aims in taking part into the service process» (Sangiorgi, 2004). The service's structure is supported by stakeholders (see paragraph 6.1.2) and tools (see paragraph 6.3) which cooperate to offer a tourist experience through

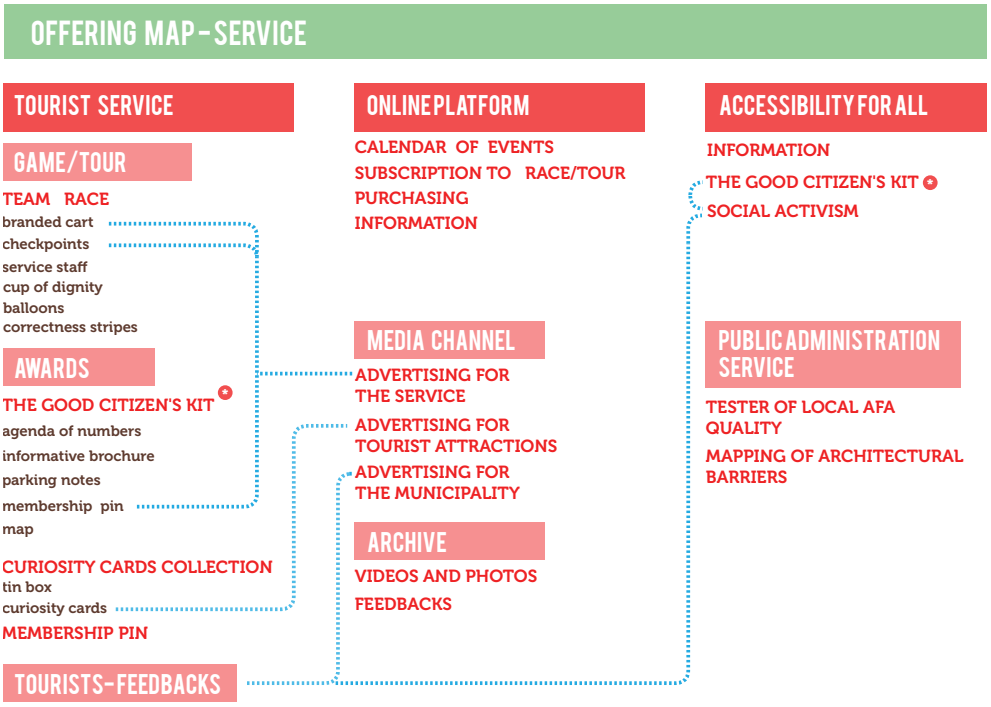


Image 6.09: service offering map

an urban game that guides users to explore a city and discover pearls of knowledge on local art and culture; the structure is planned to make a behavioural attitude emerges in the user: through a *critical play* experience, players will be in direct contact with the urban tissue, its barriers and obstacles, gaining awareness on the actual issue of the AfA – Accessibility for All. The experience fosters participants to actively participate in the improvement of local AfA (also in their own cities, if they are not local tourists), using the Good Citizen's Kit – which is one of the final awards, that I explain in detail at paragraph 6.3.3.

For the experience to be realized, I have to plan an adequate service structure which is primarily composed by two main sets of the offering:

> the urban team race (which is the core of the tourist offering and also the situation wherein it will emerge the awareness on AfA);

> the awareness on Accessibility for All;

> the platform (which is an informative tool, a blog for visitors and citizens, an advertisement channel and a photography archive).

As you can see in the *images 6.09*, the main sets of the service offering are composed by elements and supported by figures.
An essential part of the service structure is composed by the game dynamics, the service phases (from the information to the log-in, from the purchasing to the check-in and the fruition) and the tools which compose the system (informative, identification, orientation and game material, the awards and the service platform). These topics and their roles within the service system will be analyzed in the following paragraphs of the chapter.

6.2.1 Game dynamics

After the identification of the project's core, the experience to realize, the target to hit and the purposes to reach, I will design the game dynamics to build an experience of *critical play* (Flanagan, 2009), which is accomplished by designing a game which is also «instrument for conceptual thinking, or as tool to help examine or work through social issues» (ivi: p.1). The play activity guides players during the urban race, shaping their experience and bringing them to reach a certain level of awareness on Accessibility for All.
From this moment of the dissertation I will explain what my service system is, the game dynamics and their role within the system.

In the essay *Rules of Play* (Salen and Zimmerman, 2008) the authors write that game dynamics drive the interaction of the formal gaming system with the players' actions and decisions. As a system, a game is composed by a set of parts that interrelate to form a whole; from this complexity there are emerging patterns of playing behavior.
«In these systems, agents residing on one scale start producing behavior that lies one scale above them [...] The movement from low-level rules to higher-level sophistication is what we call emergence» (Johnson, 2001: p.18). From this quote we understand that a behavioral model which emerges within a game system can start producing behavior outside the system and for other users. The emergence of these behaviors is a powerful tool to create a play experience which fosters awareness on actual issues. These patterns can emerge within a game system and they can also not be

planned by the game designer; an example is the strategy of bluffing in Poker, which is not described in the game rules but which was spontaneously emerged within the game system. But not always the emergence of a behavioural pattern rises spontaneously during the gameplay.

As I argued earlier in the text, a designer can take advantage of this feature of the play, called the emergence (Schell, 2008: p.143) to build a gaming system which guides players towards a planned behavior that rises from the experience.
My service system aims to guide users on an urban game experience which fosters them to a conceptual thinking on an actual issue, the urban Accessibility for All, gaining awareness on the topic.
I'd like to explain in one sentence the experience which I am offering to the target range: an urban race for teams of visitors who explore the city open spaces, earning points and discovering cultural anecdotes on the location, with the goal of gaining knowledge and winning the awards (for further information on the prizes, see chapter 6.3.3). The players' goals are to discover local curiosities and to win the race; but indirectly they will gain consciousness on the AfA. The awareness on the issue will emerge from the game system, thanks to the modality in which participants experience the play activity. They will drive a cart among the game checkpoints which are spread around the city. The tool of the cart has been used with success in a series of urban races in the project Idiotarod, which is depicted in the *image 6.10* and analyzed in a Case Study form at the end of the chapter. I chose to include the cart in the gaming system as a tool to understand the urban accessibility for people who use a wheelchair (and their assistants): a player sits inside the cart while another one pushes it around the city; in this way participants understand how people on a wheelchair habitually interact with the urban elements. The direct interaction with the urban tissue makes players aware on the architectural barriers, which normally are not perceived as obstacles by able bodied people.

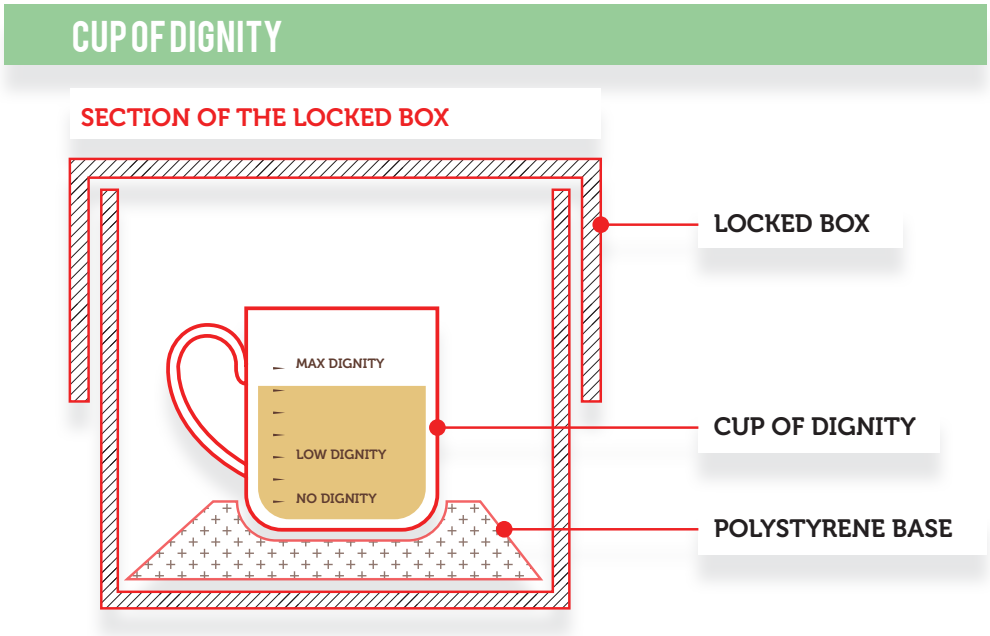
Players will perceive the experience of an individual on a wheelchair, during a normal daily move and the sensations (physical and emotional) that he feels interacting with urban obstacles. The player inside the cart must remain seated during the race; his/her task is to collect objects which are

Image 6.10: players driving a cart during an Idiotarod race

spread around the game space at the checkpoints.
During the play experience players must symbolically protect the rights and dignity of the individual in different ways.

> Players protect the rights of the individual, which are represented by balloons - fragile objects which is easy to break. They are fixed on land-markers (see paragraph 6.3.2), placed in public spaces on spots which are hardly accessible by people on wheelchair (for instance above a sidewalk); they must be taken by the player who sits inside the cart. In fulfilling his/her task, the player inside the cart interacts with urban elements as an individual on wheelchair would do, realizing the difficulties he/she faces in each daily movement. Balloons has to be protected and defended during the rest of the race, as the rights of the individual must be protected during the daily actions.

> Players defend also the dignity of the individual, symbolized by a cup full of sand. In the *image 6.11* we can see it is placed inside a wooden box which is placed inside the cart. The cup is fixed on the bottom of the box with a polystyrene base, for a sreater stability and it has some bars inside, to measure the level of dignity of the individual; if the cart will receive the shocks due to a careless driving and the interaction with urban elements (like sidewalks and potholes), some sand will overflow from the cup, decreasing the level of dignity. The box is closed by a lock which is opened at the end of the match, showing players if they have defended properly the individual's dignity.

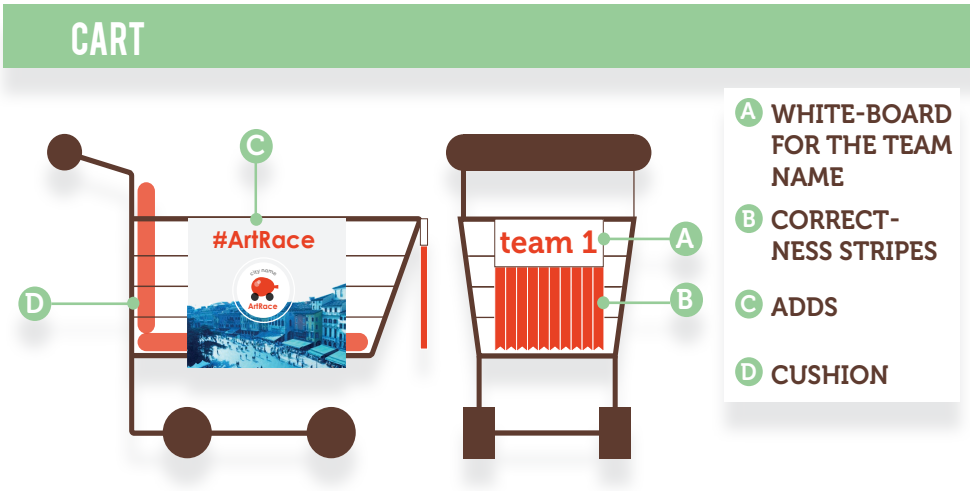


Since they are unable to verify, at any moment of the game, if the sand in the cup is intact or not, they will have to pay attention to their movements during the whole match.

Image 6.11: cup of dignity

The correctness of the players is controlled during the game by the staff of volunteers[76] of the service: every group has joined an Inspector that controls its actions, rewarding the good and punishing the bad (with credit or demerit notes which will correspond to a positive or negative score at the end of the race). The honesty of players during the play experience is represented by a series of ten *Correctness Stripes* made of paper and fixed in the forepart of the cart (stripes are depicted in the *image 6.12* which show the cart); they can be torn by the team Inspector in case of forbidden behaviours. I will deepen the role of the Stripes shortly in the dissertation. In addition to the Inspector there will also be some supervisors of the checkpoints, who check the correctness of the players using the game tools and control that checkpoints are not ruined by passersby.
Checkpoints are elements which mark the game field, helping

76 Staff is composed by volunteers, which could be retired people or young people (for example the entertainers who usually work for the municipal initiatives , like the summer camp).



players to stay on the path of the race; they are provided with land-markers covered by balloons that make them visible in the middle of the urban noise (this concept is deepened in the paragraph 6.3.3 on game tools). Balloons are the objects which players collect during the race; they are tied to the checkpoints land-markers at a height which corresponds to the maximum one established by the Italian Ministerial Decree 236/89[77] for the door handles (between 85 and 96 cm). I chose to use this dimension because it corresponds to the highness which is easily accessible by people on a wheelchair. I will deepen the topic shortly in the text. Every team takes one balloon per each checkpoint and at the end of the game path players show them to the judges of the race, to demonstrate how many checkpoints the team has reached throughout the gaming session.

A team must be composed at least by two players, but more participants are allowed to play within the team. They can help in pushing the cart and reach checkpoints around the city; moreover they can swap their turn with the player who pushes the cart to divide the physical effort and they can collaborate to lift it up when they meet architectural barriers, like sidewalks with no ramps. The maximum number of players in a team is five; it is suggested to play in a group of three or four people to share the tasks and increase the fun: two to push the cart one after the other, one inside the cart, and one to read the paper map and guide the team towards

Image 6.12: cart with correctness stripes, padding, label and advertising

77 See paragraph 4.1.2 on Italian laws and ministerial decrees.

the next checkpoint. It can happen that a big group of visitors subscribe to the service; in this case the "welcome" staff at the first service check-point will suggest them to split in two or more groups to increase the fun and the competitiveness spirit.

6.2.2 From the Log-in to the Race

Designing a service/game system it is crucial to identify all the elements which compose it: the planning of figures and tools which compose the system, their role within it and their relationships. It is fundamental also to distinguish the phases which form the service itself, from the promotion to the fruition by the users. The service is composed by different moments: the information, the *log-in* (subscription), the payment and the fruition are some of the main phases.
Furthermore, it is important to define the type of relationship between the user and the system: will it stop or not, once the service has been used?
This paragraph aims to define the basic phases of the service, especially the *log-in* and the participation to the *ArtRace*.

Before explaining the phases of the *ArtRace* I'd like to resume the two game modes that I have introduced in the paragraph 6.1. The main game modes depend on the time available to players; in case of tourists which have little time to visit the city, the game should not last more than one hour (one hour and a half including the time for the prizegiving). In this case the *ArtRace* will have a modality *Race Against the Clock*, in which participants will have a time limit to complete the game path: the goal is to reach at least six checkpoints before going to the finish line.
On the other hand, if players are Zero miles Tourists (this particular kind of tourism is explained at paragraph 3.2.3) and citizens, the time at their disposition will not be a restrictive problem. The *ArtRace* will be played in the mode *Exploration*, in which players can complete all the checkpoints series before to reach the finish line. Also if the timetable is different, game dynamics and goals are the same for both the modes.
From this point of the dissertation I will focus just on one game modality, the *Race Against the Clock*.

Talking about the phases of the service, to take part in the *ArtRace* users must subscribe previously; the users' *log-in* is crucial to prepare the identification and game material (see paragraph 6.3.1 and 6.3.3): first of all the number of carts for the gaming session, the service staff and the awards. As you can see in the image 6.17 (at the end of the paragraph), people can subscribe online, through a phone call, at the tourist info point, in local travel agencies which support the service or in the Town Hall. They can purchase the service in anticipation or at the beginning of the team race; I will deepen the payment modality shortly in the paragraph.
To facilitate the log-in, users can consult a calendar of events, which lists the scheduled dates for the urban races. It is available on the service website, on posters spread around the city, in the Town Hall and in the local info point and travel agencies. At the scheduled date for the *ArtRace*, subscribed players go to the service welcome desk (which corresponds to the first checkpoint of the race), where they check-in: they register their presence so the service staff can control that people who previously subscribed are actually participating to the race. People who have not previously done the log-in (for instance passersby which want to participate in the service) can do it directly at the welcome desk before the team race starts. Every participant signs a releasing (in case of accidents) and a release note for photographic material.
Pictures and videos are very important to give a social dimension to the service, to make it visible and to encourage new users to participate; however players will be allowed (and recommended) to take pictures just in case the municipality that hosts the service agrees.

Local authorities can refuse to allow players photograph their interaction with architectural barriers: there might be people interested in showing the local situation in a more dramatic way than the real (to put in bad light the local government) or simply the municipality may decide not to put on show its weaknesses at level of Accessibility for All. In case the municipality takes the initiative as a good advertisement for his attention to the local AfA, or as a method to show the progressive improvements to local urban fabric, players will be encouraged to take pictures and publish them online with the hashtag #ArtRace. In this case the hashtag will be written clearly and prominently on branded carts, allowing passersby to publish pictures and videos on the service website. On

the website players can also purchase the experience (I will dedicate the last part of the paragraph to analyze the price of the service and the purchasing system). After this phase, every team receives some materials:

> a branded box containing a map of the game checkpoints (every stage has an identification number), which will be a container for the Curiosity Cards collected during the race;

> a locked box containing a cup full of sand to be protected during the race (which I will examine shortly in the paragraph).

> a cart equipped with a white-board where to write the team name and with a series of ten stripes that symbolize the correctness of the players (see paragraph 6.2.1) on the forepart. A participant per team leaves his/her ID card as a deposit for the cart, which will be returned at the end of the path.

Before the race starts, the service staff provides each player with a branded pin which shows their participation to the *ArtRace*. Then the staff explains the modality of game, the rules and tools of the game system and the goals to achieve. The first checkpoint is not only the welcome desk, but also the starting line of the race. It is located within the touristic area of the city center, where it is visible and easy to find for the players. However, every checkpoint is marked on the paper map. Before the race starts, team components decide their role within the group: a member is in charge of driving the cart while another one is sitting on it. The other players can help in pushing the cart, lifting it in case of architectural barriers and reading the map. At the starting point of the *ArtRace,* each group - looking at the map - goes towards one of the checkpoints spread along the game path. There is not an established order to reach checkpoints, players can plan their strategy and decide the order to follow. As I mentioned previously in the paragraph, in the mode *Race Against the Clock* each team must reach six checkpoints before crossing the finish line. Players' goals are (see *image 6.13*):

> reach at least six checkpoints and collect balloons and Curiosity Cards;

> cross the finish line in first position;

> protect the dignity and rights of the individual (symbolized by the balloons and the cup full of sand which is closed inside the wooden box).

Along the game path each group is followed by an *Inspector*, who is part of the service staff (I'd like to remind that the staff is composed by volunteer citizens). The Inspector's role is (see *image 6.14*):

> control the correctness of the game actions, assigning points of merit and demerit;

> punish irregular actions: assigning demerit points, punching a hole in the balloon (if the player tries to take it in a way which is not contemplated by the game rules) and tearing the *Correctness Stripes* located in the forepart of the cart (see *image 6.16*);

> validate the use of Power up cards from the team (see paragraph 6.3.3 on Game Material);

> report on a paper map the architectural barriers that hamper players along the game path. The mapping of architectural barriers is useful for the municipality to improve the local accessibility, helping the public administration.

