TeMA

Journal of
Land Use, Mobility and Environment

This special issue collects a selection of peer-review papers presented at the 8th International Conference INPUT 2014 titled "Smart City: planning for energy, transportation and sustainability of urban systems", held on 4-6 June in Naples, Italy. The issue includes recent developments on the theme of relationship between innovation and city management and planning.

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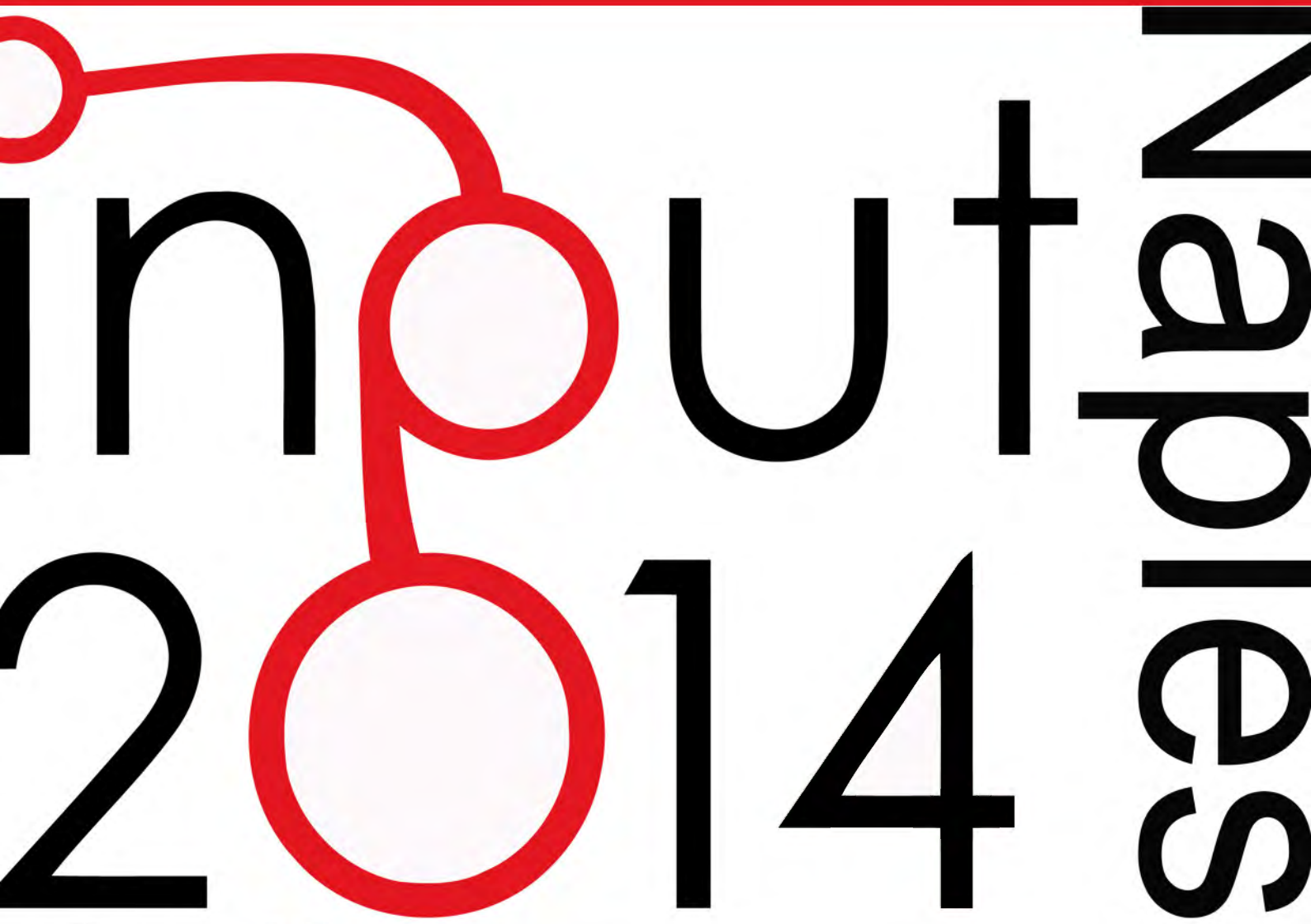


