

Co-Designing Game Solutions for Hybrid Urban Spaces. How Game Elements Can Improve People Experience with the Mobility Services.

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Abstract. Digital technologies integrated in the physical spaces enable new practices that open new possible interactions between people and the urban public spaces. These emerging hybrid spaces might have a crucial role in the processes aiming at having a more satisfying urban life. Mobility is a field strongly impacted by hybrid urban spaces and this should be considered in order to improve the quality of life in cities. In this paper the authors, starting from the concept of Mobility as a Service (MaaS), show as game elements applied in different moments of the travel experience and disseminated in different elements of these hybrid spaces can enhance the interaction between people and mobility services. An example of this assumption is shown, by presenting the outcome of a co-design session, during which a game solution aiming at improving the people experience with the mobility services is identified.

Keywords: Mobility, Hybrid Space, Gamification, Co-design, MaaS

1 Introduction

Mobility behaviors have a higher impact on the environment and on society [1,2], both at individual (e.g. health related effects) and at collective (e.g. air quality related effects) level. As a consequence, it is essential to improve the quality of the mobility services, in order to encourage people to more sustainable behaviors. In order to do that, it is fundamental that the mobility services are designed according to a human-centered approach, which consider the human needs and desires and the cognitive schemes of people.

In the last years several disciplines and methods, especially in the design field (e.g. design thinking, service design, etc.), have been focusing on new frameworks which develop solutions according to a systemic vision, which consider the human experience. This is particularly true in relation to complex services of the cities, which consist in both physical and digital elements.

Also the mobility field is affected by this transformation, going towards a more human-centered and systemic model of transportation. With this regard, the present paper continues the work of the authors about how the gamification approach can improve the interaction of people with the mobility services [3]. In details, the authors start from the assumption that in a multimodal and multiservice transportation scenario the gamification approach helps to connect and integrate the ecosystems of elements composing the travel experience of the user. Indeed, the use of game

elements applied to mobility services could improve the quality of interaction by providing consistency to the whole journey and by facilitating the travelers in reaching multiple goals. The aim of this paper is the design of gamified solutions for mobility services by following a collaborative approach.

First of all, the authors analyze the general context in which the interaction with the mobility services take place. So, they explore the urban transformation occurred with the widespread of digital technologies and the new related social practices. (Section 2). The second element the authors take into account is the shift of the mobility services towards a Mobility as a Service (MaaS) scenario, i.e. an approach that considers the complexity of mobility services and puts a big effort in the fulfillment of users' needs (Section 3). Then, they analyze some other existing solutions and academic studies that apply gamification in the mobility field in order to improve the travel experience. Here the focus is mainly on the gamification mechanisms and tools that create user engagement (Section 4). Then, some practical examples about the co-design of game solutions aiming at improving the people experience with the mobility services are presented and discussed (Section 5). Finally, the conclusions of the paper (Section 6).

2 Hybrid Public Spaces of Interaction in Mobility Services

Digital technologies supporting the daily life of people have becoming part of their surrounding environment, including the city. Indeed, pervasive mobile and smart devices connected to the Internet, along with Location-Based Services (LBS), have been more and more integrated into the urban environment, enabling new possible ways of interaction with the physical public spaces of the city. In details, the boundaries between physical and digital public spaces have blurring as a result of these new types of urban interfaces, so opening to new possibilities of perception and relationship with the urban context and the other people.

Manovich [4] points out how technological applications (creating dynamic and rich multimedia information, often localized) integrated into physical space have transformed it into a dataspace where data are both extracted (such as in the case of video surveillance cameras) and delivered (such as in the case of smartphone or video displays in public spaces presenting digital information to passersby). This creates a new and contiguous experience, where the spatial and the information layers are equally important.

Also Benyon [5] identifies a new type of space, that he defines as “blended space”, where the physical and digital are tightly interwoven and that people experience as a whole. The definition of blended space brought by Benyon is strictly connected to the identification of an adequate interaction design approach for this new kind of space. In effect, as he states, “the commingling of the physical and the digital in blended spaces leads to new social spaces and new conceptual spaces”. In details, by being present in blended spaces, people go through new experiences and new ways of engaging with the world, so that designers need to focus on the whole user experience, at a human scale.