Image 6.13: players' goals during the race

Image 6.14: inspector's tasks during the race

At every checkpoint the team can receive an award: a balloon with an attached *Curiosity Card* (these tools are explained

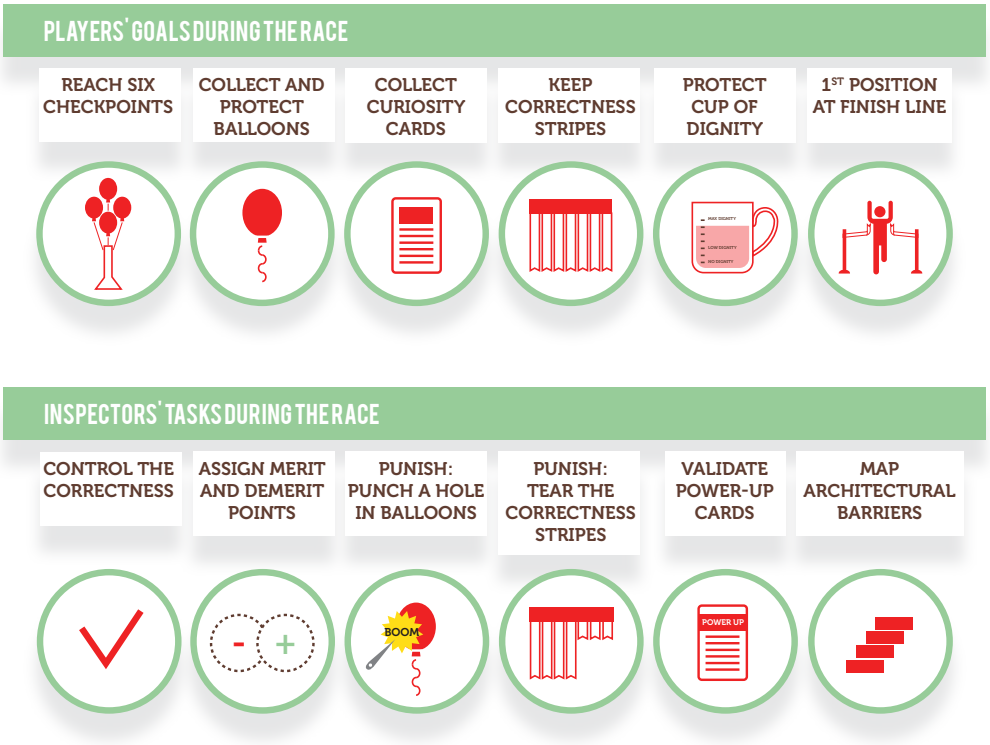


Image 6.15: missions outcomes

in paragraph 6.3.3), which tells an anecdote on the location where the checkpoint is located. Also if the elements are attached, they have two single scores. For every checkpoint the "mission" assigned to the team can have different outcomes (see *image 6.15*):

> **total success** if the team conquers the balloon and the Clue Card and the balloon is protected until the finish line;
> **partial success** if players gain both the elements but during the race they cannot protect the balloon, which blows up;
> **failure** if the team has no time to reach the land-marker;
> **gap** if the land-marker is not accessible (for example if a car is parked in front of the stage); the Inspector who follows the team take notes of the event and at the end of the game path the team will receive a score for the stand anyway.

Every checkpoint is provided with a land-marker equipped with balloons on plastic wands that the players must reach (the role of the balloons within the gaming system and the modality of use are deepened in the paragraph 6.3.3). They can be taken only by the competitor who is sat in the cart, who must reach it without raise him/herself (this is an expedient to lead participant understand the difficulties that a person with mobility impairments would have during a city sightseeing). For this reason they are tied on the land-marker at a height included between 85 and 96 cm[78], as depicted in the *image 6.16*.

78 It is the height of a door handle which respects the parameters for the construction of new accessible building (Decree 236/89).

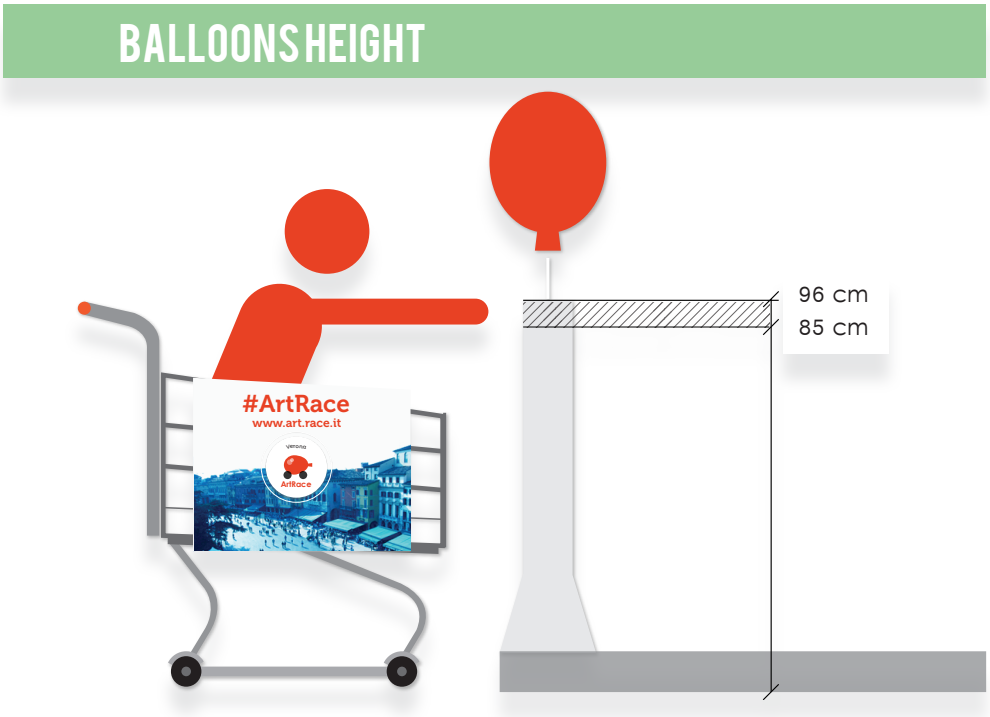
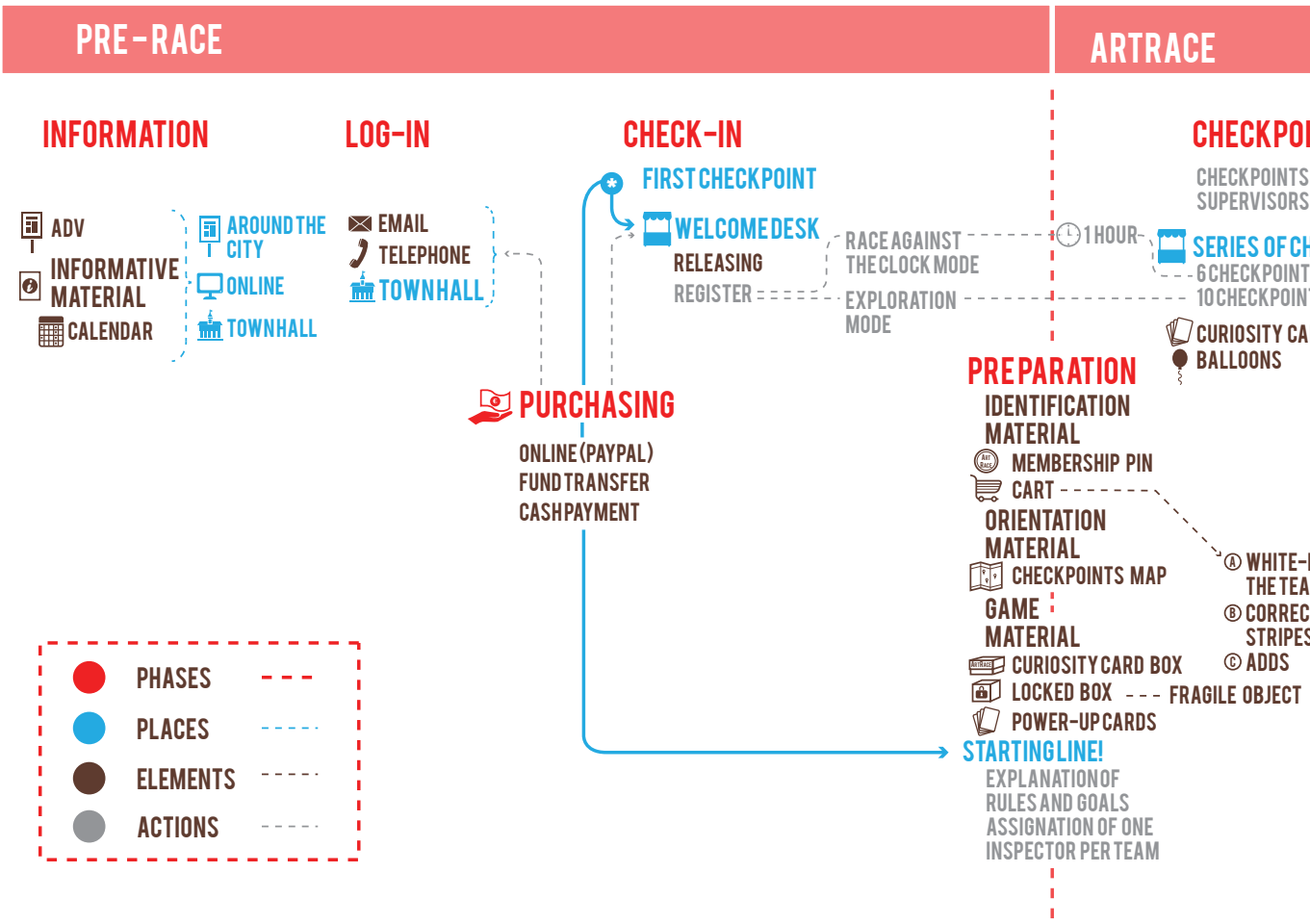


Image 6.16: height for reaching balloons

For every Curiosity Card and balloon collected during the race there is a certain amount of points (the scoring system is analyzed at the end of the chapter 6.3.3). At the last checkpoint of the race, which corresponds to the finish line, the teams show all the objects they have collected through the game path, the inspectors count the score and proclaim the winner. After the proclamation players will receive the awards (for further information on the prizegiving, see paragraph 6.3.3).
But the relationship with the service will not finish at the end of the urban race: in case the Municipality allows players to take photos and videos during the race, participants can post on the service website their pictures, videos and feedbacks on the city and on the service itself (the service website is deepened in the paragraph 6.3.3). Their pictures, posted with the hashtag *#ArtRace* create photographic archives on the city tourist attractions and on the local level of Accessibility. In addition the platform can be a useful blog for future visitors (who can read feedbacks and watch photos).
The *images 6.17 and 6.18* summarizes the phases of the service, from the viewpoint of different users.

OFFERING MAP - ARTRACE



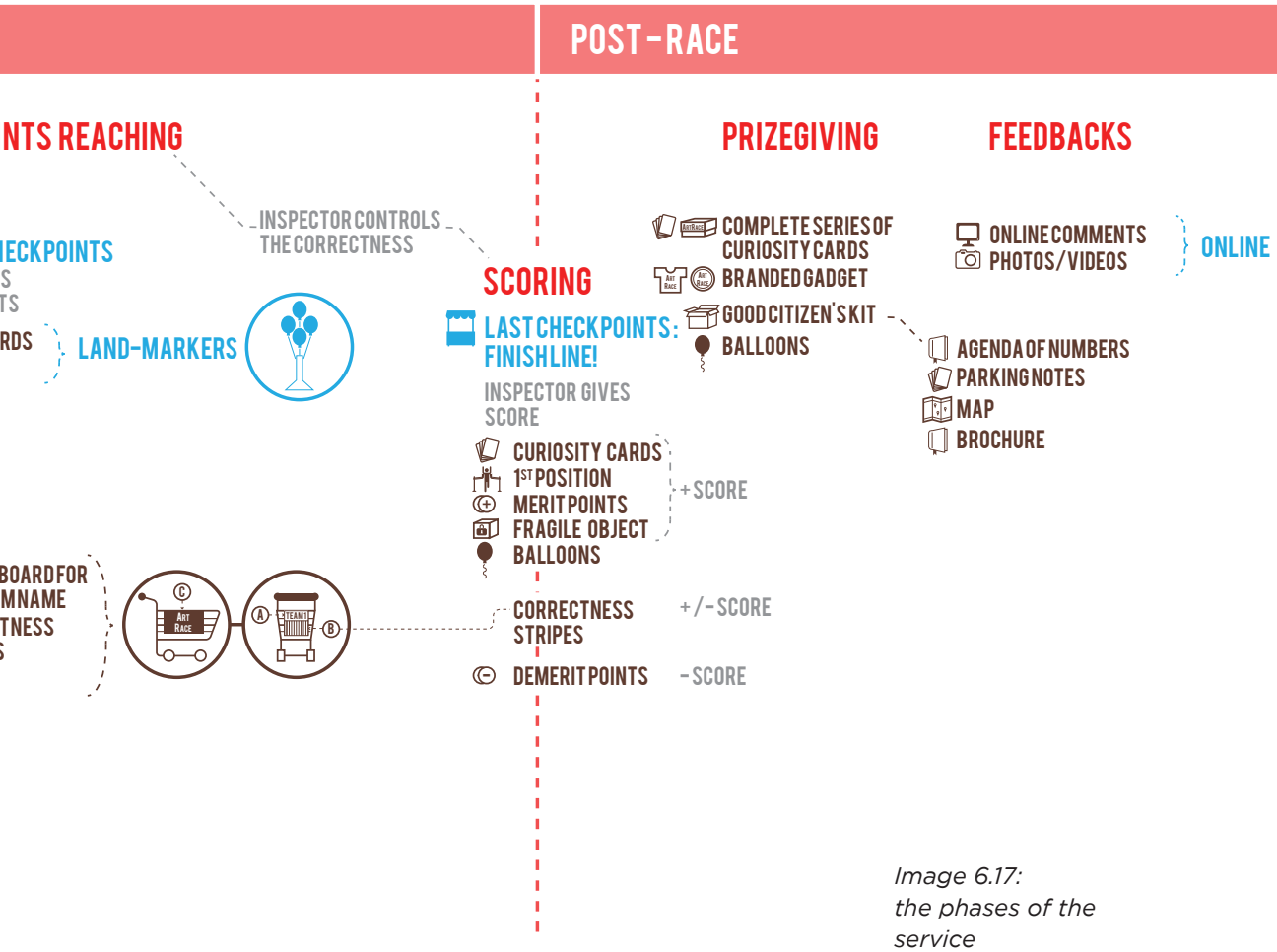
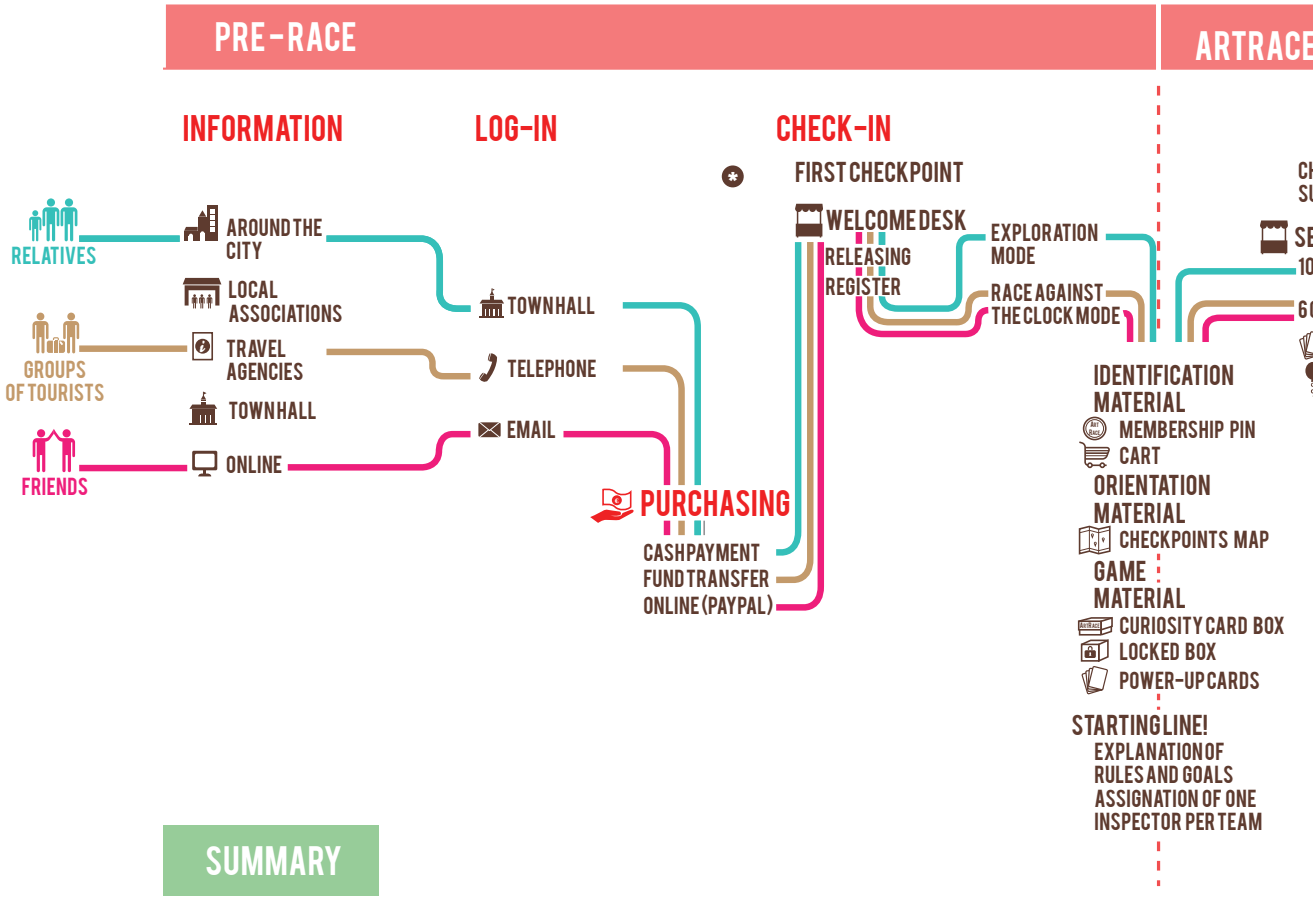
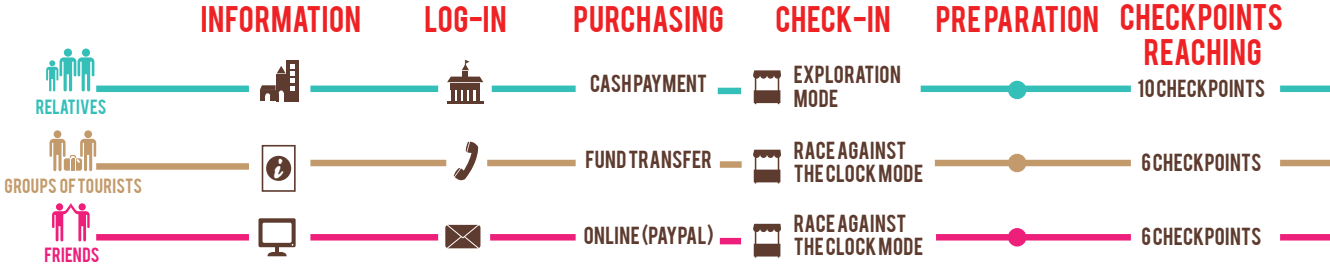