# Smart City

## planning for energy, transportation and sustainability of the urban system

Special issue, June 2014

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TeMA Journal of Land Use, Mobility and Environment

# SMART CITY

## PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

## Special Issue, June 2014

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TeMA Journal of Land Use, Mobility and Environment

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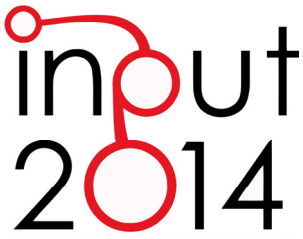
TeMA Journal of Land Use, Mobility and Environment

This special issue of TeMA collects the papers presented at the 8th International Conference INPUT 2014 which will take place in Naples from 4th to 6th June. The Conference focuses on one of the central topics within the urban studies debate and combines, in a new perspective, researches concerning the relationship between innovation and management of city changing.



TeMA Journal of Land Use, Mobility and Environment

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# EIGHTH INTERNATIONAL CONFERENCE INPUT 2014

## SMART CITY. PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

This special issue of TeMA collects the papers presented at the Eighth International Conference INPUT, 2014, titled "Smart City. Planning for energy, transportation and sustainability of the urban system" that takes place in Naples from 4 to 6 of June 2014.

INPUT (Innovation in Urban Planning and Territorial) consists of an informal group/network of academic researchers Italians and foreigners working in several areas related to urban and territorial planning. Starting from the first conference, held in Venice in 1999, INPUT has represented an opportunity to reflect on the use of Information and Communication Technologies (ICTs) as key planning support tools. The theme of the eighth conference focuses on one of the most topical debate of urban studies that combines , in a new perspective, researches concerning the relationship between innovation (technological, methodological, of process etc..) and the management of the changes of the city. The Smart City is also currently the most investigated subject by TeMA that with this number is intended to provide a broad overview of the research activities currently in place in Italy and a number of European countries. Naples, with its tradition of studies in this particular research field, represents the best place to review progress on what is being done and try to identify some structural elements of a planning approach.

Furthermore the conference has represented the ideal space of mind comparison and ideas exchanging about a number of topics like: planning support systems, models to geo-design, qualitative cognitive models and formal ontologies, smart mobility and urban transport, Visualization and spatial perception in urban planning innovative processes for urban regeneration, smart city and smart citizen, the Smart Energy Master project, urban entropy and evaluation in urban planning, etc..

The conference INPUT Naples 2014 were sent 84 papers, through a computerized procedure using the website www.input2014.it . The papers were subjected to a series of monitoring and control operations. The first fundamental phase saw the submission of the papers to reviewers. To enable a blind procedure the papers have been checked in advance, in order to eliminate any reference to the authors. The review was carried out on a form set up by the local scientific committee. The review forms received were sent to the authors who have adapted the papers, in a more or less extensive way, on the base of the received comments. At this point (third stage), the new version of the paper was subjected to control for to standardize the content to the layout required for the publication within TeMA. In parallel, the Local Scientific Committee, along with the Editorial Board of the magazine, has provided to the technical operation on the site TeMA (insertion of data for the indexing and insertion of pdf version of the papers). In the light of the time's shortness and of the high number of contributions the Local Scientific Committee decided to publish the papers by applying some simplifies compared with the normal procedures used by TeMA. Specifically:

- Each paper was equipped with cover, TeMA Editorial Advisory Board, INPUT Scientific Committee, introductory page of INPUT 2014 and summary;
- Summary and sorting of the papers are in alphabetical order, based on the surname of the first author;
- Each paper is indexed with own DOI codex which can be found in the electronic version on TeMA website (www.tema.unina.it). The codex is not present on the pdf version of the papers.

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SPECIAL ISSUE

Eighth International Conference INPUT
Smart City - Planning for Energy, Transportation and Sustainability of the Urban System

*Naples, 4-6 June 2014*

# CREATING SMART URBAN LANDSCAPES

## A MULTIMEDIA PLATFORM FOR PLACEMAKING

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**ABSTRACT**

Infrastructure we have become accustomed to using in a different manner by the cyber city is at the heart of what today is known as the "smart city", in which the whole range of technologies are at the service of the city both to improve the quality of life and ensure its sustainability.