Similarly, de Souza e Silva [6] calls “hybrid space” the conceptual space created by the embedding of Internet in the outdoor (including everyday activities in public spaces) through mobile devices that set a more dynamic relationship with online information and social networks.

Mobility in general is a concept strictly connected to the creation of hybrid spaces [6, 7] and more broadly to the blurring of borders between physical and digital spaces [8].

In the vision of de Souza e Silva [6] the mobile technologies are crucial for the definition of hybrid spaces, also because they are part of the process of connecting. More precisely, she considers three main overlapping trends that defines hybrid spaces: connected, mobile and social spaces. The focus is not on technology, but on the mix of social practices that occur together with mobility in the merging of borders between digital and physical spaces, for which digital technology become an essential element for promoting sociability and communication in urban spaces.

Also Frith [7] highlights how the possibility of using Internet in mobility has strengthen the relationship of people with physical spaces, as “the digital information of the internet has begun to merge with physical space, leading to new types of hybrid spaces”. In fact, the digital has become part of the physical world in many ways. The most evident is the merging between the physical spaces through which people move and the digital information they interact with enabled by smartphones. By this merging not only the nature of the information changes, but also that of the interaction.

Indeed, the city is included in the renegotiation of experiences and spaces because of the merging of digital and physical spaces. Especially public spaces plays a crucial role [6, 4], as they are social spaces where mobile and other digital interfaces are widely used, even for formerly private activities. The centrality of public spaces derives also by the strategic role of this spaces in the urban context as they influence the city life and appearance and they are essential for the creation of a sense of community and of civic engagement [9, 10, 11, 12].

Nowadays, because of the nearly constant use of mobile interfaces, the perception of urban context is deeply influenced by the creation of hybrid spaces, as the borders between remote (i.e. context created by the smartphone) and contiguous contexts (i.e. the physical spatial area shared with other people in proximity) are no longer clearly defined [6].

As a consequence, the city is made of several hybrid social public spaces merging different and discontinuous places within one another. In this sense, the city cannot be considered just a setting, but it is a complex interface holding inside several interconnected systems. Of course, the services offered by the city are part of this interface and cannot ignore the transformation occurred in the way people interact with the urban spaces.

According to Frith [7] the fact that a place is constructed by movement put a focus on the ways people manage their experiences with everyday mobility, as they influence the construction of the city as a whole.

In a previous work [3] the authors of this paper analyzed the effects of this transformation on the city services, and more specifically on mobility services, starting from the observation that digital environments made of interconnected devices diffused into the city are widely used to boost different kind of primary and ancillary services in the mobility field. For example, through different kind of devices (from personal mobile devices to public interactive displays and totems) and location-aware features the travelers can be assisted and entertained during all their travel. It is important to build a digital ecosystem supporting the exchange of real-time and crowdsourced information in order to significantly improve the quality of interaction with the mobility services and the overall user experience. Especially the social and open aspects of the interaction has to be taken into account, as they trigger a series of participatory processes that sustain the ecosystem and make effective the service itself.

Since the urban public spaces, in particular in their hybrid form, are the main interface used by the traveler when using mobility services, their role of spaces for encounters with the different and the unpredictable that favoured sharing and collaboration [11] should be encouraged. In this regard urban gamification applied to

the interaction with urban services and hybrid public spaces is a powerful tool for enhancing travel experience by adding value to the social connections.

Again in the work of de Souza e Silva [6] can be find how hybrid spaces arise because of the use of mobile technologies as social devices and then how mobile spaces can be considered as networked social spaces. Moreover, she points out how hybrid-reality (location-based mobile) games (i.e. multi user games played with cell phones equipped with location awareness and Internet connections) are one of the most engaging way to bring networked communities into hybrid spaces, also allowing players to use city space as the game board.