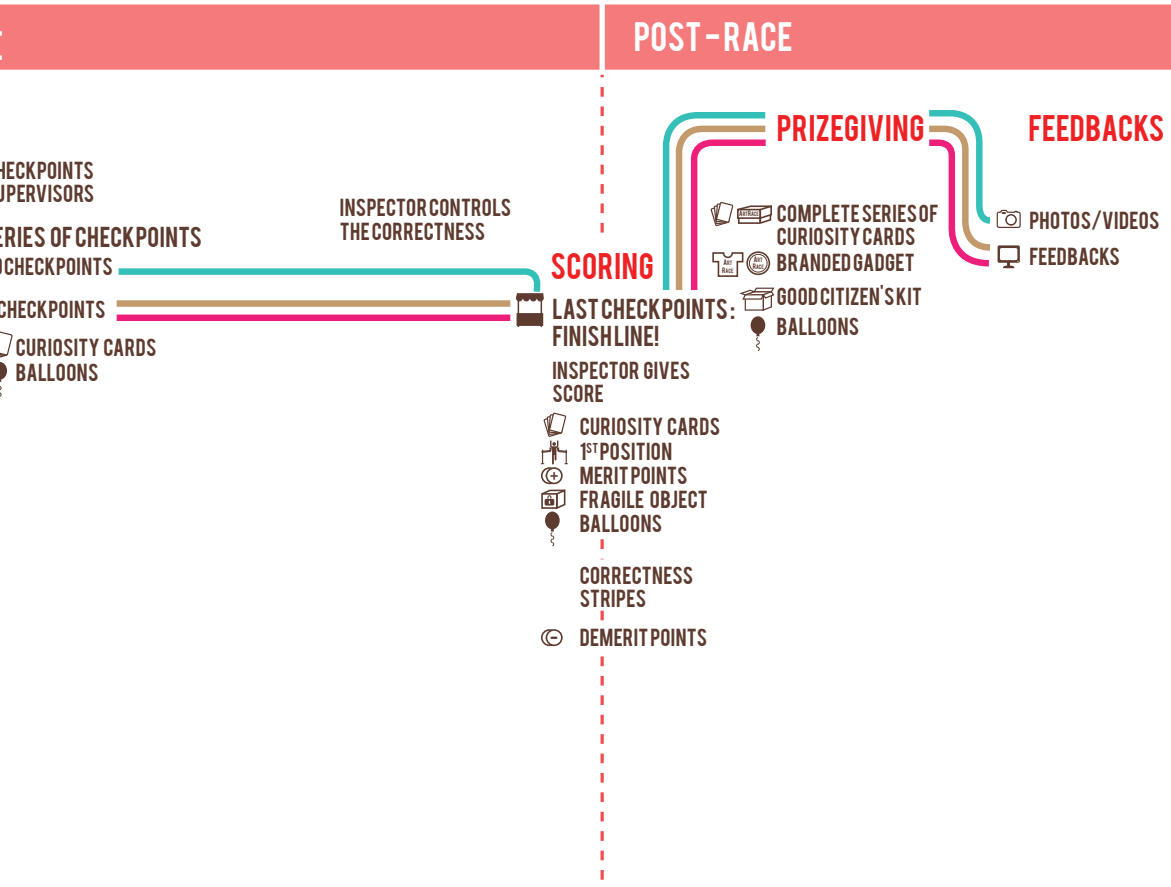
Image 6.17: the phases of the service

SERVICE PHASES



SUMMARY





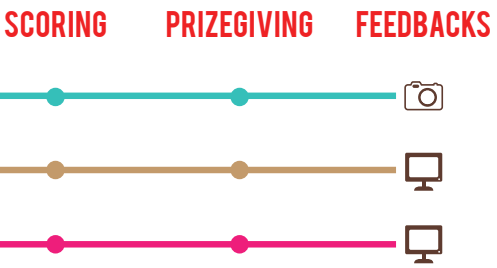


Image 6.18: customer journey map

Pricing

At this point of the dissertation it is crucial to define the cost structure and revenue streams of the service. Before analyzing the monetary flows linked to the service, I'd like to remind that my main goal as a designer is not to gain money from the sale of the offering, but rather to offer a tourist experience that gives the player awareness on the issue of Accessibility for All, leading the municipality to work for a local improvement. In this design perspective, it is important that the service revenues would at least cover the costs of implementation; a major gain will be devolved to the municipality for the implementation of public works which aim to improve the local accessibility for all.

The service has low costs of realisation: as depicted in the *image 6.19,* the costs are due to the advertising, the development and maintenance of the website, the tools (for a detailed list of the game, information, orientation and identification material typologies, see the paragraph 6.3).
In addition, the service has several partners who are interested in providing and financing the various elements of the service, because it has a strong social impact and a strategy that aims to improve the accessibility and perception of a location, for visitors and citizens.
The municipality of the location which hosts the service could support *ArtRace* in two modes:

- **>** financing the whole costs of the service (advertisement, game materials, service staff, gadgets and awards);
- **>** providing advertisement and service material – information, identification, orientation and game material (for a detailed description of the four categories, see the paragraph 6.3), but no additional costs due to the website development and the periodic refuelling of balloons, Good Citizen's Kit, pins and merchandise.

In both cases the municipality gains visibility from the service, for its attention to the AfA issue and for the tourist offering; moreover, the service helps public authorities in the local administration, because participants verify if the urban accessibility is according to the Italian laws, mapping architectural barriers (for further information, go to the paragraph 4.2).
In the first case, participants play for free, while in the second

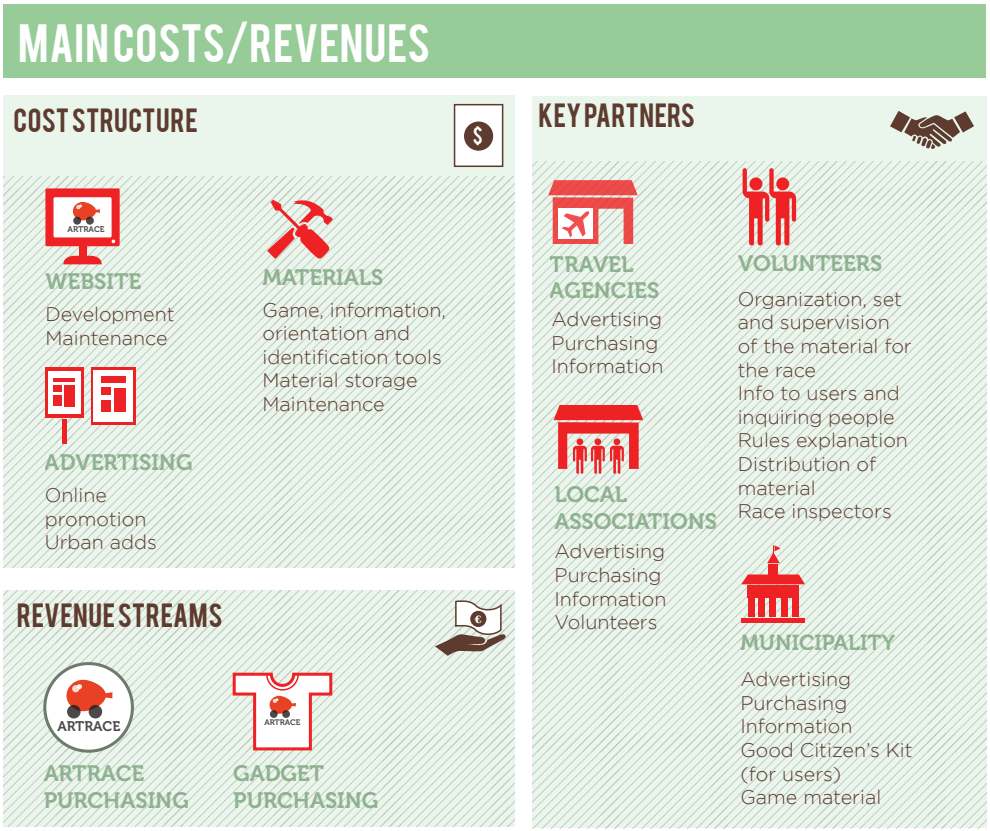


Image 6.19: main costs and revenues

case players pay a participation ticket, which is necessary to cover the service costs. From this point of the paragraph I will deepen the second case, examining costs which are not covered by the local municipality and the revenues which are necessary to cover the expenses.

The Municipality, which gains visibility from the service, is in charge of financing its promotion on tangible and intangible channels, posting up posters around the city (thanks to the municipal billposting office) and distributing informative and advertising material to local travel agencies and to the associations that support the project. The service staff is composed by volunteers: citizens and employees provided by local associations. The effective costs to cover with the service revenues are:

> the website;
> the land-markers;

WEEKLY IDEAL ARTRACE

6 TEAMS OF 3 PEOPLE (18 PARTICIPANTS)

↓

3 TEAMS ARE FAMILIES (SPECIAL PRICE)
9 PLAYERS PAY THE NORMAL PRICE

ArtRace	Cost	Revenue 18 €/person 45 €/family
18 Pin	13 €	
6 Good Citizen's Kit	60 €	
100 Balloons	7,5 €	
	tot= - 80,5 €	tot= + 297 €

216,5 € Revenue per race

866 € Revenue per month

REVENUE STREAMS - 1ST YEAR

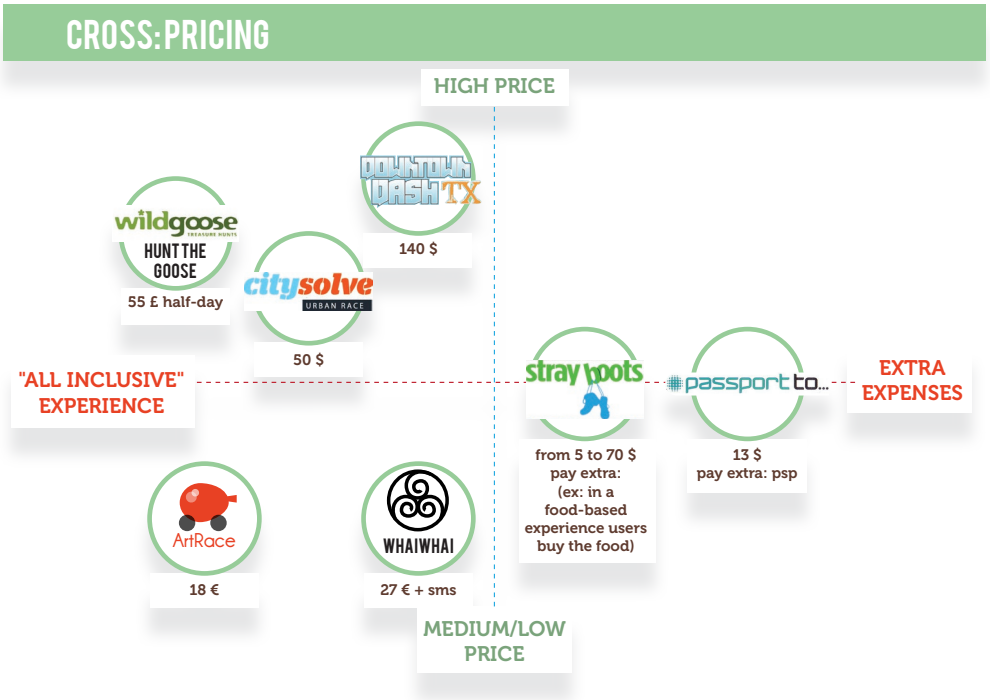
Initial costs	
Website Development	1500 €
Domain name and Hosting	50 €
Land-markers	183 €
Four-monthly costs	
Balloons + Rods with valves	53,92 € 95 €
Pins	240 €
Good Citizen's Kit	960 €

Yearly expenses, tot:
(1.348,92 x 3) + 1.733 = 5.779,76 €

Monthly earning	
ArtRace	866 €

Yearly earnings, tot: 10.392 €

Revenue streams:
10.392 - 5.779,76 = 4612,24 €



> the gadgets (t-shirt and pin);
> the Good Citizen's Kit.

The development of a website has an average cost of 1500 €, while the yearly domain name and hosting expenses are around 50 €.[79] The website maintenance is assigned to volunteers and the online promotion of the project *ArtRace* is supported by the Key Partners (see the business model canvas, depicted at *image 6.19*) and by the word of mouth – both online and offline - generated by users.
Other expenses due to the land-markers and balloons[80], the gadgets (pins[81] and t-shirts[82]) and the Good Citizen's Kit.

The *image 6.20* represents an ideal weekly *ArtRace* (thinking

Image 6.20: the ideal weekly ArtRace

Image 6.21: first year revenues

Image 6.22: service competitors

79 The average costs are based on the Aruba offering (aruba.it).

80 The average costs are based on the offering on the website point-party.it

81 The average costs are based on the offering on the website spilleonline.it

82 The average costs are based on the offering on the website eshirt.it

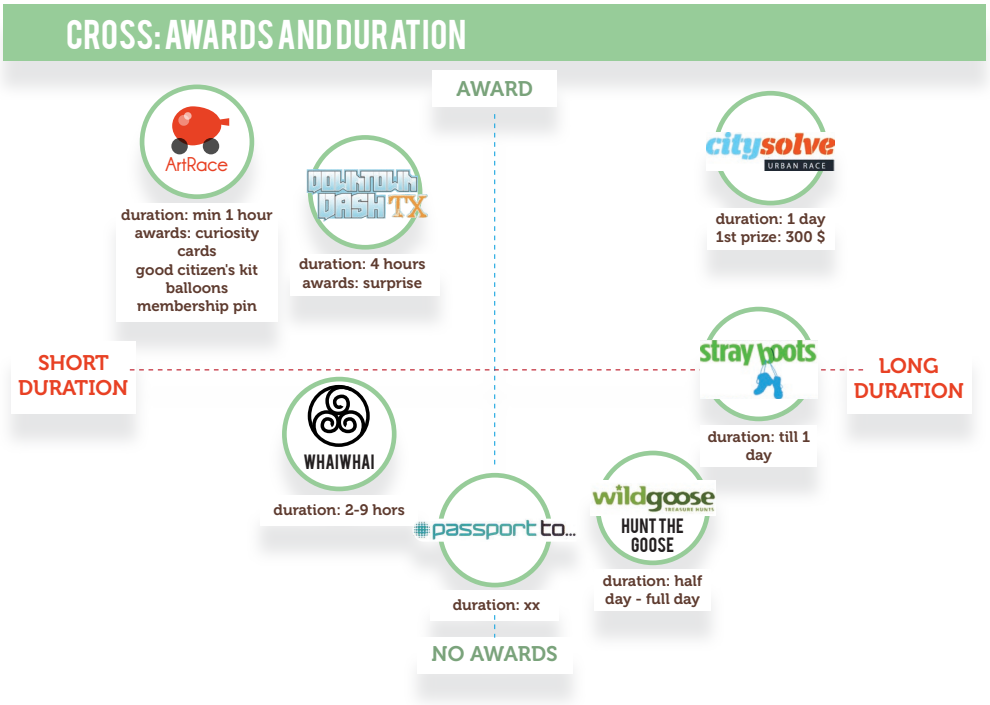


Image 6.24: comparison with competitors

to have one race per each weekend), with six teams of participants composed by three people. Three of the six teams are families, whom deserve a special family price.
For each *ArtRace* there are some costs (which can change according to the number of participants).
The *image 6.21* depicts the ideal situation during the first year of the service implementation. The expenses of the first year amount to 5.779,76 €, to deduct from the yearly revenue of 14.256 €. The effective revenue of the first year (the period of launch for the service), considering an average number of four *ArtRace* per month (with six groups of participants, as in the ideal situation depicted in the *image 6.20*) will be of 8.476,24 €, without considering the eventual sale of gadgets.
While I was analysing the service pricing, I made a comparison with some service competitors, as depicted in the *image 6.22*.
The Business Model Canvas (*image 6.23*) offers an overview on the partners, resources, values, activities, customers, channels, costs and revenues of the Game Service System.
The *images 6.25, 6.26 and 6.27* offer an overview on the service phases, through a storyboard.

While I was planning the resources, analyzing costs and revenues and examining the main competitors of the service ArtRace, I have also made a comparison regarding the duration of the service experience and of the awards given to players at the end of the game session (race, treasure hunt and other kinds of games). The *image 6.24* depicts this comparison, showing how ArtRace has a short duration (answering to the needs of visitors with a few time to explore a location) and a good offering of awards.
In the *image 6.25, 6.26 and 6.27* I draw a storyboard to visualize the different phases of the service experience.

Image 6.23: business Model Canvas

BUSINESS MODEL CANVAS

KEY PARTNERS

Who are our key partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

MUNICIPALITY
Advertising
Purchasing
Information
Good Citizen's Kit (for users)
Game material

VOLUNTEERS
Organization, set and supervision of the material for the race
Info to users and inquiring people
Rules explanation
Distribution of material
Race inspectors

LOCAL ASSOCIATIONS
Advertising
Purchasing
Information
Employees

TRAVEL AGENCIES
Advertising
Purchasing
Information

KEY ACTIVITIES

What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue Streams?

USERS
Assistance
Welcome desk
Information
Purchasing system

MANAGEMENT
Relations with suppliers, volunteers and municipality

CHECKPOINTS
Supervision
Material supply

PROMOTION
Online/offline advertising

WEBSITE
Management
Subscription
Purchasing

KEY RESOURCES

What Key Resources do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue Streams?

MATERIAL
Game, orientation, information and identification material
Awards
Gadget

EMPLOYEES

WEBSITE
Adds
Info
Purchasing system
Blog
Photos archive

VALUE PROPOS

What value do we deliv customer?
Which one of our custo problems are we helpir
What bundles of produ offering to each Custor
Which customer needs

GAME
Race
Amusement
Fun with friends
Competition
Scoring
Prizegiving

PRICE
Fair price

DURATION
Short (1 - 2 hours)

COST STRUCTURE

What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

WEBSITE
Development
Maintenance

ADVERTISEMENT
Online promotion
Urban adds

MATERIAL
Game, information, orientation and identification tools
Material storage
Maintenance

SITION

ver to the
omer's
ng to solve?
ucts and services are we
mer Segment?
s are we satisfying?

TOUR
Alternative
Sightseeing
Urban exploration
Curiosity
discovery

ACCESSIBILITY
Awareness
Active participation
in local improve-
ment

CUSTOMIZATION
Two game modes

CUSTOMER RELATIONSHIP

What type of relationship does each of our Customer Segment expect us to establish and mantain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

SERVICE WEBSITE
Feedbacks
Photos/videos (archives)
Blog

ACCESSIBILITY
Information on improvement

LOCAL
Local news
Municipality's website
Travel agencies and organization's platform

CHANNELS

Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones are most co-efficient?
How are we integrating them with customer routines?

ONLINE
Service website
Municipality platform
Local associations and travel agencies websites

OFFLINE
Town hall
Travel agencies
Local organization
Tourist info point

CUSTOMER SEGMENTS

For whom are we creating value?
Who are our most important customers?