The smart approach to the city construction and transformation finds its roots in the concept of Cyberspace. This is a wide open field, still partially undetermined, which cannot be reduced to one of its components. It serves to interconnect all the devices concerning creation, recording, communication and simulation.

In order to illustrate the smart approach to placemaking - meant as the art of making place for people - and implicitly the achieving of a better quality of life, the new DIV@TER multimedia platform, in course of development, is proposed. Div@ter is a dynamic and interactive platform for the complex-sensitive management of the qualitative data of a territory, whose research project has been financed by POR FESR Lazio Region 2007/2013 Axis 1- Activity 1.1. The synthesis of the Esplanade area in Helsinki case study will complete the paper. This case is in line with the projects and relative goals carried out by Forum Virium Helsinki 2015, which is developing new urban digital services. Among these, the Smart City Project Area is devoted to the development of digital urban services for easier travelling and living in the city through the use of mobile devices which are integrated into everyday objects and activities.

**KEYWORDS**

Placemaking, smart urban spaces, quality of life, multimedia platforms

## 1 INTRODUCTION - THE SMART APPROACH IN PLACEMAKING

The emergence of internet as a medium of communication in Europe in the last twenty odd years has not only produced the dematerialization of the territory and the cancelling out of physical distance (Secchi, 2000) but has also opened up spaces and their users to new meanings and uses (Castells, 1989). Hypertext, interactive multimedia, simulation, virtual reality, telepresence, hyper-reality, artificial life and expert systems are only some of the new forms of smart application. All these devices have in common the exploitation of the molecular nature of digitalized information, and the variety of hybridizations between these techniques and the "classic" media, including the telephone, cinema, television, books, newspapers and museums which are arising with (Levy, 1999).

Castells (1989) refers to the "place of flows" as a real or virtual entity which also includes electronic interconnections, where many temporalities, as well as many simultaneities - which become a-temporal - are allowed. With new technologies, space is downsized to zero and, recreated in a virtual dimension, no longer constitutes an obstacle. These relationships are defined by Castells with the term *cyberspace* or *virtual space*, and are described by means of spatial language such as "information highways", "sites" and "squares". The increase of interchangeability of the spatial collocations of the individuals is linked «to the loss in importance of the *place* in social practice, where by "place" is meant a focus of sedimentation of historical memories, collective or individual symbolic representations, social practices and habits, affective bonds with points of transit and ones which are instrumental, provisional and replaceable, *non-places*, in fact. Or perhaps, in the possible re-elaboration or frequentation of other types of places, whether physical or merely virtual, based on the attribution of symbolic values deriving from other considerations and needs» (Belloni, Rampazi, 1996).

Cyberspace, as described by Mitchell, regards all the forms of interaction between both real and virtual worlds. Its origin, as Levy notes, is American and is attributed to the writer William Gibson, who first used this term in the fantasy novel *Negromante*, giving it the meaning of a universe of the digital net, as a place where encounters, adventures and world conflicts can take place.

Mitchell analysed the individual components of the system of new cyberspace as places for socialising, work, culture, leisure, meeting people on the web, and for the various cyber communities that were then being created, each with its own outlook, customs and requirements but all sharing the cyber distance that both divided and united them.

The network contributes to the construction of the living spaces of its inhabitants; now that it too is configured as an urban space, it creates new landscapes and aggregations of functions. In addition to relating to natural and urban contexts, buildings extend their connections, linking up with the structures created by cyberspace through electronic processors which enable their interactions.

The use of internet has led to a different approach to citizen participation in the construction of the territory. Community hubs, network thinking and social networks are only some of the current relational modalities among web communities. High tech infrastructures are ushering in a new culture of exchange, creating new possibilities of interaction within the communities. Thanks to the innovatory contribution of these infrastructures territorial usage is being reorganised, creating contexts where social exchange comes to replace the more traditional contexts.

The interaction between cyber communities and urban places produces a variety of effects. Graham & Marvin (2001) have focused on two elements in particular: the relational modalities between cyber communities and the public sphere; and the implications of the advent of cities which are entirely cyber. As Patsy Healey (1995) has said, " the physical city must be replaced with virtual urbanity, a city of the mind, enabled by telematics. The hope of this new technological revolution is that it will provide channels through

which knowledge and information can be democratised, dispersed around the diversity of relational webs in urban regions".