So, we can affirm that the interfaces defined by the social use of hybrid space can be enriched with another element that could improve the user experience in the mobility domain, i.e. gamification. Of course this brings to a reconfiguration of the urban spaces because of the social practices arising from the interaction taken place into the urban space, considered as an interface. In details, the game experience creates an imaginary playful layer that merges with the city space [6] influencing people's behavior and fostering the sharing of information and practices, even with strangers. At the same time, the use of gamification approaches could have a positive effect on the users perception and understanding of the mobility services through the rediscovery of the city and the services themselves while playing a game. In fact, a large part of the qualitative nature of mobility concerns exactly how the movement is experienced [7].

3 Mobility as a Complex System

In the recent years, the innovation introduced by information and communication technologies have been facilitating the diffusion of innovative forms of transport [13]. In this context, the concept of Mobility as a Service (MaaS) emerged. According to Kamargianni M., Li W., Matyas M., Schafer A. [14] MaaS is an approach which considers mobility as a complex service, where the user needs represent the basis of the design of mobility solutions. Following this approach, it is possible for the users to access to travel conditions and services customized on their specific needs and desires.

As highlighted by Finger M., Bert N., Kupfer D. [15], to reach this aim a central role is played by the Internet. The increasingly use of the Internet in the mobility field gives the opportunity to consider different transport modes during a trip planning operation. For example, as highlighted by Melis A., Prandini M., Sartori L., Callegati F. [18], it allows to integrate public and private transport services. Generally the MaaS model intends to discourage the use of private vehicles, replacing them with alternative travel modes [19], especially those based on sharing forms of transport. The latter, according to Jittrapirom P., Marchau V., van der Heijden R., Meurs H. [13], also incentivates the use of more sustainable transport conditions. Through the use of Internet-based technologies, the information processing is characterized by a greater flexibility and allows a higher level of customization [16]. Nempanu F., Schlingensiepen J., Buretea D., Iordache, V. [17] focus on the ICTs as one of the central elements of the MaaS, by evidencing how they affect different activities and make possible to identify the best solutions for the individual user. In this regard, Hietanen S. [20] stresses how in the MaaS model the presence of a single interface, which combines and integrates the different mobility solutions, allows to propose the travel experience as a unique and effective experience, with a seamless perspective. The latter refers to the optimal and coherent integration of the different transport methods into a single displacement chain.

One of the most evident applications of this perspective is the integrated ticketing mode, which is one of the main characteristics of MaaS. In fact, the purchase of tickets in an easy and integrated way, customized to the individual use of the transport services by the user, assures a unified perception of the journey and simplifies the related planning. These activities, often carried out through smartphones and other digital devices, allow a single payment for multiple trips [19]. Usually there are two methods of purchase. The first is suitable for mobility services with many users; it is characterized by a time subscription that provides unlimited access to public transport. In this case the MaaS actor has a high financial availability and buys the various transport services. As suggested by Hensher D.A. [22], the provider becomes a multimodal service broker, acting as an intermediary between users and the various mobility services available. The second model is suitable for those users who occasionally use means of transport and buy a single ticket each time they travel. In this case, each journey stage is priced separately and therefore the MaaS platform assumes the role of search engine.

Starting from the provided considerations it is possible to affirm that the versatility is one of the main characteristics of the MaaS. This point had already emerged in the first study on MaaS carried out by Sochor J., Strömberg H., Karlsson I. M. [23], who focused on the Sweden model of MaaS. According to these authors, this flexibility concerns different factors, such as the possibility to choose different solutions of shifting and the possibility to pay a price adequate to the real use of the public transport service. However, some authors, such as Vij A., Carrel A., Walker J. L. [24], go further this consideration, by proposing a framework for MaaS which, putting the person at the center, considers a high number of variables able to establish a relationship between the very personal characteristics and the most suitable specific travel solutions.

4 The Role of Gamification in Mobility Field for the Improvement of the Travel Experience

In the mobility field, solutions which implement gamification elements are increasing [25]. The application of these elements aim to reach two main objectives: stimulating sustainable behaviors [26, 27] and encouraging the cooperation among people for crowdsourcing purposes [28].