CITIZENS
LOCAL VISITORS
RELATIVES
FRIENDS
GROUPS OF TOURISTS
CLASS MATES
ROMANTIC COUPLES

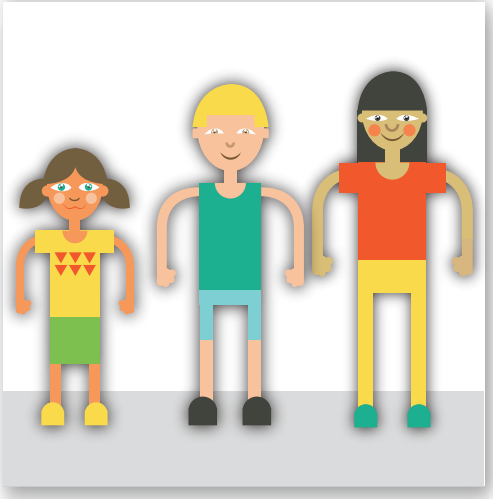
REVENUE STREAMS

For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

ARTRACE PURCHASING
GADGET PURCHASING

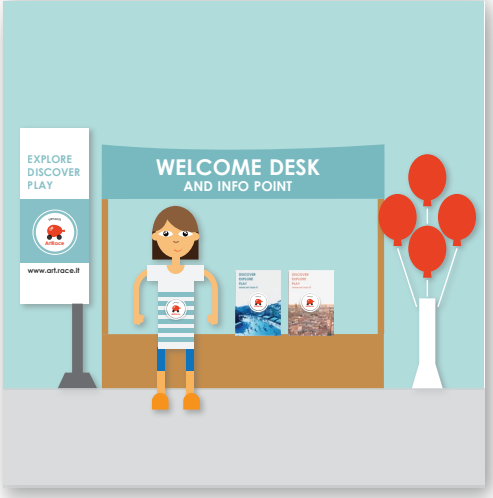
STORYBOARD: PHASE 1 – INFORMATION AND PREPAR

TARGET: a family of local visitors



1) ADVERTISING AROUND THE CITY

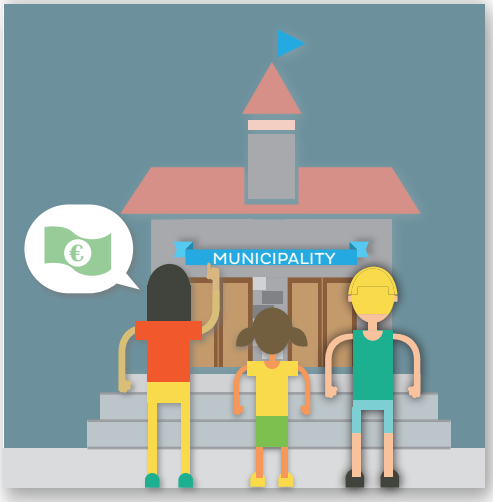
4) WELCOME DESK



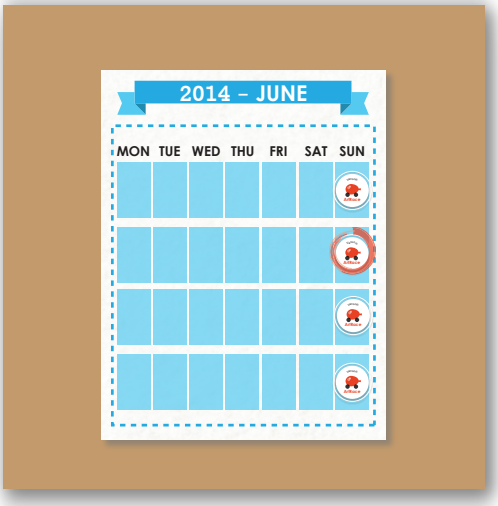
5) CHECK-IN

ATION

2) INFORMATION AND PURCHASING: at the Town Hall

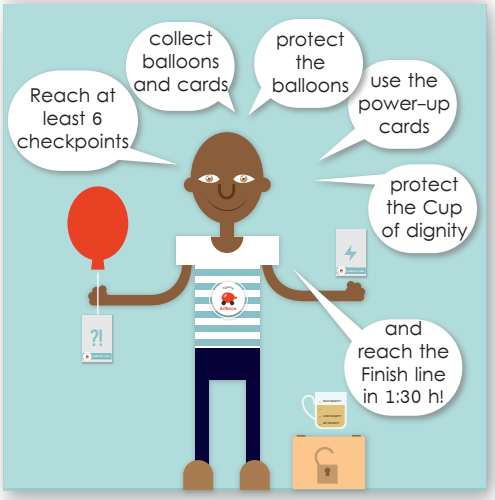


3) BOOKING FOR A TEAM RACE



6) GAME MATERIAL AND STAFF: cart, Cup of Dignity, a package to collect Curiosity cards, Power-up cards, pin and Inspector

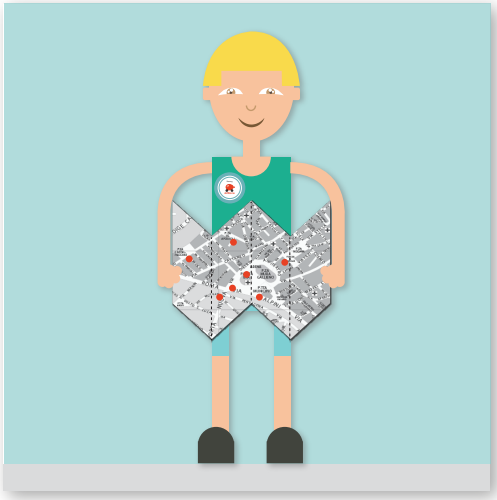
7) EXPLANATION OF RULES AND GOALS



STORYBOARD: PHASE 2 – THE TEAM RACE

8) STARTING LINE

9) ORIENTATION: read the map and individuate the checkpoints



12) USE THE ROLE EXCHANGE CART: the driver changes

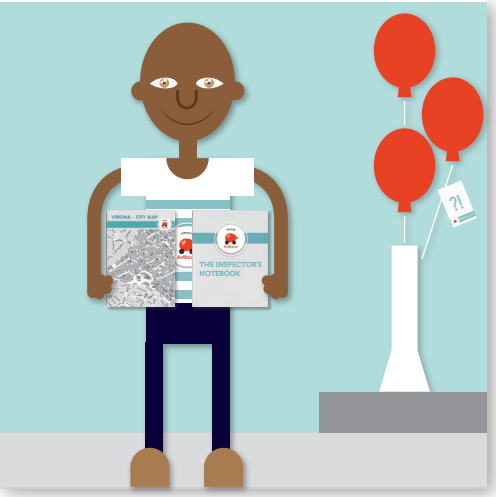
13) GET IN TOUCH WITH ARCHITECTURAL BARRIERS: the land-marker cannot be reached

10) COLLECT BALLOONS AND CURIOSITY CARDS

11) TAKE PICTURES AND SHARE ONLINE

14) PUNISHMENT FOR CHEATING: the inspector tear the Correctness stripes

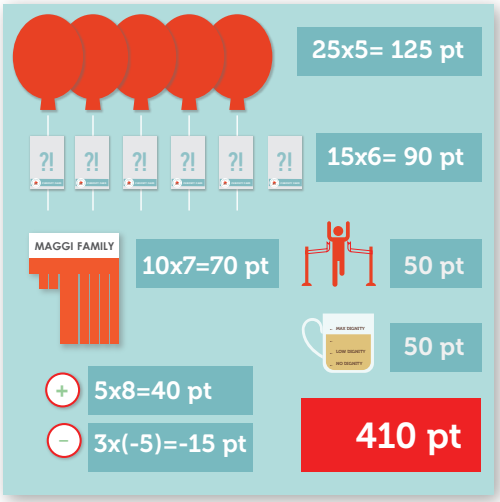
15) MAPPING: the inspector takes notes on the players' behavior and maps architectural barriers around the area



STORYBOARD: PHASE 3 – SCORING AND PROCLAMATI

16) FINISH LINE

17) SCORING



18) PROCLAMATION OF THE WINNER

19) PRIZEGIVING: Good Citizen's Kit, set of Curiosity Cards on the city, pins and balloons

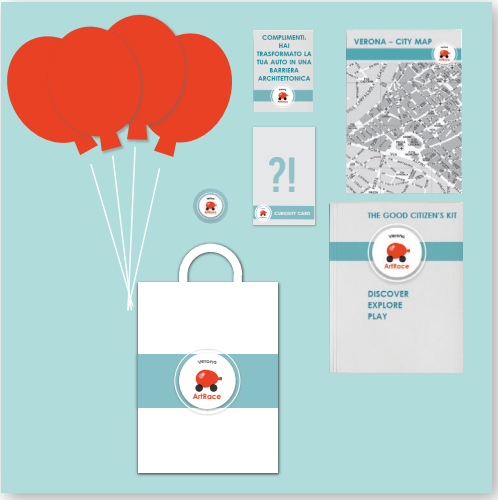


Image 6.25: storyboard - Preparation

Image 6.26: storyboard - The team race

Image 6.27: storyboard - Scoring

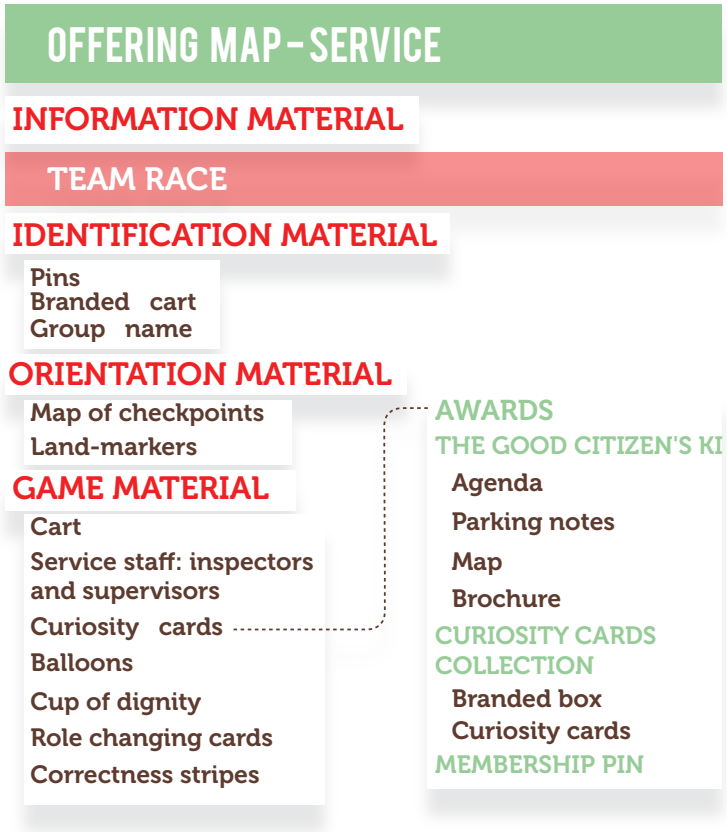


Image 6.28: the elements which compose the Team Race

6.3 Tools

In the previous paragraphs (chapters 5 and 6) I have defined a service framework which can be applied to many Italian cities, to increase or expand the tourist offering and to enhance the local level of urban accessibility. During this paragraph I will define and explain the constitutive elements composing this offering, which are the basic modules of the framework. I will observe the service with a multidisciplinary eye, as a game, a tourist service and a tester of the local quality of urban Accessibility for All. The heart of the service is the *tourist offer* which is the offering that aims to hit the direct target - the local visitors, including the citizens who want to visit their city discovering unknown aspects. The tourist service is a set of main elements, which are composed by subsets: the urban *Team Race* and the *Platform* (which will be analyzed hereinafter in paragraph 6.3.3).

In the *image 6.28* we can see that the *Team Race* is composed by four main kinds of elements: information material, identification material, orientation material and game material. Within the last category there is the subset of the *awards*, given to the participants at the end of the race (except for the *Curiosity Cards* that are collected through the game path as indicated in the paragraph 6.2.1 on the Game dynamics). In the next subparagraphs I will explain every category of tool.

6.3.1 Information and Identification material

The categories of information and orientation material have been grouped into a single subparagraph because they are provided to the users in a first phase of approach to the service, before the *ArtRace* will start.
At this point of the chapter it is crucial to remind that the direct users of the service are visitors travelling in groups, especially families or groups of friends. To engage this target the service needs a strong advertising campaign, as well as a service image that is coordinated and well recognisable. Users need to be involved both online, relying at first on existing tourist websites and apps (for example the location's website and Tripadvisor) in addition to the official website of the service, and offline in the travel agencies which support cultural and local trips, at tourist info points and in the Town Hall. The service needs a well-recognisable logo spread around the city and a designed communication strategy to tickle users' curiosity for more information.

Informative material

The *informative material* includes the advertisement for the service, which can be both online and offline: online on the service website, on the city's official website and on other tourist blogs and networks; offline with posters and flyers spread around the city, in the Town Hall and inside travel agencies. The *ArtRace* itself is an element which advertises the service, because players who drive the branded cart are noticed by citizens and other tourists, who can go on the website indicated by the label on the cart for further information.

Image 6.29: advertisement, posters around the location

Image 6.30: advertisement, poster at the bus stop

One of the most important elements of the service offering is the *Good Citizen's Kit* (an informative tool on the issue of AfA, which is given to player at the end of the race, available online and at the Town Hall). I have designed this tool to support the service system, to sensitize people toward the awareness on the issue of urban Accessibility for All and to allow them to contribute in a "redesign" project towards the improvement of local accessibility.
This tool is available for users in various ways: it is bestowed to participants at the end of the team race; it can be picked up at the welcome desk of the Town Hall; it can be also downloaded from the service website (in a pdf version).

The *image 6.29, 6.30 and 6.31* depicts some advertising materials: posters around the location and postcards (to be distributed at the info point, in travel agencies, in public places and venues). The *image 6.32* depicts the elements which compose the *Kit*:

> the brochure which contains information on the Italian and international laws on accessibility. A section of the brochure lists some numbers and contacts of public authorities, to report urban problems and local architectural barriers of the three types (which are deepened in the paragraph 4.2); in particular it is pointed out the local URP[83] - the desk to report malfunctions and provide guidance and suggestions.

> a block of cardboard notes that users can place on vehicles that have been parked on sidewalks or reserved parking lot, to make drivers aware of their improper action. The *image 6.33* represents the initiative *Vuoi il mio posto? Prenditi il mio handicap!* (Do you want my parking lot? Get my handicap!), moved in the province of Trieste to provoke the drivers who park on reserved lots.
When the block of cards will be finished, users can download from the service website a free template to print at home.

> the *Good Citizen's Pin* to wear showing the social commitment of the individual, as a kind of Medal of Honor.

> a map where users signal obstacles like temporary obstacles and architectural barriers. The map can be published on the service platform or showed to the competent public authorities, helping them to improve the local AfA.

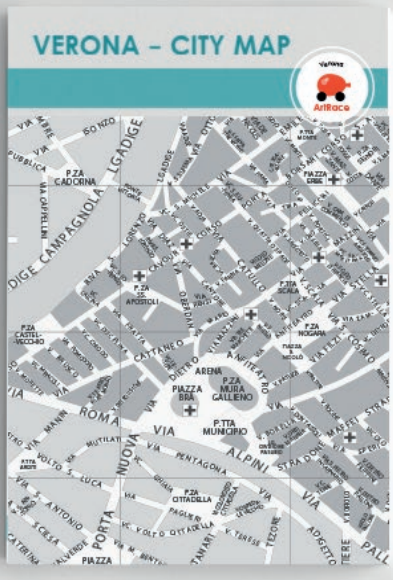
Image 6.31: postcards

Image 6.32: the Good Citizen's Kit

83 Citizens Relation Office (Ufficio Relazioni con il Pubblico)


DISCOVER
EXPLORE
PLAY
www.art.race.it
Verona
ArtRace

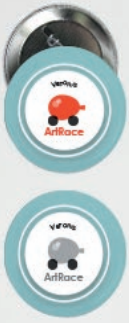

DISCOVER
EXPLORE
PLAY
www.art.race.it
Verona
ArtRace


VERONA – CITY MAP
ArtRace


THE GOOD CITIZEN'S KIT
Verona
ArtRace
DISCOVER
EXPLORE
PLAY


COMPLIMENTI.
HAI
TRASFORMATO LA
TUA AUTO IN UNA
BARRIERA
ARCHITETTONICA


NON CI SONO
ABBASTANZA
BARRIERE
ARCHITETTONICHE
IN CITTA'?


Verona
ArtRace
Verona
ArtRace

PERCIÒ SCELGO:

- ☐ amputazione gamba ☐ dx ☐ sn
- ☐ distrofia muscolare
- ☐ paraplegia
- ☐ sclerosi multipla
- ☐ ictus
- ☐ altro .....

Image 6.33: the flyer of the project Vuoi il mio posto? Prenditi il mio handicap!

Image 6.34: the branded cart

People can use the *Good Citizen's Kit* also in different cities from the location where they received it (except for the agenda's section on the local authorities to contact, because the contacts are different in every Commune). It would be ideal for the kit to be present in the major Italian cities, bringing a collective improvement to open-air tourist attractions in the peninsula and to the national level of Accessibility for All.

Identification material

The *identification material* for users includes the *membership pins* which are given at the welcome desk of the race. It is also contained in the *Good Citizen's Kit* given at the end of the race, and it can be purchased at the tourist info points, in the Town Hall and in the travel agencies which support the service. During the *ArtRace* players receive other tools which identify them as participants. Every player will wear the membership pin and every group will receive a branded

cart with a plaque that reports the name of the team - see *imahe 6.34.*
The cart is a tool essential during the race and it works also as guerilla advertisement for the service offering - because it attracts the attention of passersby during the race and makes the service visible. It is branded with the logo and the colors of the service and it reports the service website and the hashtag *#ArtRace* (the hashtag is an element which appears just if the Municipality allows players to take photos and videos of their interaction with urban obstacles during the race). It will have foam rubber stripes on the external corners to avoid dangerous impacts with objects and people and a seat cushion which covers its bottom. Every eventual accident is under the responsibility of the users: at the welcome desk (the first checkpoint) the service requires to the participants to sign a releasing which regulates this possibility.
On the forepart of the cart there is a white-board to write on the team name (a kind of plaque for the vehicle) and a series of ten paper *Correctness Stripes* which represent the honesty of players' actions during the race; they can be torn by the team Inspector if team members cheat (as I mentioned earlier in the paragraph 6.2.1). When a team receives the cart, a member of the group must consign his/her ID card as a guarantee for the restitution of the cart at the end of the race.

6.3.2 Orientation material

Some elements guide the players during the race, helping them to stay on the game path; these tools are the *checkpoints*. The ArtRace consists in a tour composed by ten stages spread around the city and marked by *land-markers* where players gain the balloons and the Curiosity Cards (see paragraph 6.2.1 on the game dynamics). It is an urban treasure hunt which develops through sequential stages: in the *Race against the Clock* modality, every team has to achieve six stages before to reach the finish line.

Checkpoints have analogies and differences, depicted in the *image 6.35*. Everyone is marked with a number on a paper map (see *image 6.37*); on the checkpoint location players find a land-marker covered with balloons and guarded by the service supervisors.