Consequently, "the art of making places for people" (Cabe, 2000; Carmona et al. 2010; Lynch, 1960), in order to face the new urban topics, has updated its theory and has added representational tools in order to become suitable to illustrate more complex urban scenes. Indeed computer science and new technologies have in recent decades become increasingly useful supports and more a for improvement of studies and applications in the field of area investigations (Ayeni et al., 2004; Asami, Longley, 2012).

In this respect, new approach to mapping the city have arisen, with the main purpose of identifying the urban dynamicity using direct observation supported by ad *hoc* electronic devices, including: virtual (Ratti et al. 2005), multiscale (MVRDV, 2002), configurational (Hillier, 2012) and complex-sensitive (Sepe, 2013a-b).

The different ways of collecting information are translated into specific display modes which cover a wide range of maps and virtual tools, often using combinations of data to obtain new kinds of information.

As regards, the smart approach to *placemaking* and the new DIV@TER multimedia platform, in course of development, will be illustrated in the following. Div@ter is a dynamic and interactive platform (www.divater.it) devoted at improving the knowledge of tangible and intangible resources of a place, often less considered in the smart services of a city, in order to improve the quality of life of citizens and visitors and support local participation and planning.

The research project has been financed by POR FESR Lazio Region 2007/2013 Axis 1- Activity 1.1. The first results of the case study which was carried out in the Esplanade area in Helsinki, and which has been used as a first test of the Platform, complete the paper. The paper is organized as follows: Section 2 describes the Div@ter platform; Section 3 is focused on the Helsinki case study. Finally, Section 4 draws the conclusions.

## 2 THE DIV@TER MULTIMEDIA PLATFORM

Div@ter is a dynamic and interactive platform for the complex-sensitive management of the qualitative data of a territory (www.divater.it). The Open Source platform, in course of development, allows to import tangible and intangible spatial data from different sources, integrate them with information provided by the users, calculate indicators and represent the information in interactive and immediately understandable maps. It collects the main data using the PlaceMaker method, already experimented in many contexts - including Europe (Sepe, Pitt, 2013; Sepe 2007, 2010), Usa (Sepe, 2013a), China and Japan (Sepe, 2006)- and for different objectives, integrating them with structured data and enabling the development of new services based on them. Div@ter is a Geographical Business Intelligence tool devoted to the re-design of the territory, which is conceived as a unique platform with different entry points, both private and public: for local authorities, professionals and citizens. The PlaceMaker method is an urban analysis and planning method. Its aim is to identify elements that are not recognizable in traditional maps and which constitute the contemporary identity of places, and to outline suitable actions for the protection and sustainable development of these places. By employing a protocol that is at once rigid and flexible, the PlaceMaker method assembles, elaborates and reconstructs data from surveys based on physical reconnaissance, sensorial perceptions, graphical elaboration, photographic and video records, and sets these data against those provided by an overview of expectations, an analysis based on traditional cartography and two questionnaires administered to local inhabitants. It comprises eight phases – five of analysis and three of design – and a Phase 0 that consists in constructing the grid required for the operations which are to be implemented later. The different types of database have to be created to contain the different types of data collected: there are data from anticipatory analysis (sketches, poems, collages, etc...); the denominative and perceptive, the graphical (signs and symbols), the photographic (fixed images), video (moving images)

surveys; the elements deduced from the study of traditional planimetries (graphic signs, symbols etc...); the questionnaire administered to visitors to the places (sketches, words, etc...). The product of the PlaceMaker method consists of two complex maps, one of analysis and of design, which represent place identity and project interventions in order both to establish a dialogue with local people and to complement traditional urban planning instruments as a means to make decisions taking account of the intangible aspects of an area. The information collected and systematized in the course of several surveys, questionnaires and analysis is summarized in the maps in the form of symbols. In the Div@ter platform, places and elements identified with PlaceMaker method are represented by inserting symbols and elements into maps connected to multimedia schedules that can be continuously updated (fig. 1).