A good part of the academic literature focuses on how the elements of gamification can improve the quality of the interaction between travelers and mobility services. As pointed out by Wells S., Kotkanen H., Schlafl M., Gabrielli S., Masthoff J., Jylhä A., Forbes [29], an effective interaction can provide an incentive to the user's commitment both to perform daily tasks and to reach wide-ranging objectives. These objectives, as stated by Weiser P., Scheider S., Bucher D., Kiefer P., Raubal. M. [30], can be external, when they are decided by the designer of the system, or internal, if they are set by the user himself. In this regard, the authors want to highlight how important is the role of gamification in connecting these two perspectives, with the aim of assimilating good practices that are defined externally to users. In this sense, the gamification can generate a process that goes beyond competitions end in themselves.

As also emphasized in the study made by Houtari and Hamari [31], the motivations that must stimulate the activity of travelers fall into two types: extrinsic, referring to external evaluation elements, and intrinsic, deriving instead from user preferences. Several authors, among them Matallaoui A., Hanner N., Zarnekow R. [32], show as the overuse of external motivations to stimulate behaviors is negative, because they obtain short-term effects and the results largely derive from the weight

of the reward provided after the competition done. On the contrary, the social prizes can have a greater impact than monetary prizes. In this sense, as suggested by Ariely D. [33], there are various examples of people who adopt good practices more for a good cause than for a monetary reward.

The analysis of the academic literature shows as the engagement provided by gamification in the mobility field refers above all to encouraging sustainable mobility. For example, Navarro K. F., Gay V., Golliard L., Johnston B., Leijdekkers P., Vaughan E., Williams M. A. [34], analyzing the behaviors of people who use apps with these objectives, observe some changes derived from the incentives provided. On the other hand, even in this field, there is a lack of effectiveness of monetary incentives, because these do not maintain long-term effects but they end when the reward ends. Also the indicators that are adopted to activate the engagement assume importance. In fact, indicators such as distance, speed, and the saved CO2 values are often used, but they are considered abstract in the perception of travelers, and are therefore not effective for motivating people. According to Handy S., Van Wee B., Kroesen M. [35], the authors consider that the gamification elements should refer to more concrete factors such as information about comfort, safety, environmental conditions, which are essential for those people who would like to adopt sustainable behaviors.

However, the use of such mechanisms must not be limited only to sustainability, but must necessarily extend to the widest travel experience, as described in the MaaS paradigm. In this way the gamification elements can be integrated into the relationship that travelers have with city elements and in the relationships with other people. As supported by Brito J., Vieira V., Duran A. [26], to achieve this goal, it is necessary to adopt a user-centered design approach, which can connect the gamified elements to the micro-activities that the travelers play in the different journey stages. To achieve the mentioned objectives, the service design should place particular emphasis on the social interaction between users and on knowledge sharing. All this must refer to the whole travel experience and be optimized for each stage, simplifying the most difficult activities and making them more pleasant. In this way, the interactions with touchpoints in the city can be more significant and, according to de Souza and Silva [6], the unpredictability contained in the game makes it exciting, as an unexpected playful experience. The objectives of each journey stages [3] (planning, execution of the activities, receiving information on the carried out activities) can interact with the game elements in a more engaging way. These authors support the importance of a shared experience, which allows to go beyond the short-term effects. In fact, according to Wunsch M., Stibe A., Millonig A., Seer S., Chin R. C., Schechtner K. [36], the collaboration and the common experience of travelers represents not only an important element in achieving a change in daily behavior, but also a mechanism for mutual encouragement in performing the travel-related activities.

Finally, Bellotti F., Berta R., De Gloria A., Dange G., Paranthaman P. K., Curatelli F., Hausler F. [37], introduce the importance of the narrative elements, which if combined with the gamification elements can involve the user, promoting the starting emotional trigger.

5 Co-Designing Gamified Mobility Services

In the previous sections the authors focused on how the use of game elements can enhance the people experience in the urban environment and in particular their interaction with the mobility services. In fact, the assumption at the basis of this work is that in a context where digital technologies are spread in the physical spaces of the

cities, combining and hybridizing with the traditional elements of the places, it is fundamental to rethink the overall experience of people with the urban services and that the game elements can serve this purpose.