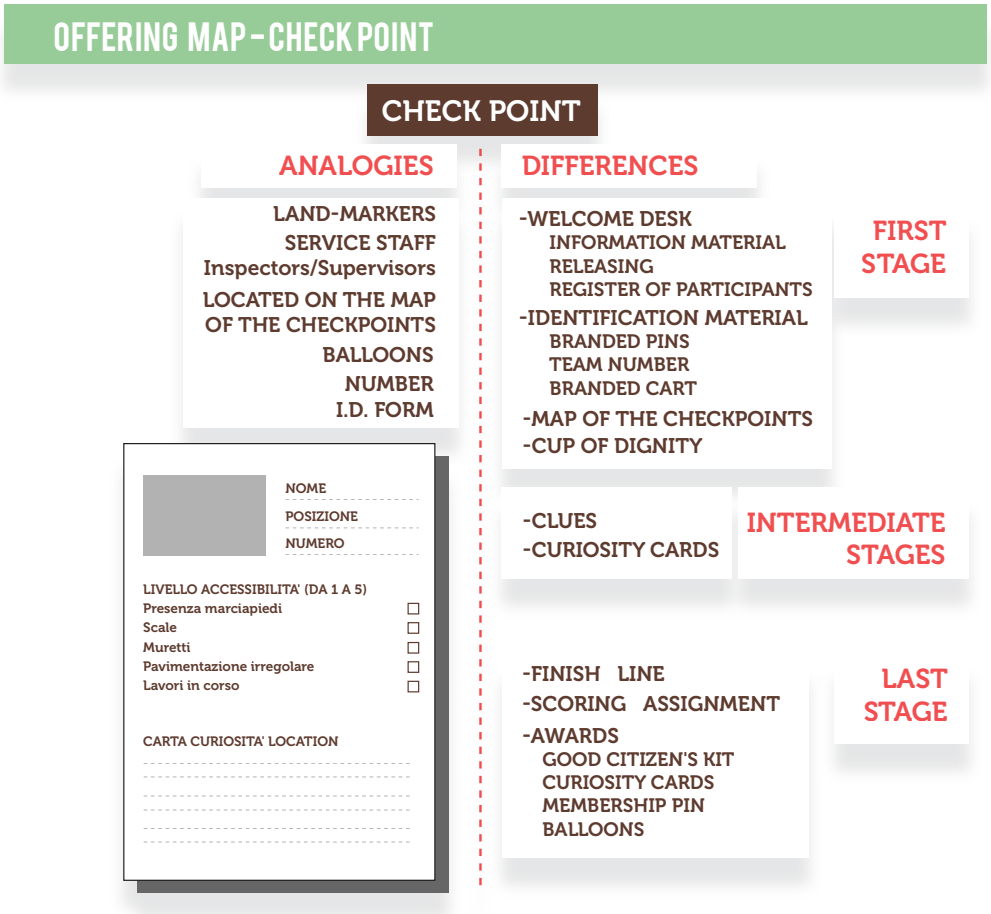


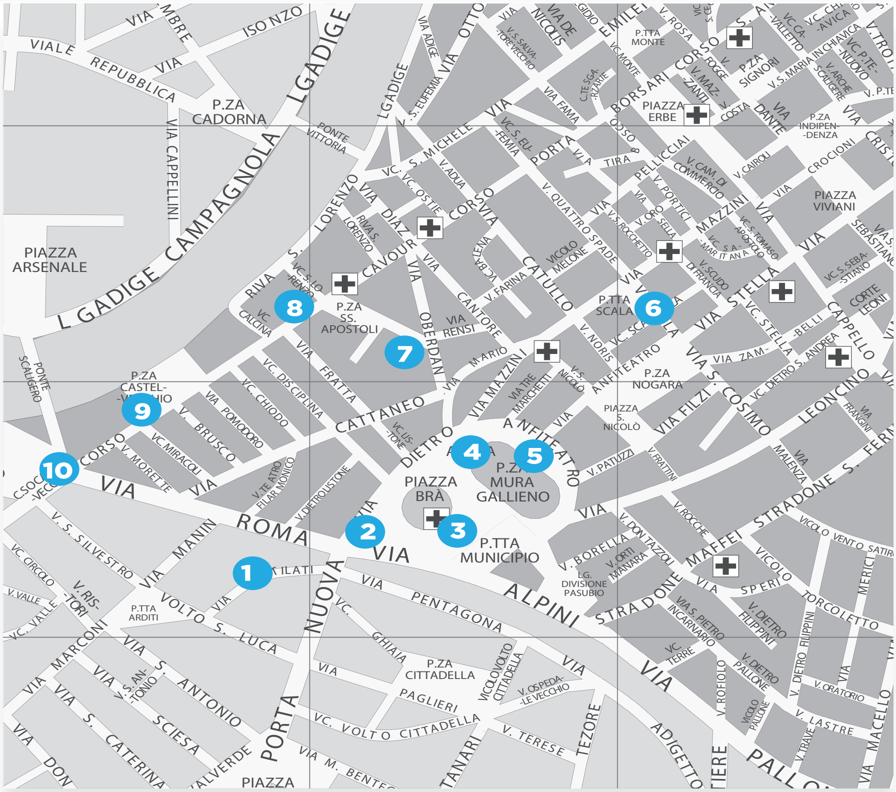
Image 6.35: analogies and differences among the checkpoints

There are the three kinds of stages: the first stage (the *welcome desk and starting line*), the intermediate stages and the last stage (the *finish line*).

> The location of the first checkpoint corresponds to the starting line of the race. The location of this stage is communicated previously to participants who have signed up for the race; however, it is located in a central point of the tourist area (for example, if the service is set in Milan the first checkpoint will be in Piazza Duomo and in Verona it will be in Piazza Brà, to mention a few), it is clearly visible also for tourists and citizens who are passing by. They can ask for some information and eventually purchase and participate to the race.

> The following stages are marked on the paper map.

MAP OF CHECKPOINTS



There is not a given order for players, whom can decide the strategy they prefer: for instance, while the team called "xx" will go to the checkpoint number four, the team "yy" can choose to reach the checkpoint number two at first (see *image 6.38*).

> The last checkpoint corresponds to the finish line of the game. Each group in every moment can end the race going to the last stage, also if it has not completed all the six checkpoints (of course it will have a lower score at the end).

Image 6.37: map of checkpoints; the city depicted in the map is Verona, which will be analyzed as a prototyping location for the servuce system, in the chapter 7

In the *Race Against the Clock* mode of the *ArtRace*, every group will have completed the game path after achieving six stages: that means that a single team won't visit all the checkpoints. Despite this, at the end of the race they

MAP OF CHECKPOINTS

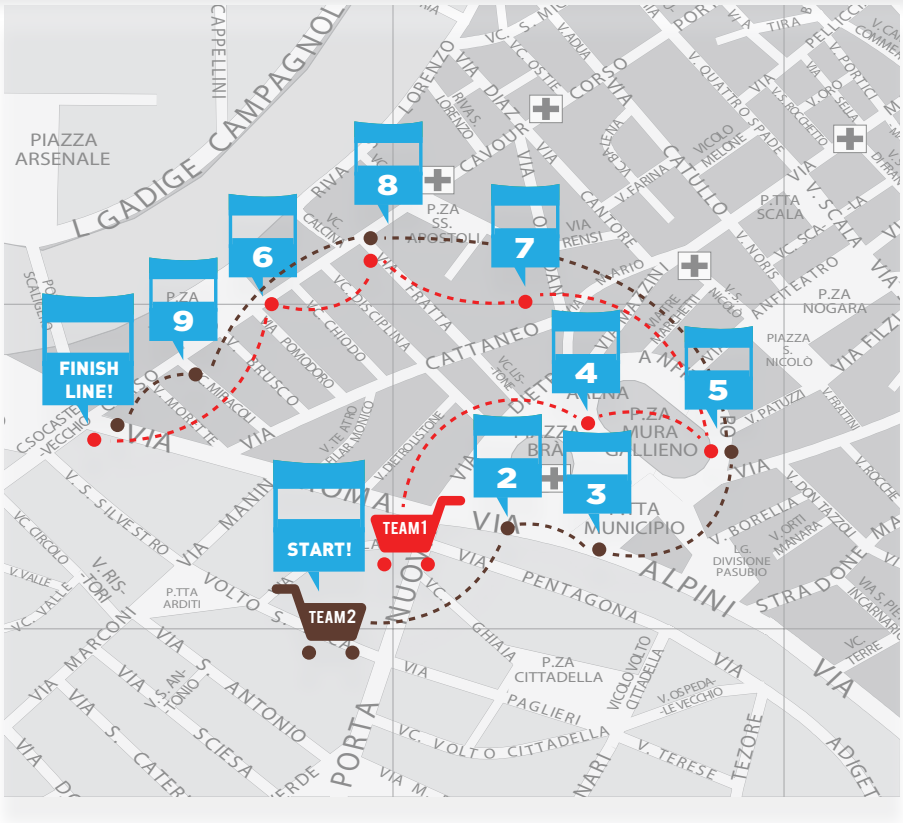


Image 6.38: sequence of checkpoints

will receive the complete series of *Curiosity Cards*, which comprehend also the anecdotes associated to the missing stages.

Checkpoints are recognizable and visible from a distance of about 150 meters, thanks to the *land-markers*. A land-marker is depicted in the *image 6.39*. As you can see from the pictures, they are covered by balloons of a bright color; balloons are simple but effective tools, because their color and lightness completely deviates from the urban noise and can be easily noticed by people, also from an average distance of 150 meters. «Urban public space is a stage for viewing the field of graphic design in its diversity. A mix of voices, from advertising to activism, competes for visibility» (Ellen Lupton, 1996: p.15). The land-markers must emerge among this mix of "voices" indicated by Lupton as urban elements which

Image 6.39: land-marker

compete for the visibility, because checkpoints need to be visible to participants; they can also work as advertisement for the service offering. They have a central role within the game system, since they are both elements which orientate the players during the race and fundamental tools for the game dynamics. Here participants collect the balloons and the Curiosity Cards (both are described in the paragraph 6.3.3 on the game material).

6.3.3 Game material

The service supplies four main kinds of materials: *informative material*, online and around the city, to engage visitors and citizens in the service; *orientation material* to guide players along the game path; *identification* tools; *game material* which support players during the *ArtRace*. These categories of tools compose a system which – through the game dynamics – leads to a *critical play*: an experience which aims to make players reflect on the actual issue of the Accessibility for All. Checkpoints are one of the most important elements for the game dynamics, because here players gain the game material: balloons and Curiosity Cards.

Image 6.40:
a Curiosity Card

Curiosity Cards tell anecdotes on the city. They are important elements of the tourist experience, because all together they constitute an alternative guidebook to the location - the *image 6.40* shows a sample of this cards, a curiosity about the city of Verona (the city for the service prototype, which will be the subject of the *Chapter 7*), linked to the Arena. I will explain in detail their role insde the Game Service System shortly in the paragraph.

Other cards are the *Power-ups*, like the *Role Exchange Cards* and the *Invisible Bridge* (depicted in *image 6.41*) which allow the players to exchange their role and to lift the cart over architectural barriers (as if there were a bridge to overcome the obstacle).

Other important game elements are the *balloons*: at every checkpoint the team takes a balloon, which can be taken just by the player who sits inside the cart who cannot stand up to reach it. The *Inspector* controls this action and punches a hole in the balloon if players act wrongly. Obviously the balloon is placed on the land-marker at a reachable height[84], but it is not so easy to catch: the land-markers will be located, for example, on a sidewalk and players will study the strategy to

84 In the paragraph 6.2.2 I explain how and why I chose the height for the balloons

Image 6.41:
Power-up Cards

reach it (for example lifting up the cart or looking for a ramp). Balloons must be defended by players during the race: if they explode, participants must return to the previous checkpoints to take another one. The protection of the balloons is a metaphor of the defence of the rights of the individual, which can become a real daily fight for people with impairments.

Awards

At the end of the race, the *Inspectors* will count the score of the teams which will receive some *Awards*.
The prizes are:

- the *Good Citizen's Kit*;
- a package of *Curiosity Cards*;
- the membership Pin;
- the *balloons*.

Curiosity Cards are collected by players during the race.
At the starting point of the race, which is the first checkpoint, the *Inspectors* give to each team a branded box which contains a paper map of the checkpoints (see the paragraph 6.3.2 on the orientation material). It is a container to store all the *Curiosity Cards* collected along the race; it becomes a kind of treasure chest to gather together all the interesting facts about the city that users discover along the way.

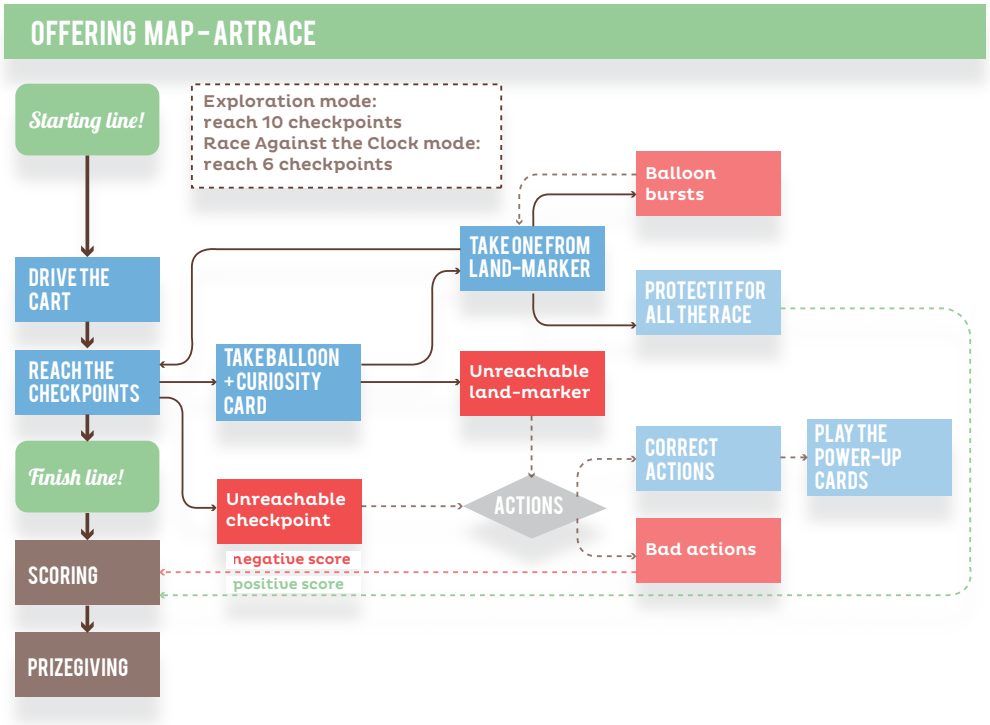


Image 6.42: flowchart of the game actions

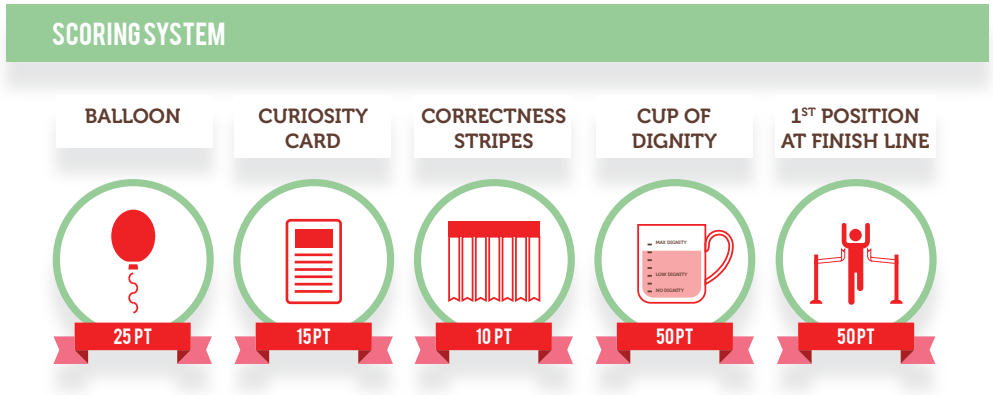
Since in the *Race Against the Clock* mode players reach just six on ten stages, at the end of the race each player will receive a complete series of *Curiosity Cards* win a package. In the *Exploration* modality teams visit all the checkpoints and they collect all the cards during the game path. The whole set of cards composes a kind of alternative Tourist Guidebook of the city, since they depict stories and curiosities linked to the local culture.

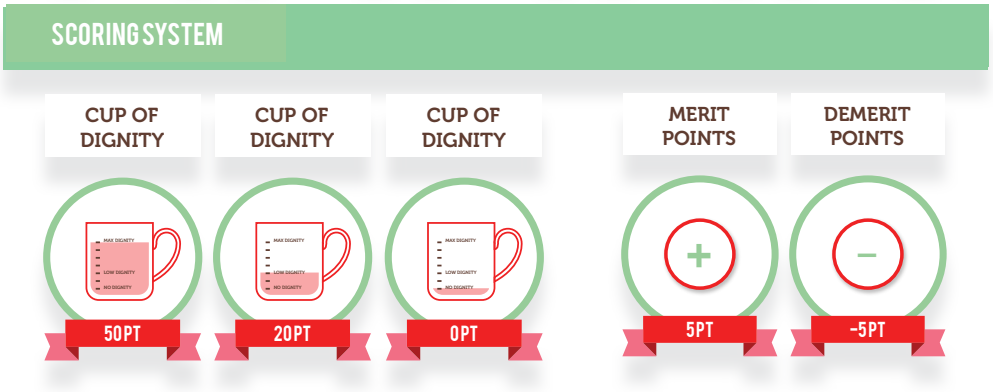
Also balloons are prizes for the players; *Curiosity Cards* and balloons are both objects to collect around the game path and they have to be shown to the judges at the finish line: they are a method to assign a score to players and to declare the winner team.

The *image 6.42* presents a flowchart of the game actions, guiding players during the experience until the prizegiving.

The scoring system

At the end of the match players reach the final check-point and show all the balloons and curiosity cards collected





through the path, to receive the final score. The scoring system depends on these objects, but also on the number of Correctness Stripes which are left on the cart forepart (see paragraph 6.3.1), on the condition of the cup closed inside the wooden box (which can have a high or low level of sand) and on the merit/demerit points given by the *Inspector*.
In the *image 6.43 and 6.44* you can see the score for each of these elements. For a gaming session in the modality *Race Against the Clock*, every group will have completed the race after achieving six stages. If the first group to reach the finish line has achieved a total success – if it has collected and defended all the balloons, stored all the curiosity cards, protected the cup full of sand and respected the correctness - it will earn 490 points. The other groups have at least 50 points less than the first (because they didn't reach the finish line in first position), with a starting score of 440 points; however they can still win the race if their Inspector has assigned them many merit points.

Image 6.43: the scoring system

Image 6.44: scoring associated to the Cup of Dignity, Merit and Demerit points

Platform

An essential component to promote, support and organize the service offering is the website, an intangible element of the Game Service System.
The virtual platform could be developed after the prototyping phase of the service, before the launch of the Zero mile Tourism offering on the market. At an early stage, the service relies on external partners, for instance the website of the project dismappa - as depicted in the *image 6.45*.
In this paragraph of the essay I introduce the elements that will compose the ArtRace platform and the role of the website inside the system.