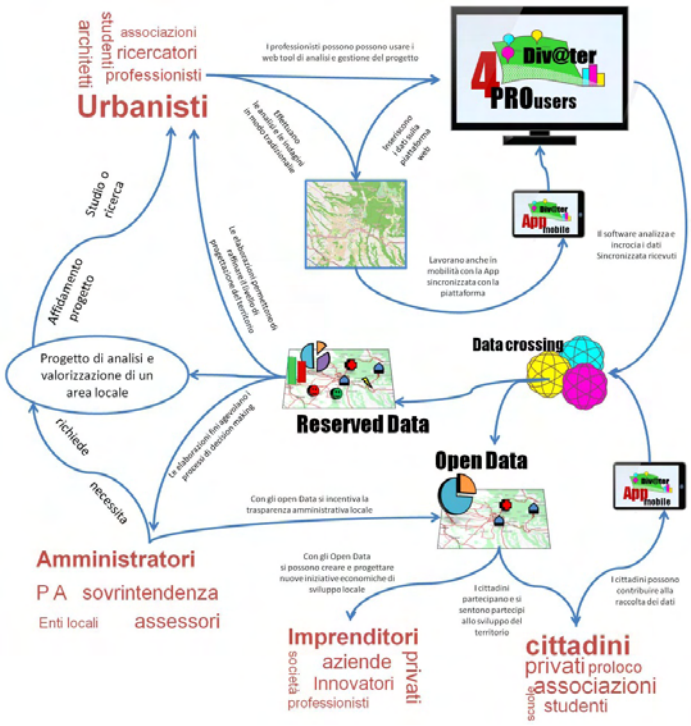


Fig. 1 Div@ter platform: case uses

## 3 SMART HELSINKI

### 3.1 FORUM VIRIUM HELSINKI 2015

The case study of Helsinki can be considered in the framework of the new smart projects which are in course of development in this city. Most of them are planned by Forum Virium Helsinki 2015 (http://www.forumvirium.fi), a private non-profit organisation owned by the City of Helsinki, which is developing new urban digital services in collaboration with the private sector and public organizations, the municipality, and residents. The main topic areas which are involved in the general project include: *smart city, wellbeing, new forms of media, innovative public procurement, innovation communities* and *growth services.* In particular, the Smart City Project Area is devoted to the development of digital urban services for easier travelling and living in the city through the use of mobile devices which are integrated into everyday objects and activities. Real-time traffic information among people, open public data, smart urban spaces are some of the services which are implemented in this area. In particular, Smart Urban Spaces - a joint European research project involving nine cities from Finland, France and Spain - has developed smart city services accessible by mobile phone, aimed at making urban living easier (fig.2). The 30 cooperation

partners both from the public and private sector include: VTT Research Centre of Finland, the University of Bordeaux, the University of Caen, AICIA and ESI Tecnalia. The participating companies were While on the Move, Fara, Top Tunniste, Bonwal, Thales, NXP Semiconductors, Gemalto, CEV-Group, Intelligeré, Applicam, Moviquity, Telvent, CBT, Palma Tools, Visual Tools and Avenzis & ITMC. The project aims (http://www.smarturbanspaces.org/) are devoting at: "providing SW technology bricks and design frameworks that can be used for designing & adopting context based services (e.g. lbs, presence, instant messaging, local and interoperable services in cities/urban spaces); "starting building a network of European cities aiming and validating local and interoperable services"; "developing a first set of European urban services standards". The final goals include both improving attractiveness, attracting investments, tourists and consumers, and improving the quality of life. To approach these goals, the actions are mostly in line with PlaceMaker case study results which will be described below: "enhancing their local identity; deepening their regional positioning; increasing their international awareness, also by strong networking actions", making easier communication by local administrations "to influence people's positive perception of their city, be they in town or in another region or country".


Fig. 2 Smart urban space devices

## 3.2 THE ESPLANADE AREA CASE STUDY

The Esplanade area in Helsinki is not affected by problems such as scarce maintenance, the impact of globalisation, chaos, or a clear lack of liveability. The Esplanade owes its interest as a case-study to the fact that, although it has the potential for being one of the most symbolic and representative spots in the city, it is not as attractive and appealing as it could be. The purpose of the case study was to understand if there are critical points where it might be possible to think in terms of smart urban design, enhancing identity, improving the quality of its image, walkability and urban safety. Accordingly, "Better public spaces bring more people outside into shared activities, and build stronger communities. By creating destinations - tables and chairs near a favorite street vendor, a fountain that encourages play, or public ball courts - more people choose to spend time in the public realm. Well-designed and cared-for public spaces are a source of community pride and often generate economic benefits" (Bain, Gray, Rodgers, 2012) .