Starting from this point, in this section the authors identify some game solutions which aim at improving the people experience with the mobility services. In particular, the identification of these solutions is carried out by applying the co-design methodologies and tools. Actively involving people in designing with the experts the services that they will use is an important activity, since it allows to create solutions that are based on people needs and desires and for this reason the possibility that they will be satisfied in using them is greater and their general experience more positive. In the academic and non-academic contexts, the greatest tendency is towards considering the people not only as final users of a solution, but real partners and active subjects who, through collaborative processes, can ideate and create with expert designers different kinds of solutions [38, 39]. In particular, in this work, a specific target has been involved in a co-design session during which the participant have ideated gamified solutions for mobility services. The section is articulated in two paragraphs: the first one focuses on the methodology followed by the authors during the co-design session; the second one focuses on the obtained outcomes of the co-design session.

5.1 Methodology

Before starting the proper co-design exercise, the aim of the session has been explained to the involved people. In particular, the authors focused on how game elements can improve the people experience with the city services in the urban spaces, by showing some examples from different fields of application. Then, the authors explained the importance of actively involving different stakeholders in co-design sessions, by emphasizing the centrality of their role in identifying their needs and in trying to ideate solutions for the city environment. Finally, a short description about the organization of the co-design session.

The authors decided to focus on a specific scenario: the path that the participants generally follow to reach their place of work or of study. This decision allowed them to reflect on specific moments of their interaction with the mobility service and to identify specific meaningful elements of this experience. In fact, considering the complexity of a service as mobility, it has been necessary to limit the field, by focusing on a more restricted area.

The co-design session has been organized in following three phases.

During the first phase, the involved people individually have been invited to reflect on their usual behavior in the assigned scenario. In particular, they have been asked to identify the three most significant moments in their interaction with the mobility service, also providing a short description.

During the second phase, the members of each team collegially have discussed about the results of the previous phase, by identifying four elements:

1. the most positive elements of their experience with the mobility services;
2. the most negative elements of their experience with the mobility services;
3. the key moments of their experience with the mobility services;
4. the touchpoints with which they interact during their travel experience (not only related to the mobility services, but in general with the activities they carry out during the trip).

In order to identify these elements, each team has been encouraged to complete the canvas present in the Figure 1.

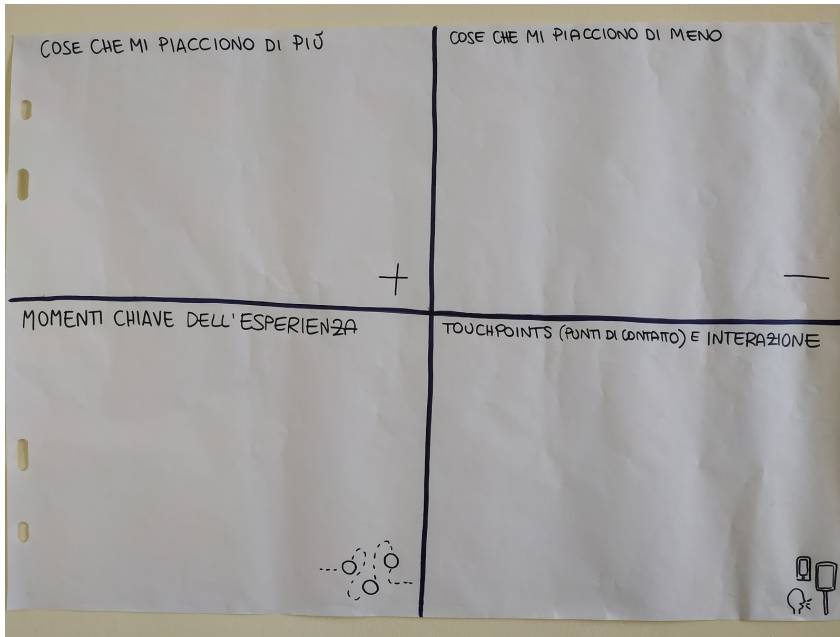


Fig. 1. The canvas used by the participants of the co-design session to discuss their usual behaviors with mobility services.