The platform is a virtual gathering point for the service users, a blog where they can publish reviews on the service and on the city itself. Users can publish pictures, videos and comments of local tourist attractions, and if the Municipality agrees also on the city level of urban accessibility (see paragraph 6.2.2).
Photos and videos uploaded by users create two archives: one is a collection of tourist pictures and the other is on the local accessibility. The platform is very useful for local citizens to share opinions and to actively contribute to show the local degree of accessibility (leading public authorities towards an improvement of AfA). It is also accessible and visible to visitors, who are allowed to post pictures and videos and to read comments on tourist attractions. Especially the blog and the photos archives work as a source of online word of mouth on the quality of the location. It is convenient for the public authorities to participate in the service planning, to guarantee a high level of urban accessibility which will generate a positive word of mouth among users.
According to the concepts examined in the past subparagraph, we know that the service can be seen as an alternative tourist offering. But a second point of view consists of looking at it as an initiative which aims to improve the urban accessibility of a city. The platform supports both sides of the service, attracting visitors towards the city tourist offering and increasing users' awareness on the issue of AfA (Accessibility for All). A key tool for the consciousness strategy is the Good Citizen's Kit (see paragraph 6.3.1), an agenda with the goal of sensitize the citizens to increase their social effort, bringing the community to a higher well-being state for all - citizens and visitors.

Image 6.45: ArtRace promoted and on purchase on the website dismappa.it

In the paragraphs I have identified the typologies of elements which compose the service framework. Each element can be adapted to various contexts, with different historical and cultural background and with a diverse level of accessibility. For a city with a high level of AfA (Accessibility for All) the service will be a confirmation of the good operation working of local authorities (positive advertisement). For a place with a low level of AfA it will be an opportunity of improvement and a way to show the gradual enhancement to an audience composed by visitors and citizens.

6.4 Playtesting

At this point of the dissertation I have outlined the foundations of my Game Service System; it is now crucial to organize a playtest session determining the strengths and weaknesses of my offer.
I have made a preliminary playtesting session[85] in the campus of Design and Architecture in Bovisa, with a sample of users similar to the reference target (see the *image 6.46*). In particular, I have analyzed the interactions between players with the cart and urban elements.

85 Playtest sessions aim to individuate problems and not necessary to propose solutions.

Image 6.46: the playtesting target

I have identified the playtesting area (see the *image 6.47*) and watched players moving around the area to explore in different moments, with and without the cart. At the end of the game session I have interviewed participants, to understand how the experience has affected the service users.
The main phases of the playtesting have been the preparation of the materials, the exploration of the area and the interaction with architectural barriers. I'd like to explore point by point the phases of the playtest session.

Preparation of the material (see *image 6.48*):

> we covered the inner part of the cart with some padding, to make it more comfortable for the user who will sit inside;
> we placed the box containing the Cup of Dignity (full of sand) inside the cart, to control that users explore the area with caution when riding the cart, safeguarding the dignity of the individual with disabilities (represented by the level

Image 6.47: the playtesting area

of sand into the bowl). Being a preliminary session, we used a plastic cup attached to the bottom of the box with a slight layer of scotch instead of a cup supported by a polystyrene base (as we can see in the paragraph 6.2.1);
> I studied the game path to include the main barriers which people usually encounter in a tourist area with a medium level of accessibility (stairs, sidewalks, potholes).

Exploration of the area (see the *image 6.49*):

> we walked the streets as a team: a player inside the cart, driven by another; a third user helps to push it in case of architectural barriers, showing to the inspector the special power-ups. I acted as team inspector during the race, controlling the correctness of players, taking notes of their correct and incorrect behaviors and mapping the architectural barriers of the area;

Image 6.48: preparation for the Playtesting

> we simulated the presence of land-markers supplied with balloons, on sidewalks, stairs and walls;
> after the game session I interviewed the participants, understanding how the experience has impacted on the vision of the players concerning urban accessibility.

Interaction with architectural barriers:

I have observed these interactions during the playtesting (see the *image 6.50*); then I took interviews to players, listing the main difficulties during the exploration of the area:

> many steps and few ramps;
> difficulty in crossing the roads, particularly in finding ramps for the descent from the corresponding sidewalk provided with pedestrian crossing;
> uneven roads;
> sloping sidewalks (normally their slope is not perceived by able-bodied people, but it is obvious for individuals who conduct vehicles on wheels);
> vehicles parked on sidewalks;
> some obstacles were insurmountable (see the *image 6.51)* and players failed to reach some land-markers; this

Image 6.49: exploring the area

led participants to consider architectural barriers in a new way, through the eyes of people with mobility impairments, who cannot simply get up from the wheelchair and overcome obstacles;

> to overcome some obstacles it is necessary the collaboration between players, for instance in "lifting" it over a step (showing to the inspector the power-up card);

> narrow sidewalks.

In conclusion, the service tested the accessibility of the area: despite the presence of a university campus in the neighborhood of Bovisa, the municipality of Milan should improve the Accessibility for All of the area.

The game encourages players to notice things that normally they would not notice: for example they perceive how common urban elements such as sidewalks or potholes are large obstacles for citizens on wheelchairs; participants also perceived that many drivers use to park brutally on sidewalks in front of the access ramps, regardless of blocking the access. Experience successfully manages to sensitize all participants towards the issue of Accessibility for All. The player who sits inside the cart feel all the bumps and it is important that

Image 6.50: dealing with architectural barriers

drivers pay attention to the urban obstacles during the race. Even if the game rhythm is slowed by the carefully driving of the cart, each impact should be avoided for two many reasons:

> avoid players feel the bumps;

> protect the dignity of the individual on the wheelchair, represented by the Cup of Dignity, without overturning the sand in the cup (which means to mantein a high level of dignity).

ArtRace is an excellent test concerning the level of accessibility of a location and a useful service for the city itself:

> cities with a medium-low level of accessibility will host the service to establish the local level of Accessibility for All, understanding if an area needs urban improvements and mapping the architectural barriers which obstacle the daily life of the individual;

> each town would be proud to host the service to show its attention to the accessibility.

Image 6.51: players being hampered by architectural barriers

I have personally observed how none of the players have tried to cheat; moreover, at the end of the race the level of dignity of the Cup was very high, proving the caution of the players.

The playtesting should be repeated with other user samples, possibly in the city centre of tourist cities, after receiving the permission from the municipality.

CASE STUDY #9. IDIOTAROD

NAME	Idiotarod
LOCATION	New York, USA
AUTHOR	Idiot Labs
YEAR	2009
TOOLS	Webmail (for the registration), starting point, carts and prizes

GAME MODE	Shopping cart race (urban parody of the famous Alaskan dogsled race)
DESIGNER'S GOAL	Create a public art race
PLAYER'S GOAL	Win prizes, for example for the Best in Show and Best Design
CUSTOMER JOURNEY	Participants subscribe via mail to the race, they receive the location, date and time for the event. The only request is to bring a cart for each group and it must be decorated in a funny and creative way
STRONG POINT	The race foster the creative spirit of players, who participate numerous also during rainy or snowy days, to show their artistic carts
WEAKNESS	It is a clandestinely-organized race

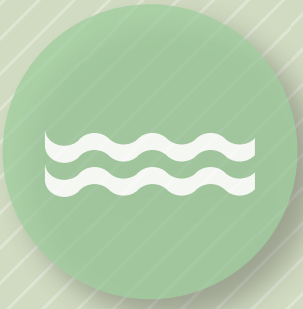
CASE STUDY #10. HUNT THE GOOSE

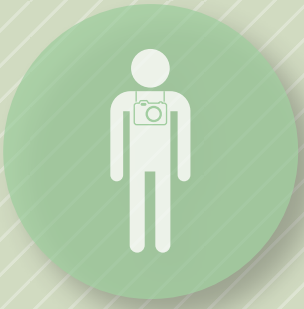
NAME	Hunt the goose
LOCATION	Launched in UK, now there are several editions (in Italy for Milan, Rome and Pompei)
AUTHOR	Wildgoose Events Ltd
YEAR	2003
TOOLS	GPS, SMS texts, App, Samsung Galaxy tablet (provided during the treasure hunt)

GAME MODE	City treasure hunt
DESIGNER'S GOAL	Create a new type of treasure hunt that takes advantage of new smartphone/tablet technology to make the users explore a city
PLAYER'S GOAL	Overcome challenges while exploring a city
CUSTOMER JOURNEY	Every Hunt provides a series of clues, questions and trivia that activate when participants are close to a particular location (thanks to the GPS technology). There are many kinds of hunts: for instance, players can explore a city, make a tour of pubs or participate in street Olympics
STRONG POINT	Users can organize treasure hunts with colleagues and friends
WEAKNESS	The price is quite high (55 euro per each participant of the team)

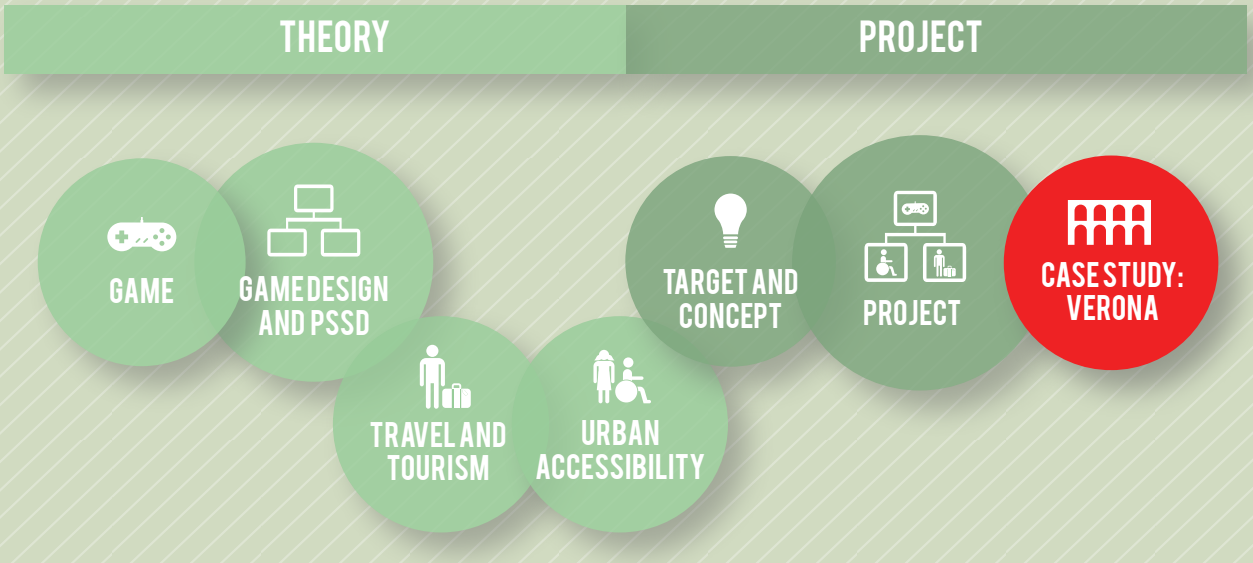







7. CASE STUDY: VERONA



Verona, con le sue vecchie mura che l'attorniano, i suoi ponti dai parapetti merlati, le sue lunghe e larghe vie, i suoi ricordi del medio evo, ha una grande aria che incute rispetto.
Paul Valéry

Deliziosa Verona! Con i suoi bei palazzi antichi e l'incantevole campagna vista in distanza da sentieri praticabili e da solide gallerie con balaustra. Con i suoi tranquilli ponti romani che tracciano la retta via illuminando, nell'odierna luce solare, con tonalità antiche di secoli. Con le chiese marmoree, le alte torri, la ricca architettura che si affaccia sulle antiche e quiete strade nelle quali riecheggiavano le grida dei Montecchi e dei Capuleti...
Charles Dickens

INTERNATIONAL TOURISTS IN ITALIAN REGIONS

REGION	ARRIVALS	PRESENCES	AVERAGE PRESENCES
VENETO	10.230.469	40.387.375	3,9 days
LOMBARDIA	6.883.106	19.074.599	2,8 days
LAZIO	6.664.244	20.516.459	3,1 days
TOSCANA	6.448.902	22.307.426	3,5 days
TRENTINO ALTO ADIGE	5.190.906	25.772.989	5,0 days
EMILIA ROMAGNA	2.345.340	9.632.676	4,1 days

SOURCE: ISTAT, 2012

Image 7.01: tourists in Italian regions

At this point of the dissertation it has been outlined the service framework. It is crucial now to test the Game Service System that I have designed on a real space. I chose as a prototype location the city of Verona, for several reasons that I am going to explain in this chapter.
In the paragraph 3.5.1 (on the Italian tourism nowadays) I have analyzed some data about the tourism in Italy, which have been a support in the selection of the prototype location. Summarizing the information, in the actual situation of tourism, five Italian regions cover the 70% of the national incomes for the visitors' presence. These are Veneto, Trentino South Tyrol, Tuscany, Lazio and Lombardy (as shown on *Image 7.01*).

The first region is Veneto, which has the biggest number of local and European tourists among all the Italian regions. Visitors travel mainly to Venice and Verona, also if Verona is not exploited as a tourist resource like its "sister" Venice, because the tourism strategies in use do not meet the needs and desires of the new users.
Verona has a strong local heritage – which I will

PLACE BRAND HEXAGON: VERONA

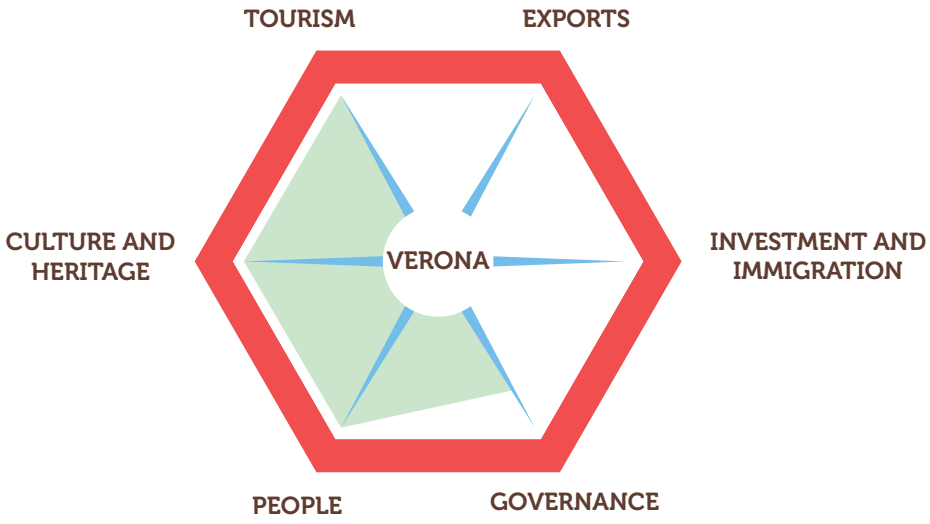


Image 7.02: Place Brand Hexagon of Verona

analyze shortly in the text – and other suitable basis for the implementation of the service *ArtRace*.

> First of all, the city planning – which has Roman origins – presents a wide urban centre which was intended to host the Arena and the open market activities. The city centre is a controlled traffic zone which is often closed to the traffic, usually during holidays and weekends.

> Verona hosts yearly initiatives and meetings for the international day of individuals with impairments; this events could reveal as a rich soil for the service launch.

> The location has been awarded for the high degree of Accessibility for All in public spaces; the municipality could be interested in hosting *ArtRace* because it would increase the alternative tourist offering attracting local visitors, and also generating a positive word of mouth on the local level of AfA.

> Verona hosts important associations and projects which aim to improve the daily life of individuals with impairment; they can act as Key Partners to support the project.

My service helps Verona's tourist system to diversify its offerings and provide innovative solutions, showing off the local culture.
The *image 7.02* shows a Place Brand Hexagon on Verona (for further information see paragraph 3.4).

After introducing the features which make of Verona an optimum location to prototype and launch the service system, I'd like to analyze its urban planning and history.[86]
This will be the core of the chapter.

86 A source of inspiration for this paragraph has been the text Cities of tomorrow. Challenges, visions, ways forward. (2011, October) edited by European Union

7.1 Desk Research on Verona

To analyze the city of Verona - understanding the possibility to decline the service framework on the location - I started with a Desk Research, which continued in parallel with the Field Research. The Desk Research is a methodology to analyze and gather information which are already available in print or published online.
I have done a bibliographic research to learn the history of Verona, its tourist attractions and its urban accessibility[87]; this analysis was crucial to understand the elements which could help me to develop the service system. On the ENIT, ISTAT, Touring Club Italia and the Commune of Verona websites I have collected useful statistics and graphs about local and international tourists.

The conversation by emails with a disabled Swiss girl, Joelle Philibert, who recently embarked on a tourist trip around Europe - moving on a wheel chair accompanied by experts to discover local sports[88]- has been very useful to support my project. I discovered her project thanks to a short article posted on the website *dismappa.it*, a service born in Verona on April 2013 to map local tourist attractions and their degree of Accessibility for All. Given her passion for travels and its expertise in the field of tourism for people with mobility impairments I asked her an opinion on my project. Her answer was a true confidence injection and I'd like to share a part of this conversation.

> **Anna**: "*Good morning Joelle!*
> I am developing a service system with the aim to sensitize Italian municipalities (starting from the city of Verona) about the Urban Accessibility for All. Citizens and tourists can explore and discover the city urban tissue and its history/culture/art walking into the shoes of people with motor impairment (I am talking about people on a wheel chair, but also elderly people, parents with strollers, tourists with heavy luggage and so on...basically everyone!).
> Do you think it could be seen as offensive?
> In my vision, visitors explore the city through an urban

87 Paragraph 4.1

88 Joelle started her trip around European cities on March 2014. For further information visit Joelle's website www.jo-z.ch

team-race. To make sure that they understand and contribute to the improvement of local urban accessibility, I thought of an awareness strategy to put them in close contact with the permanent and temporary architectural barriers that normally they wouldn't notice; they have to drive vehicles with wheels, for example shopping carts, to maintain a direct contact with the road surface for all the city tour.
While they visit the town, they are slowed down by Architectural Barriers being aware on the actual issue of Accessibility for All (AfA).
Do you have any suggestion? I'd like to realize a service to sensitize people toward the issue of AfA, creating an amusing experience while showing the daily difficulties of a person with motor impairments, without injure the dignity of anyone.
I would really like to hear you advices
With gratitude,
Anna"

Joelle: "*Votre projet est une bonne idée.*
Je ne pense pas que ça soit offensant. Bien au contraire, ça sensibilise le public.
Pour le côté ludique je mettrais à disposition des fauteuils manuels et électrique à choix. Chaque handicap a ses problèmes.
Je n'ai pas eu le temps de bien regarder l'accessibilité de Verone, car nous sommes restés que 24heures. Mais j'ai pu constater qu'il y avait beaucoup de marches devant les restaurants et commerces. Par contre les trottoirs étaient très souvent rabaissés. Nous n'avons pas visité des monuments, nous n'avons pas cherché d'accès.
Les places de parking par contre pour personnes à mobilité réduites avaient l'air d'être respectées.
En tout cas je vous encourage pour votre démarche. Merci beaucoup.
Joelle"

She gave me an external opinion on the credibility of the project that I was building, helping me to clarify some thorny issues, first of all the perception of people who have mobility impairments on the use of cart as a simulacrum of the wheelchair.