In the following, the case study of Helsinki will be summarized with particular attention to the tree phases of design - detection of identity resources, questionnaire to users of places, and map of design with identification of project interventions -, carried out with PlaceMaker method.

The detection of the identity resources resulting from the five analysis phases was carried out observing criticality, potential and quality concerning the place identity. As regards criticality, being one of the most representative areas in the city, our area is well maintained, even though road works can be observed in places. Problematic spots are found at the border between the park and Market Square and, to a lesser

degree, between the park and the Erottaja square. The former is extremely chaotic due to the casual organization of the market (fig. 3). The street is busy with lorries bringing products to the market, many cars, and buses, which block off the view of the sea. Erottaja seems less chaotic, but conveys a similar impression of a place lacking design.

The park, although well maintained, could be improved in several ways. The presence of benches makes it a place more for lingering than for walking through. However, some parts of the park have becomes a drinking haunt for some people. Furthermore, the appearance of the people frequenting it is somewhat sad, and this impression is borne out by some of the answers to the questionnaire. One of the reasons for this, climate issues aside, might be the scarcity of meeting places or places providing occasions for social contact in the park (fig.4). Furthermore in some parts of the park, especially near the entrance and at the back, stands selling flowers and food and picnic tables are set up without any semblance of order, generating a sensation of chaos. Finally, the noise from the streets flanking the park is quite loud and annoying.

Fig.3-4 Helsinki, Market Square and Esplanade

As regards potential, the Esplanade has it in abundance, being an extensive green area connecting the financial district with the sea and located between two important shopping streets. The currently available attractors fostering socialization, such as the music pavilion and the adjacent cafe, meet the needs of the tourists and younger people, but not of all locals. Furthermore, the nearness of the sea and the views this nearness affords are not exploited to full advantage. The Etelesplanadi side is less attractive than the Pohjesplanadi one, notwithstanding the presence of some fine public buildings, the elegant Savoy restaurant designed by Alvar Aalto, and the Artek shop selling design products by Alvar Aalto.As regards quality, the analysis we performed indicates that the greatest flow of people occurs externally to the central portion, and is especially concentrated on the Pohjesplanadi, where the nearness of the historic centre, the presence of imposing institutional buildings, large hotels, stylish, big-name emporia, and quality souvenir shops, all well maintained, and cafes with sidewalk tables make it more attractive for visitors. The most characteristic part of the Esplanade is that around the harbour, that is, the fish market plaza. Other noteworthy features are that all historical buildings display good quality and the urban furniture has a unique design. The above considerations indicate that the area should be redesigned to make the most of its image and identity resources, to make the park area usable for all age groups, and to improve the Etelesplanadi sector, the fringes of the study area, and views of the sea.

Then, we administered a questionnaire (seventh phase) to users of the place about the identity resources identified in the sixth phase of PlaceMaker method.

0) Nationality and age. Passing through the study area: 1) What do you think about the quality of this place? 2) Did you notice the historical buildings? 3) Did you notice the Artek shop or the interior design of the Savoy restaurants? 4) What do you think about setting up smart attractions in the park suitable for different