Fig. 2. The canvas used by the participants of the co-design session to identify the main elements of the ideated game solution.

Finally, during the third phase, the participants ideated a game solution aiming at improving and making easier the people experience with the mobility service. In particular they have identified the following elements:

1. the general objective of the game solution. In particular: the name of the solution, the general characteristics of the target to whom it is addressed, the general activities that it allows to perform and the connection of these activities with the mobility field;
2. the elements of the city involved in the ideated solution. In particular, the participants are asked to identify with which (technological or not technological) elements of the city people can interact, in the context of the identified game solution, considered as game tools of this solution;
3. the game components used in the ideated solution, that is to say the game elements which enable the game (for example: points, badges, game levels, rankings, etc.);
4. the game actions required by the ideated game solution in order to reach the defined objectives.

In order to identify these elements, the participants have been encouraged to complete the canvas present in the Figure 2.

In order to help the participants to identify the point 2 and 3 of the previous list (which could represent a difficult operation for non-expert people), specific inspiring cards have been provided to them. In particular, a first deck of cards contained the representation of some general urban elements (you can see an example of these cards in Figure 3) and a second deck contained the representation of the main game components (you can see an example in Figure 4).



Fig. 3. Examples of the inspiring cards representing urban elements.

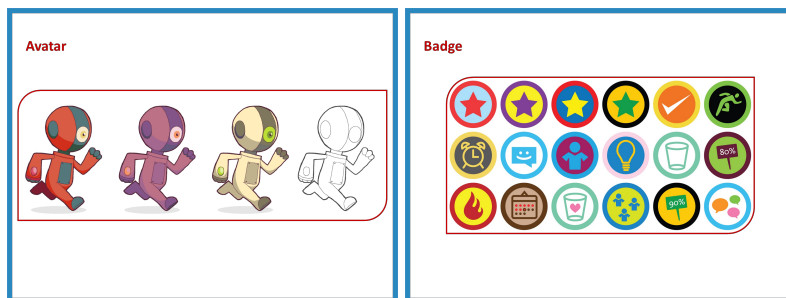


Fig. 4. Examples of the inspiring cards representing game components.

5.2 Main Outcomes of the Co-design Session

In this section the outcomes of the co-design activity related to one of the team of involved participants will be presented. The participants of the co-design session were young adults, aged between 20 and 35 years. The focus of the session described in this contribution was on the mobility service in the city of Rome. The element that is fundamental to let emerge is that the outcomes shown in this paragraph represent only an example referring to one of the teams participating in the co-design session. Moreover, it should be not considered as a project proposal to be implemented in the short term, but as an opportunity for comparison on the topics covered by this contribution, by letting emerge general design possibilities.

First of all, in Figure 5 some of the tabs individually created by the participants and related to the three key moments of interaction with the mobility service are represented.

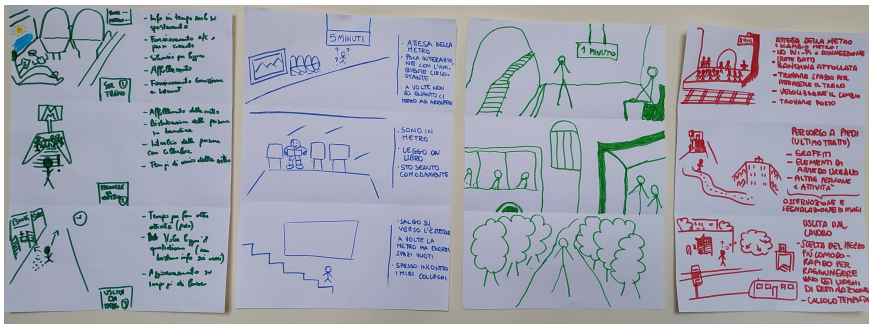


Fig. 5. Representations of the key moments of interaction with the mobility service individually identified by the participants.