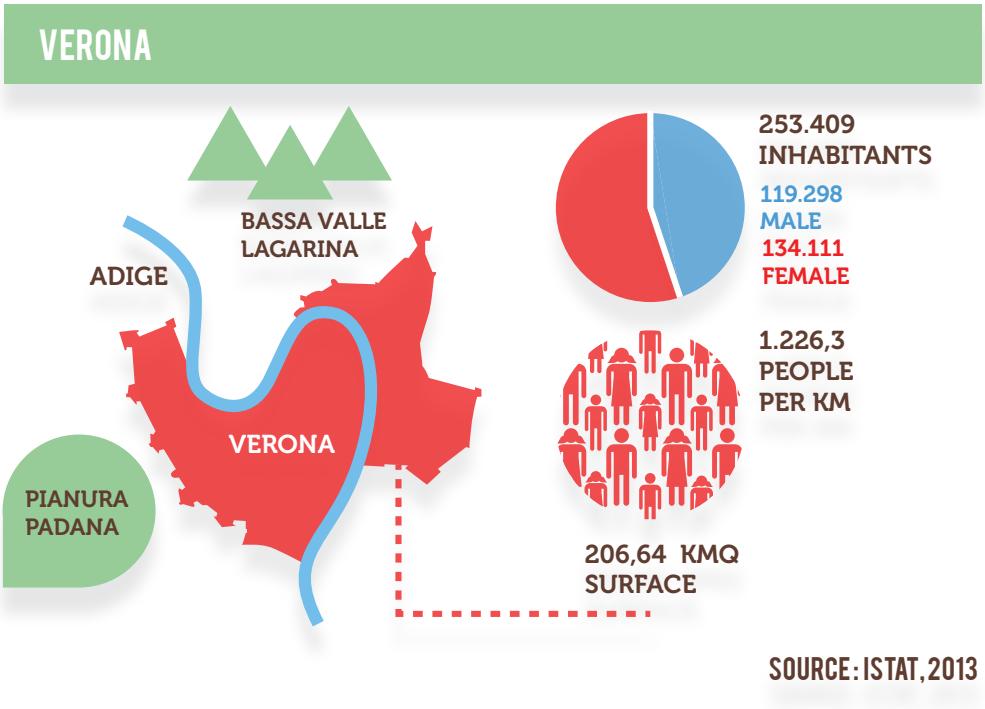


Image 7.03: data on Verona

My first preoccupation was the possibility to build a service which could be perceived as offensive for people with motor impairments. A big issue was the mean of transportation for the game's participants. Could a cart be seen as a mockery? Luckily Joelle gave me the confirmation that the service won't be seen as a bad joke by people with physical disabilities, but on the contrary the service can work as an initiative to sensitize people towards the issue.
She also suggested that, in a future improvement of the service, players will ride manual and electric wheelchairs.

7.1.1 A brief history of Verona

Verona is an Italian city located in the North of the country; it is the administrative centre of the namesake province. It was built at the merge of the Po valley and the pre-alpine foothills in the low Lagarina valley, on the merger of the river Adige (as shown on *Image 7.03*).
The town has a very ancient history. On the hills and mountains close to Verona some archeologists found

CARDO AND DECUMANUS

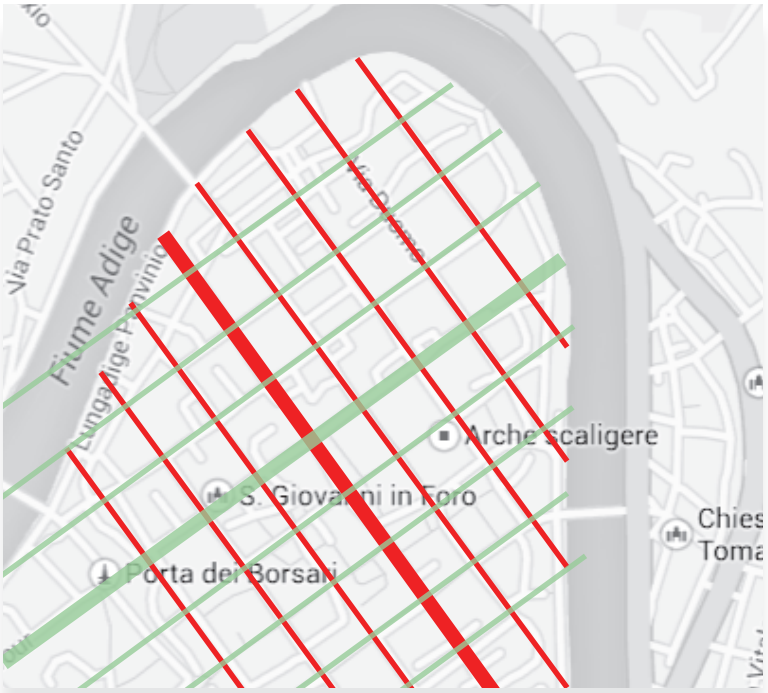


Image 7.04: Cardo and Decumanus, city of Verona

evidences of prehistoric traces of life, for instance a human skull bone dating back to the Paleolithic. However it is not exactly known when and by whom the city was founded.
Despite the important archeological discovery on the presence of human beings on the territory of the present-day Verona during Paleolithic age, academics disagree on the origin of the city as a human settlement. Historians have also some doubts on the origin of the city's name: the most validated theories are that "Verona" may derive from the Latin term "ver", spring, or from the name of an important Etruscan family.
It is sure, from a historical point of view, that before passing under the Roman supremacy Verona was inhabited by Celtics. With the annexation to the Roman Empire it became a rich and important town. Roman authorities built the city streets according to the Empire guidelines, a grid of roads organized along the two main streets (from the latin Cardo Maximus

and Decumanus Maximus, see *image 7.04*) that join together in the Forum Romanum. Numerous architectural works were built: for example palaces to beautify the city (and to show its importance) and surrounding walls to defend it from the attacks of the Barbarian.

After the fall of the Roman Empire, Verona remained an important city, even under the conquest of other populations: the Ostrogoths, the Longobards and the Franks under the lead of Carlo Magno and his son Pipino.

With the birth of the Holy Roman Empire of the German Nation[89], the city became an imperial feud. The germanic sovereigns used to stay in the city during their trip to Italy.

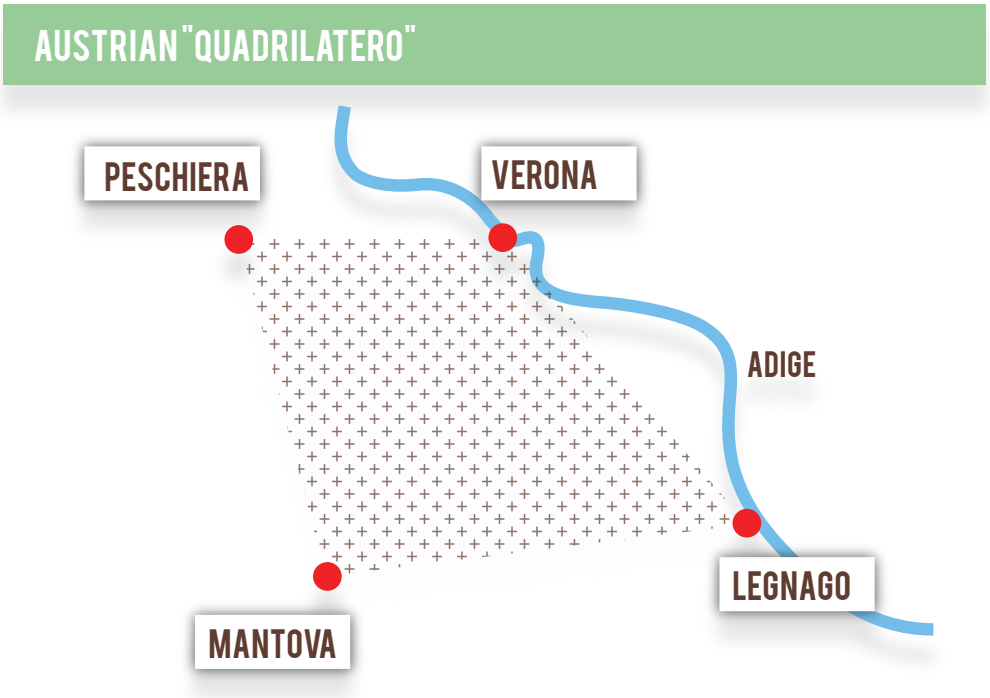
After the end of the feudal submission, in 1136 it was born the Verona Council and to defend the communal freedoms, soon it was founded the Veronese League that joined the Lombard regional League. Forty years later, the League defeated Federico Barbarossa at the battle of Legnano, conquering the autonomy of Italian towns.

The local Scaligeri[90] domination started in 1262 when *Mastino della Scala* was elected as captain of the community and it had its apex in 1311 with the Cangrande lordship. At this time many building which had been destroyed by the earthquake in 1117 were rebuilt in Romanesque style. In the following century Romanesque style gave way to the Gothic period. From about 1400, for four centuries the city was annexed to the Republic of Venice; in this period the city lived the Renaissance, the crisis of 1600 and the age of Enlightenment. Towards the end of 1700 Napoleonic troops entered the city, but the very following year the citizens rebelled, although the uprising was quickly put down. In 1797 Verona was ceded to Austria by Napoleon.

With 1800 Verona enters into its contemporary era. With the peace of Luneville the town was divided into two zones, one under the Austrian control and the other one with French

89 In 962 Otto I, the Holy Roman Emperor, received the imperial crown from Pope Giovanni XII. This ceremony, alongside the union of Germany and of Italy, established the Union of the Crown of Germany and the Imperial Crown, forming the Holy Roman Empire of the German Nation (in German "Heiliges Römisches Reich Deutscher Nation")

90 La Scala family, also called the Scaligeri dynasty, was one of the most Middle Ages Italian lordships who reigned on Verona from 1277 to 1387 a.C. Its symbol was a staircase, which nowadays continues to be the symbol of Verona. Many men of La Scala family used to have the word "dog" (ita: Cane) within their name, as a symbol of their aggressiveness and pride.



lordship. This lasted a few years: in 1805 the city passed to French kingdom until the fall of Napoleon. In 1815, the Congress of Vienna and the birth of the Kingdom of Lombardy-Venetia started half a century of Austrian domination. The city became very important from a military strategic point of view, as the main stronghold of the defensive "Austrian Quadrilatero" (see *image 7.05*) composed by Verona-Peschiera del Garda-Mantua-Legnago. For military purposes the streets inside Quadrilatero had been fortified and the railways built.

Image 7.05: the Austrian Quadrilatero

Verona was annexed to the Italian realm in 1866, after three wars of independence, with an almost absolute majority popular vote (only a citizen on 16.100 voters said "no").
In the first years of the realm, the city was overturned by some catastrophic events: the flood of the river Adige in 1882, the Great War (1915-1918) and the World War II. The April 26, 1945 the American military entered in Verona to end the conflict and a few days later the partisans gathered in the Arena to lay down symbolically their weapons and mark the end of the war and the beginning of a reconstruction era.
To cope with the heavy losses suffered over the centuries, Verona inhabitants became skillful to reuse building materials;

Image 7.06: the Fantastic Humorous Fair, 1800 ca

an example is the collapse of the Arena, as a result of the earthquake in the 12th century, after which the citizens used many bricks from the ruins to rebuild their homes. The arena covered a lot of functions over the centuries: it was the popular theatre for entertainment, exotic animal exhibitions (see the *image 7.06*), public executions, competitions, gladiators fights and so on; but it has been also a place to live in - the bows were inhabited by citizens or used as open shops, as depicted in the *image 7.07*. Verona was a city of merchants and a large number of streets and squares owe their name to the profession they hosted in the past (Piazza delle Erbe, Piazza dei Signori, via dei Pellicciai, la Porta dei Bombardieri and so on).

Verona hosted many historical figures of great value, for instance Garibaldi and Dante (who lived here after his exile). Even Shakespeare went to Verona, where he learned the

Image 7.07: merchants of vases out of the Arena

legend of Romeo and Juliet that led him to write the most famous version of the story. To cope with the enormous visitors demand the Verona Council gave the birth to many tourists attractions: the main examples are the Juliet's balcony, the Romeo's house and the Dante's square.

7.2 Field Research on Verona

The field research is a methodology aimed to collect data on a location, using methods as the online and in loco interviews/ questionnaires and the direct observation.
During this phase I went to Verona at weekends and holidays periods, observing tourists and citizens and their way to move in the city. I took photos of temporary and permanent architectural barriers, to identify the level of urban accessibility

Image 7.08: architectural Barriers around Verona

for people with mobility impairments (see the images in the paragraph 4.2.3). I have also made a photo comparison between the archive of historical images[91] and the current life in Verona. It has been very interesting to notice the iconic buildings and the tourist attractions have changed their style in time, also it their structure has remained unvaried; many buildings have even changed their functions. But their level of accessibility has remained the same over time, and often it excludes people with mobility impairments. In the *image 7.08*, you can see some architectural barriers which are due to the original structure of the city.

I have visited Verona several times, collecting data and photos on the actual level of AfA and on the tourist offering. In the next paragraph I will talk about this field analysis to explain why the city of Verona is a suitable location to host my service.

7.2.1 Accessible Verona

As a part of the field research phase, I have analyzed the urban level of Accessibility for All in Verona, visiting the city and making a photo feature (see *image 7.09*).
In these occasions I have noticed that Verona is a city which gives attention to the issue of urban accessibility. For instance in the July 2012, in occasion of the International Day of People with Disabilities, the municipality of Verona renewed the project *dismappa.com*, an online service to value the historical city center with a mapping of the fully

91 A source of photos has been the Alinari collection of pictures about Verona, contained in the book Verona per tutti (1947).

Image 7.09:
Verona city centre

and partially accessible public places. This service answers to an issue which hit the minority of people, individual with mobility impairments, proposing city tours for people on a wheelchair. The project was born from the necessity of people with impairments to plan their visit to a location, understanding which spaces are accessible for them. Many blogs written by tourists with motor disabilities, for instance *www.diversamenteagibile.it*, report their experiences around the world and show how they must plan the journey in any detail and choose just the tourist attractions which are accessible, especially in cities with a multilayered urban tissue. To solve this problem Verona proposed *dismappa*, an informative service. But it is not a solution to the issue, because many places still are not Accessible for All, but rather an archive of accessible attractions.

Talking about the local accessibility it is crucial to introduce, at this point of the dissertation, the city's origins – which I have analyzed in detail at paragraph 7.1. Despite Verona is a city built on the Adige River, and which is therefore made of multiple layers (the layer of the river, the bridges, the living centre, the hilly areas), it presents a good level of accessibility, at least around the city centre. The flat areas of the centre, which are depicted in the *image 7.09*, are marked by ground-level platform with ramps for wheelchairs, while the uphill and downhill areas are often equipped with stairways flanked by ramps; the ramps are quite often present around the city, making the urban tourist areas easily accessible for the users with mobility impairment. The image depicts three area of the city: the first image is the Arco dei Gavi, a monument which is accessible for all because it is placed on a flat pavement

Image 7.10: narrow sidewalks

without architectural barriers; the second image depicts the backside of the Arco, located by the river, and the parapets which are transparent to make the site accessible even from a visual point of view – parapets, as mentioned in the paragraph 4.2.1, are visual obstacles for individuals on wheelchair.
However, these measures do not make of Verona a place totally accessible for everyone. When tourists step out of the city centre the situation changes (and sometimes there are barriers also in the city center). For example, the sidewalks do not always allow the fruition by people on wheelchairs (as depicted in the *image 7.10*); in the new urban interventions the appropriate width of a sidewalk is at least 100 cm, while those are narrower.

Despite all - and considering the original structure of the town - Verona is very accessible for tourists which can visit

MAP OF CHECKPOINTS

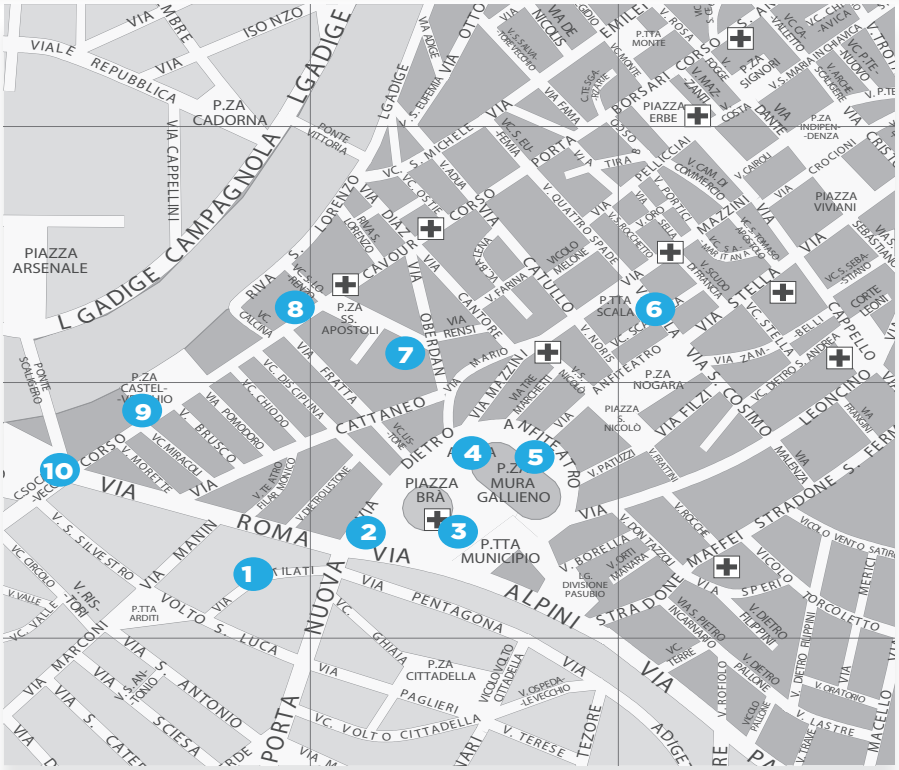


Image 7.11: map of checkpoints around Verona

the majority of open air tourist attractions.
A point in favor for the city's accessibility is the closure to the traffic in the central areas, during the holidays and the high tourist season, enhancing the safety of visitors.

7.3 The background story (and other versions)

At this point of the chapter it has been outlined that Verona has a strong artistic component: it is cluttered with historical buildings which represent different architectonic styles, statues and frescos. As many Italian cities, the local art attracts the majority of tourists. For this reason the location is suitable to host a series of *ArtRaces*.

The *image 7.11* depicts a series of checkpoint on the tourist area of Verona.

Once the service has become established, the city could host different types of local races based on stories and legends. The race based on art is just a declination of the service framework, which can be based also on local tales, legends and curiosities. In the case of Verona - a town which was shaped by different populations through ages – there is a wide set of local myths and legends, which can be used as leading stories of the urban race. Some legends and tales are due to the fact that the city hosted many important guests, for instance Dante, Garibaldi, Goldoni, Goethe, Byron, Salgari and Shakespeare, shaping their masterpieces (think about the fame of the Shakespeare's version of the Romeo and Juliet tale or to the Dante's Inferno which is dedicated to a Lord of Verona, Mr Cangrande II).