ages and kinds of people, and to meet different needs? 5) What about increasing recreational activities such as music concerts or folk festivals using the area comprising the park, Etelesplanadi and Pohjesplanadi as a cohesive whole? 6) What about improving smart public spaces at the edges of the park, near Erottaja square and Market Square? 7) What about improving the park green with more attractive and interactive gardens, partly to be designed by architects selected by an international competition? 8) What about enhancing views of the sea? 9) Did you feel threatened anywhere in the area? To the question 1, the interviewees, independently of age or nationality, replied that it is good, mentioning in particular the buildings and the park architecture and gardens. The interviewees had actually already answered the second question in their answer to the previous question. We nevertheless posed the question to understand whether the interviewees were expressing a general judgment or were aware, for example, that some of the buildings had been planned by Engel. Among the locals, most had noticed that the buildings are in the Neoclassical style, and some also mentioned Engel. Most of the non-local interviewees had noticed the historical buildings, especially on the Pojiesplanadi. A small number answered affirmatively, but without providing further details. As to the third question, most of the locals were familiar with the Savoy restaurant, but not with the fact that its interior was designed by Alvar Alto, although they knew him as a famous architect. More precisely, half of the locals knew about Alto's role in designing the Savoy, while the other half did not. As to the non-local interviewees, independently of age or nationality, only a small percentage knew about the interior of the Savoy or of the Artek store. To the fourth question, "What do you think about setting up smart attractions in the park suitable for different ages and kinds of people, and to meet different needs", the interviewees mostly gave a positive answer, especially younger people and the elderly. A smaller percentage replied that the park was fine as it was. In their answers, the locals and the Finns in general often referred to climate issues as an element to be taken into special consideration in any renovation plan. To the fifth question, regarding increasing recreational activities such as music concerts and folk festivals in the park, the interviewees answered positively, independently of age or nationality. The locals were especially interested in Finnish festivals and folk dances. To the sixth question, "What about redesigning smart public spaces at the edges of the park, close to Erottaja square and Market Square", the locals replied positively, especially as regards the part of the park towards Market Square, which they perceived as chaotic. The non-local interviewees, independently of age or nationality, were unable to give a precise answer. As to the seventh question, about the creation of more attractive gardens, half of the interviewees answered that the gardens were already pleasant and well designed as they were. The other half asked for further clarifications about the question. After being told that the idea was to create gardens in some of the less attractive parts of the park, partly through international competitions, they answered positively. As to the eighth question, about the enhancement of sea views, most of the interviewees answered affirmatively. The locals, in particular, underscored the importance of the sea as a symbolical element of the city. To the ninth question, "Did you feel threatened anywhere in the area", all the interviewees answered that they usually felt safe there.

Finally, we laid down project proposals to enhance place identity (fig.5). What we propose is a set of closely interconnected actions to improve the three parts of the Esplanade as a single axis, as well as the perception of this axis as a "gate" to the sea.The first action is that of Improving Urban Attractivity, to be implemented in several steps. The first step is that of *enhancing the port and sea*, making the most of the nearness of the port and the sea, both in the park and in the two streets flanking it, by designing spaces and urban furniture inviting people to stop or look. This step is important insofar as it highlights what is one of Helsinki's strong identity elements, to which the park should serve as a gate of sorts, or, at any rate, provide privileged access. The second step goes in the same direction. It consists of *redesigning the edges of the park*, that is, the urban space between the park and Market Square – which is presently chaotic but nevertheless

representative, partly because of the presence of street peddlers selling typical products – and between the park and Erottaja square, where the somewhat neglected Swedish Theatre by Engel stands. The third step is *designing small smart public spaces* to enhance the character of the Etelesplanadi stretch, which is presently less distinctively characterized than the Pojiespanadi stretch. The second action is that of Connecting Places. This is one of the most important actions to be undertaken to allow the area to be perceived as a cohesive whole. It comprises three main steps. The first is *to introduce small public spaces* to connect the park with its lateral streets. The second step is to place more emphasis on *connections with nearby places of interest*, such as Senaatintori (Senate Square), the Vanha kirkkopuist park, and the Amos Andersonin Taidemuseo. The third action is to Improve urban furniture. Taking account of Helsinki's major design tradition, as reflected by the presence in this area of the Artek shop and of the Savoy with its interior designed by Alvar Aalto, this action has the dual purpose of promoting the place and project a strong identity image. To this end, the first step is *to set up design objects drawing on local tradition in public places*, partly as a means to evoke urban furniture and decorations designed by Aalto as found in the shop on the lateral streets. The second step is *carrying out a smart lighting project covering the whole park* in order to improve its illumination during the dismal dark months. The third is *to create some light temporary structures for exhibitions* in the three sections of the area, in order to allow it to be used to better advantage and be perceived in its continuity. The fourth action is Introducing Activities. This action mainly concerns the park and involves setting up activities here for different kinds of users to allow it to be used more extensively during different periods of the year. The setting up of such activities, in conjunction with the cultural and commercial activities in the lateral streets, would contribute to the more general intent of reinforcing the perception of the park and the streets on either side of it as a single axis. The first step is *to introduce smart and interactive games* such as chess, checkers or bowls, to be included in newly planned green zones, or set up in already available spaces in the park. This first step would be carried out especially for the benefit of the elderly, who have more free time on their hand, and of lovers of open-air games in general. The second step is *to set up playground areas* with wooden recreational equipment for children. Children and their parents already use the park, but setting aside some areas and recreational equipment for them would increase everybody's enjoyment of it. The third step is *to set up temporary exhibitions.* These exhibitions should be suitable for open spaces and designed to create a continuity between the three sections of the area. The fourth step is that of *improving entertainment* by organizing traditional street performances, as are already held, for example, at Christmas time, and enriching the program in the park's House of Music to expand the use of this space during the year. The fifth action is Introducing Traffic Regulation Measures. Especially at the edges of the park bordering on Mannerheim and the port, chaotic traffic detracts from people's enjoyment of the area. Two steps could be taken to address this issue. The first would be *to reduce traffic* with appropriate measures, especially at the points most used by public transportation. The second would be to *reduce annoying noise.* The street lights, for example, emit rather loud signals that are so noticeable as to make this one of Helsinki's characterizing elements. The reduction of noise and traffic could help to improve the livability of the lateral streets. The sixth action is Improving Green. Although green is strongly present in the park, a more dynamic use of it could increase its attractiveness. The first step would be *to offer plants for sale directly in the park*. Some of the less decorative garden areas could be replaced with '*didactic' gardens* using native plants and shrubs with strong scents and bright colours, with labels showing their names, available for purchase on the spot. Such an activity would be an element of strong interactivity, especially in the brighter months. The buyer, whether a local or a tourist, would thus be able to bring back home part of the garden and make it live on elsewhere. The second step is *to call a competition for the design of a part of the garden*, to be planned in the winter months and carried out in the summer months, choosing year after year a new theme harmonising with the characteristics of the place. The third