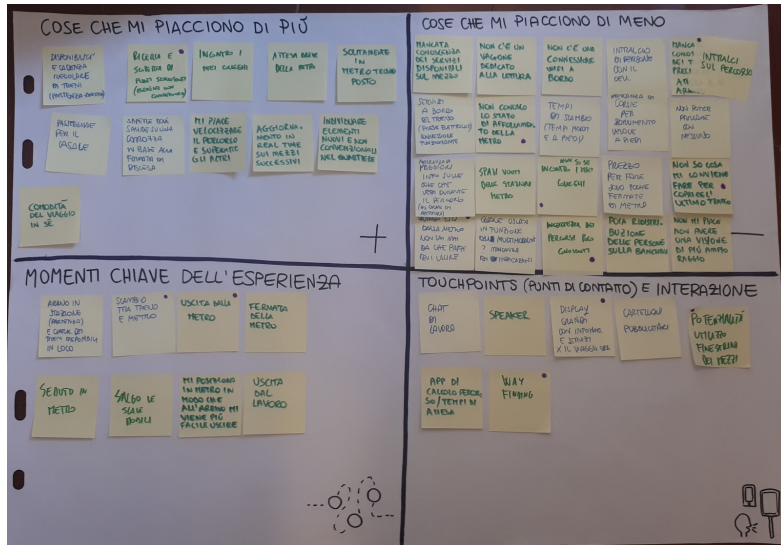


Fig. 6. Identification of positive and negative elements of the mobility service, key moments of the experience and touchpoints.

Generally, the participants have represented the waiting time for the means of transport and the moment of the journey itself, when they are on the means of transport. However, also other stages of the travel are represented, for example: the moment immediately preceding the climb on the means of transport; the moment immediately following the descent from the vehicle; the moment when they arrive at workplace (usually traveled on foot); the journey back home. This set of different moments is particularly meaningful, since this brings out the need of considering the overall people experience of mobility, by rethinking how to design more satisfying moments.

In Figure 6, the canvas related to the discussion among the participants in the co-design session, which represents a summary of the main elements emerged from the first phase of the workshop.

The positive elements of the people experience with the mobility service are related not only to the means of transport (for example the regularity in departure and arrival times with real time updates, the comfort of the vehicle, the possibility of making more efficient their movements and moments of entry and exit from the vehicle), but also to the value-added services and experiences not directly connected to the mobility (for example the possibility of discover new and non-conventional points of interest along their own path, or the possibility to meet some colleague who are on the same vehicle).

The negative elements of the people experience are more related to the mobility service itself. They concern different elements: the lack of the facilities on board (for example: space, WiFi connection, etc.); the uncertainty related to the time of departure/arrival/passage from one vehicle to another; the state of crowding of the vehicles and of the stand-by platform; the impossibility of making more efficient specific moments (the path to arrive to another mean of transport, the exit from the subway, etc.); the sense of abandonment aroused by some transport sites (for example the metro stations); the payment service not centered on the specific needs and real use of the service by the passengers. Also in this case, some participants make evident also elements not directly connected to the mobility service (for example: the lack of social relations, the lack of information related to the points of interest, etc.).

The third element discussed during the second part of the workshop was the identification of the key moments of the experience with the mobility services. As already said, the participants refer to different moments of their experience with the mobility service. Starting from the beginning of the journey, they identified the following key moments: the arrival at the (subway or train) station; the entrance to the subway; the exit from the subway (or another vehicle); the switching moment from one means of transport to another; the waiting moment; the last part of the path, before going to work.

Finally, the participants identified different touchpoints. Also in this case the participants have identified some touchpoints not directly connected with the mobility service. In fact, in addition to the traditional interaction tools made available by the mobility service provider (such as the mobile applications that people can use to check real time information related to the service status, speakers of the subway stations, information displays, etc.), they also identified other typologies of touchpoints (for example the wayfinding which indicates the route to follow for the exit from the metro, the advertising boards at the subway stations, the smartphone used for manage the personal agenda, etc.).

The Figure 7 shows the main characteristics of the ideated game solution.