Many people, also the same citizens of Verona, do not know the city hosted this figures; moreover, many tourist attractions are linked to curious stories and events which are unknown by the majority of people. A background story could be composed by all these cultural "pearls", creating an alternative tour.

The urban game can also follow a background story, like the one of the *Arena di Verona*: in the Middle Ages every niche of the Arena hosted a stand of local producers in the open market; these merchants lived in different areas of the city, depending on their production. The race could start from the Arena and continue around the city, through the streets that once housed commercial professions, for instance via Pescheria (the fishmongers' street), via dei Pellicciai (the neighborhood for artisans of leather and fur) or Piazza delle Erbe (the point of sale for the greengrocers').

The Arena's tale is just one of the possible episodes; other leading tales could be:

- The love story between Romeo and Juliet
- The important guests
- The great flood in 1882
- The tale of Santa Lucia
- The horse fair
- Verona seen by Emilio Salgari
- The mysterious "womenicide" in 1900
- Verona Belle époque
- The life along the Adige river in the last century
- The Masks of Verona

7.4 Stakeholders

A crucial element supporting the service framework – which I have outlined in the previous chapters of the dissertation – is a cohesive network of stakeholders. Talking on the case study of Verona, as a location hosting the service, it is fundamental to analyze the local figures which can provide, support, promote and finance ArtRace on the territory.
In the paragraphs 5.1 and 6.1.2 I have explained how every location which hosts the framework should have the support of local associations and travel agencies. These stakeholders are essential for the promotion of the Game Service System over the local territory and, in the case of the associations, to provide some of the volunteers which compose the service staff. In Verona there are several associations dealing with the individual's rights, with particular attention towards people with disabilities. I'd like to signal the GALM association (Medullar Damaged Animation Group) and the project dismappa, which I have earlier introduced in the essay.

> GALM promotes and supports every initiative – at different level and concerning various spheres, from the private to the public, from the religious to the scientific, from the healthy to the educational, to mention a few – which directly or indirectly aims to foster the social ad individual progress of people with medullar damages and to diffuse and improve knowledge on the issue.
> Dismappa is in charge of mapping the Accessibility for All in public spaces around the city of Verona, generating an archive of accessible tourist attractions.[92]
Both the associations are grounded and recognised at local level and they can support the initiative ArtRace, since it meets their values.

In the province of Verona there is a Communal Council of Disability, which embodies the politic will to make a priority effort for projects, initiatives and social interventions which support the daily life of citizens with impairments.[93]
The Council is composed by some tens of associations which make reference to different kinds of disability (sensorial, motor and mental) towards the common goal of fostering

92 www.dismappa.it
93 www.comune.verona.it

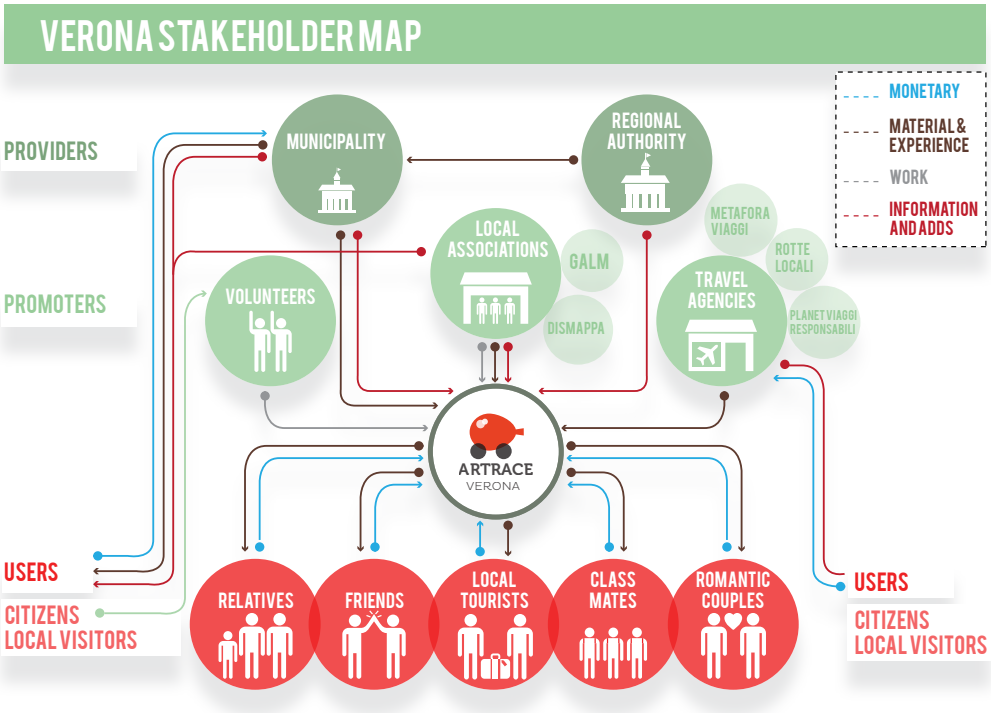


Image 7.12: map of stakeholders in Verona

integration of the disabled person in the society.
A section of the official website of the Commune of Verona lists the competences of this public authority:

> realise information campaigns to foster the physical, social and cultural integration of people with impairments;
> create systems of information on issues regarding disabled individuals and initiatives adopted for the development of equal opportunities;
> enhance the coordination of various public administrations using different kinds of tools (brochures, flyers, conventions and meetings, essays and communication through media channels);
> access to information which circulates in the community;
> access to cultural, sport and recreational activities for individuals with impairments;
> foster the participation of individuals and their representatives on issues regarding mobility impairments, with the goal to reach a coherent and global consent;
> realise surveys and research to improve the quality of life and the enhancing of programmes on prevention and diagnosis.

With the support of these territorial authorities and of the citizens of Verona (see *image 7.12*), the project ArtRace would be kicked-off on the Italian market, supported by strong design basis which will determinate its quality and feasibility. Thanks to the support of the Communal Council on Disability, the service gains validity and visibility on regional and extra-regional level; in this way it can expands on other locations, in the close future, towards a national vision of Accessibility for All.

CONCLUSION

Long term projects

The Game Service System offering has many potentialities of improvement and expansion, wheter territorial, formal, linguistic and of target.

From a territorial viewpoint, the service can find an application in many Italian cities, whether they be large or small, and it is an excellent tester to check the level of urban accessibility of every location, as well as an initiative to attract tourists and provide them with an alternative solution to the classic city tour. The service can be placed in the business area dedicated to the Zero mile Tourism, addressing citizens and local visitors. In an ideal scenario the service will be adapted to the main visited location of Italy (according to the data processed by ISTAT and ENIT and shown in the chapter 3.5.1, the most visited cities of Italy are located in the regions of Veneto, Lombardia, Lazio, Toscana, Trentino Alto-Adige and Emilia Romagna) and hereafter to the other Italian regions.
The first cities where I foresee a service application are: Verona, Mantua, Milan, Florence, Rome, Trento and Bologna, which are the most visited locations by local tourists in the first touristic areas of Italy.
The desired result is that of building a network of cities with a high level of Accessibility for All, which leads Italy to improve the national level of urban accessibility, raising at the same time the tourist market (starting from the local offering of Zero mile Tourism) with a series of alternative tours.

From a formal viewpoint, the service can assume different shapes: for example it can have an artistic connotation or a cultural feature, it can be based on local legends or aimed to discover curiosities on the location. The connotation depends on the history of the location, on its peculiarities and on the expectations of the target range. To satisfy different kinds of visitors, a single location can offer many kinds of team race, for instance based

on different local stories. Moreover, the materials which support the service would improve over time. For instance, in the paragraph 7.1 I have introduced Joelle Philibert's advice for a future improvement of the service, in which players will ride manual and electric wheelchairs instead of the cart.

From a linguistic perspective, in an initial phase the service is addressed only to local visitors and citizens of the location (indeed, it uses the Italian language); on the next phase it would be developed an English version for international tourists.

Since the service works as a tool to increase awareness of people on a social issue, an alternative target could be the schools, for which the service offers an opportunity to practice civic education. The service will be structured differently depending on the level of the visiting class (primary, secondary or higher level) but it will propose itself as a tool to engage new generations towards a sensitivity improvement for the social inclusion of people with motor impairment. An alternative target, to whom addressing the service offering, is the international tourist: proposing a tourist service for visitors from abroad means to develop an English version and to involve volunteers who can speak English. To meet their expectations, it is crucial to study their needs and desires, without renouncing to offer an authentic experience on local culture.

Before the launch of the service, it is necessary to effectuate other playtest sessions, with different kinds of users and in various location (with different level of Accessibility for All).

In addition, it is crucial to develop a website to organize, and advertise the service, attracting users to purchase the service and become Good Citizens, with attention towards the issue of Accessibility for All. The website will be developed by a Graphic Design Studio, which will study also the coordinated image of the service (logo and advertisement).

BIBLIOGRAPHY

A

ALEXANDER, C. (1979), The Timeless Way of Building. Oxford University Press

ANHOLT, S. (2004), Place Branding journal Vol.1, 1, 4-11. Henry Stewart Publications

B

BANDINI BUTI, L. (2008), Ergonomia Olistica. Milano: Franco Angeli

BATESON, G. (1977), Verso un'ecologia della mente. Adelphi

BAUDELAIRE, C. (first edition 1857), "The journey" contained in the book Fleurs Du Mal

BERTOLO, M. (2013), Gioco e narrazione, esistenziali affini, in Matrone M., Pinardi D. Narrativa d'impresa. Milano: FrancoAngeli

BERTOLO, M., DE LUCA, V. (2012), Urban games to design the augmented city. Eludamos, Journal for Computer Game Culture, 6(1)

BERTOLO, M., DE LUCA, V. (2012), La città interattiva. Un approccio ludico, inside Galbiati M., Piredda F. Visioni urbane. Narrazioni per il design della città sostenibile. Milano: FrancoAngeli

BERTOLO, M., MARIANI, I. (2013), Meaningful play: learning, best practices, reflections through games, in Mitgutsch K. et al Context Matters! Exploring and Reframing Games in Context. Proceedings of the Vienna Games Conference 2013, Vienna: New Academic Press

BERTOLO, M., MARIANI, I. (2013), Game and Play as means for learning experiences. In INTED2013 Proceedings: 7th International Technology, Education and Development Conference, Valencia

BERTOLO, M., MARIANI, I. (2014), Game Design. Gioco e giocare tra teoria e progetto. Milano: Pearson

BERTOLO, M., MARIANI, I. (2014), A Hostile World. A

pervasive urban game to sensitise and foster a cross-cultural reflection, inside Ruggiero D. Cases on the Societal Effects of Persuasive Games. Hershey: IGI Global.

BOGOST, I. (2007), Persuasive games. The Expressive Power of Videogames. The MIT Press

BORELLI, G. (1977), Una città e il suo fiume. Verona e l'Adige

BROWN T., BARRY K. (2009). Change by Design, Harper Collins, New York

BUCHANAN, R. (2001), Human Dignity and Human Rights: thoughts on the Principles of Human-centered design. MIT Press Journal

CAILLOIS, R. ([1958] 2002), Man, Play and Game. The Free Press of Glencoe Inc.

CANDELA, G., FIGINI, P. (2012), Economia del turismo. McGraw Hill

CANESTRINI, D. (2001), Andare a quel paese. Vademecum del turista responsabile. Feltrinelli Traveller

CARSE, J. P. (1986), Giochi finiti e infiniti. La vita come gioco e come possibilità. Arnoldo Mondadori EWditore

CASATI, M. (1973), I documenti terribili. 1944: il processo di Verona. Mondadori

CHATWIN, B. (1997), Anatomy of restlessness. Jonathan Cape Publishing

CINQUETTI, N. (2003), I bambini alla scoperta di Verona. Lapis e Palombi Editori

COLLINA, L. (2005), Design e Metaprogetto. Teorie, strumenti, pratiche, POLI.design, Milano

COLOVINI, L. (2002), I giochi nel cassetto: guida teorica per aspiranti autori di giochi. Venice Connection

COLTRO, D. (1983), L'albero della memoria, filastrocchi canti

e fiabe della cultura orale veneta. Morelli Editore Verona

COMUNE DI VERONA, Verona ieri e oggi. Photos from the Alinari collection

COSTIKYAN, G. (1994), I Have No Words & I Must Design. The article was published in Interactive Fantasy #2

COSTIKYAN, G. (2013), Uncertainty in Games. MIT Press

COOPER, A. (1999), The Inmates Are Running the Asylum. Sams Publishing

COOPER, C. (1998), Tourism: Principles and Practice. Pearson Education

CSIKSZENTMIHALYI, M. (1990), Flow. The Psychology of Optimal Experience. HarperCollins

D

DAL FORNO, F. (1973), Case e palazzi di Verona. Banca mutua popolare di Verona

DE BONO, E. (1999), Sei cappelli per Pensare. Rizzoli

DE CESCO, B. (1981), Una città con le ghette. Verona-belle èpoque (1882-1914). Bertani editore
DE LUCA, E. (2005), Sulla traccia di Nives. Mondadori Strade Blu

F

FEZZI, A. (2004), Sognando un Negroni. Luoghi e locali del giovane Veronese. Bonaccorso Editore

FLANAGAN, M. (2009), Critical Play. Radical Game Design. The MIT Press

FLUSSER, V. ([1997] 2004), La cultura dei media. Milano: Bruno Mondadori

H

HUIZINGA, J. ([1938] 2002), Homo Ludens. Torino: Piccola biblioteca Einaudi

I

IACOVONI, A. (2006), Gamezone. Playground tra scenari virtuali e realtà. EdilStampa

J

JENKINS, H. (2009), Confronting the Challenges of Participatory Culture. Media Education for the 21st Century. MacArthur foundation

JOHNSON, S. (2001), Emergence: The Connected Lives of Ants, Brains, Cities, and Software. New York: Scribner

JOHNSON, S. (2005), Tutto quello che fa male ti fa bene. Saggi Mondadori; Riverhead Books

JUUL, J. (2002), Half-real. Video Games between Real Rules and Fictional Worlds. The MIT Press

JUUL, J. (2006), Half Real. MIT Press Publishing

K

KOSTER, R. (2005), A Theory Of Fun for Game Design. Paraglyph Press

L

LEED, E. J. (1991), La mente del viaggiatore, Dall'odissea al turismo globale. Bologna, Il Mulino

LUPTON, E. (1996), Mixing Messages. Graphic Design in Contemporary Culture. Cooper-Hewitt, National Design Museum, Smithsonian Institution

M

MAGERKURTH, C., CHEOK, A. D., MANDRYK, R. L., NILSEN, T. (2005), Pervasive Games: Bringing Computer Entertainment Back to the Real World.

MANZINI, E. (2011), Design for Social Innovation. DESIS Network paper, Politecnico di Milano

MANZINI, E., JEGOU, F. (2008), Collaborative services. Social innovation and design for sustainability. POLI.design

MANZINI, E., JEGOU, F. (2003), Sustainable Everyday. Scenarios of Urban Life. Feltrinelli

MARIANI, I. (2011), Ludicity. Un approccio ludico alla comunicazione delle identità locali. Graduation thesis at Politecnico di Milano

MARIANI, I. (2012), Il gioco e lo spazio urbano. Una finestra su

Milano, in Galbiati M., Piredda F. Narrazioni per il design della città sostenibile. Milano: Franco Angeli

MARIANI, I. (2013), Un mondo altro, narrazioni ludiche sopra l'ordinario delle città, in Matrone M., Pinardi D. Narrazioni d'impresa. Per essere e essere visti. Milano: FrancoAngeli

MARIANI, I. (2013), Games for social innovation and change. The ludic paradigm to sensitize and foster socio-cultural awareness and social innovation. Cumulus Dublin 2013 Proceedings

MARIANI, I., CIANCIA, M. (2013), The urban space as a narrative and ludic playground. An interdisciplinary approach to communication design system: 2nd CIDAG Proceedings.

MONTOLA, M. (2005), Exploring the Edge of the Magic Circle: Defining Pervasive Games. University of Tampere, Game Research Lab

MONTOLA, M., STENROS, J., WAERN A. (2009), Pervasive games, Experiences on the Boundary Between Life and Play. Morgan Kaufmann Publishers

MORRILL, C., SNOW, D. A., WHITE, C. (2005), Together Alone: Personal Relationship in Public Spaces. Berkeley: University of California Press.

MCGONIGAL, J. (2011), Reality is Broken. The Penguin Press

MERONI, A., SANGIORGI, D. (2011), Design for Services. Gower

MOGGRIDGE, B. (2006), Designing interactions. MIT Press

MONTOLA, M., STENROS, J., WAERN, A. (2009), Pervasive games, Experiences on the Boundary Between Life and Play. Morgan Kaufmann Publishers

N

NORMAN, D. A., ([1988] 2002), The Design of Everyday Things (originally under the title The Psychology of Everyday Things). Newprint

NORMANN, R. (2000), Service management: strategy and leadership in service business. Wiley editor

P

PATULLO, P., MINELLI, O., HOURMANT, P., SMITH, P., VIESNIK, L., DALL, A. (2009), The Ethical Travel Guide: Your Passport to Exciting Alternative Holidays. Edited by Earthscan
PRENSKY, M. (2001), Digital Game-Based Learning. McGraw-Hill

PRENSKY, M. (2001), Digital Natives, Digital Immigrants. From On the Horizon (NCB University Press, Vol. 9 No. 5, October 2001)

PRESIDENCY OF THE COUNCIL OF MINISTERS, THE MINISTER FOR REGIONAL AFFAIRS, TOURISM AND SPORT (2013), Turismo Italia 2020

PROVINCIAL ADMINISTRATION OF VERONA (1947), Verona per tutti. Municipality of Verona
PUPPI, L. (1978), Ritratto di Verona, lineamenti di una storia urbanistica. Banca Popolare di Verona

R

REESE BROWN, D. (2007), Pervasive Games Are Not A Genre! (They are a sub-genre). Georgia Institute of Technology

ROMANO, P., BELTRAME, G. (2002), Luci sulla città, Verona e il cinema. Marsilio publishing for the event Verona FILM Festival

RUOZI, R., SASSOON, C. (2005), Italia per tutti. Turismo, ambiente e cultura per rilanciare l'Italia che vale. Università Bocconi Editore

S

SCHELL, J. (2008), The art of game design: A book of Lenses, Carnegie Mellon University. Morgan Kaufmann Publishers

SALEN, K. (2008), The ecology of games. Connecting Youth, Games and Learning. The MIT Press

SALEN, K., ZIMMERMAN, E. (2004), Rules of Play. MIT Press

SUITS, B. (1978), The grasshopper: games, life and utopia. University of Toronto Press

T

TOURING CLUB ITALIANO (2007), A Verona con i bambini. Touring Publishing Milan

V

VEZZOLI C., MANZINI, E. (2007), Design per la sostenibilità ambientale. Zanichelli

VILLARI, B. (2012), Design per il territorio. Un approccio community centred. Franco Angeli

VON BORRIES, F., WALZ, S. P., BÖTTGER, M. (2007), Space Time Play. Computer games, architecture and urbanism: the next level. Birkhäuser Publishing

Z

ZAMAGNI, S. (1999), Reciprocity, civil economy, common good. University of Bologna Publishing

ZUCCA, M. (2001), Antropologia pratica e applicata. La punizione di Dio: lo scandalo delle differenze. Esselibri