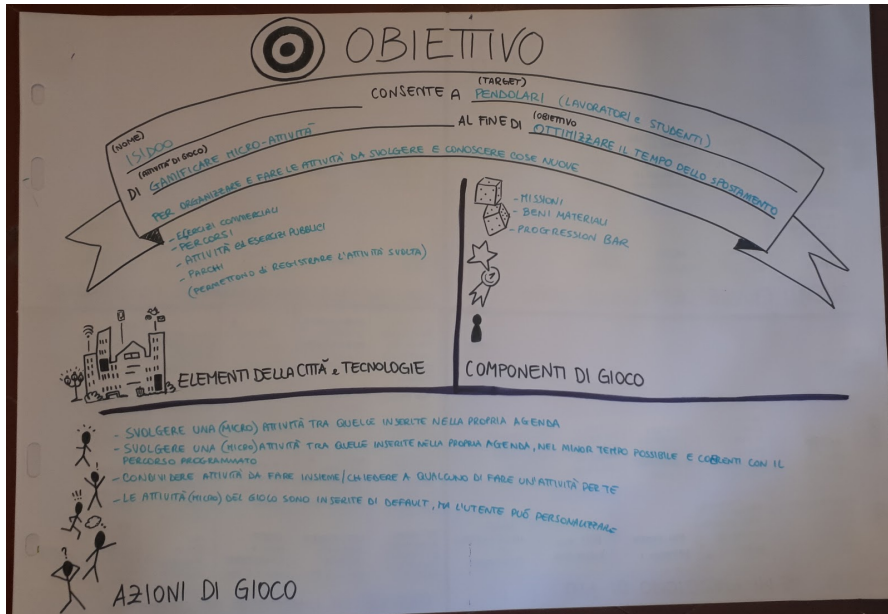


Fig. 7. The concept of the identified game solution.

As already emerged, the general aim of the session was to find game solutions that make easier the people experience with the mobility service. On the basis of the elements emerged from the previous phases, the participants let emerge one of the main need they have, which consists in the optimization and exploitation of travel time. The point they focused on is that the time spent in the travel can be better used, for example encouraging people in doing specific activities present in a to-do list, by gamifying them. This can be particularly meaningful if we consider that specific categories of people (for example the commuters) spend a good part of the day traveling from home to work and vice versa and this prevents from engaging them in other tasks with different levels of urgency (such as paying a bill, shopping, etc.). Moreover, the participant focus also on the need of gamifying the activities most related to the mobility field, rewarding the actions that improve the efficiency and effectiveness of travel (for example: overcome the slowest people, “guess” the exit from the nearest metro station to the place where you have to go, etc.). Starting from this point, the participants identified a game solution which allows people not only to more easily manage these kinds of activities but also to record when the activity is done, by interacting with different elements of the city through proximity technologies.

6 Final Considerations

This paper intended to explore how gamification can be applied in the urban spaces in order to encourage people in improving their experience with the mobility services. In particular, the authors of this paper intended to demonstrate how the urban spaces can be transformed in game platforms where the different elements of the city can be considered as game tools that enhance specific elements or services. Considering that

in the more and more “hybrid” urban spaces, the digital elements deeply transform the physical environment, it is possible to employ these “augmented” city elements as proper game tools. Moreover, the application of game elements in urban spaces has the capacity of transforming urban spaces in more “human” places. In fact, the outcomes of the co-design session represent an example of how game can contribute in making the daily activities of people in the urban spaces less boring and more engaging.

In the authors’ perspective, multiple different solutions using urban elements as game tools which improve the interaction with the mobility services can be realized. Some examples: gamifying the interaction with the tools which enable the sharing transport means; creating smart parking solutions which allow users to interact with the systems available in these spaces; involving people in making their sport activities in the urban spaces more enjoyable, by also tracking their interaction with the different city elements; encouraging people in adopting more safe behaviors during their journeys in the city.

One of the most important challenges to face is to identify game solutions for the urban spaces that not only improve the individual experience, but which is focused on the improvement of the whole society. Starting from this assumption, in the future works, the authors of this contribution intend to explore how the application of game elements can also activate social conscience in relation to specific topics (such as: the environment, the energy, etc.) and to make evident the responsibility of each person towards the future of the cities.

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