step is *to add plants with bright colours and unusual scents*, and also pleasing to the touch, or yielding edible fruit – such as strawberries – to stimulate visitors' olfactive, visual, tactile and gustative senses, and waterworks in the fountains to stimulate their auditory sense. The fourth step is *to rearrange the currently present kiosks* to fit with the new activities in the park.


Fig.5 Helsinki, complex map of design

## 4 CONCLUSIONS

Nowadays, new approach to mapping the city have arisen, with the main purpose of identifying the urban dynamicity using direct observation supported by *ad hoc* electronic devices, such as the Div@ter platform which was proposed. In particular, over the last few years, Helsinki has been improving its *smart-oriented* image, and investing on the regeneration of neglected areas, public spaces, and housing. In this direction, the Esplanade area case study, which represent the first test of the platform proposed in the paper, is meant. The possibility to share the information contained in the maps carried out with the multimedia platform on smart phones and tablets represents an important occasion both for local administrators, in order to better comprehend the qualities and criticalities of the area, and citizens and tourists, who desire to have a deep

knowledge of this place. It is important to undertake actions in the Esplanade area because it is one of the most representative place in the city. The nearness of the historical centre and of the port make it a highly potential attractive area and this calls for more attention to the needs of various kinds of users. Our case-study shows how the identity of this place can be enhanced by reorganizing spaces and activities, and reinforcing already present cultural resources and the continuity of the park with its two lateral streets. In this case, urban improvement action is not called for to address issues such as overcrowded streets or polluting vehicle traffic, or the maintenance of streets and buildings. As our analysis has shown, the area has spots with multiple assets, but, as in the case of the Erottaja, next to empty spots that are not exploited to full advantage. Likewise, places for socialization are abundant on the Pohjesplanadi but scarce inside the park and on the Etelesplanadi. The kiosks are arranged in a chaotic and random way, especially on the side of the park near the port, one of the most representative spots in the area. In the Esplanade area, the aim of our project is especially to improve public spaces, and hence needs to be fleshed out at a more detailed scale. The purpose of the actions we propose is, above all, to improve the connections - also thanks to the Div@ter smart tool - between the three parts that make up this place, so that each part may contribute to improve the other, adding to the value of the public space as a whole and making the most of the place's natural and cultural resources, as well as its commercial resources. The improvements we propose take account of children's need for playgrounds and the elderly's need for recreational activities also offering opportunities for socialization, such as chess or bowls. They also strive to meet the demands of residents and locals for smart and agreeable places where to stop, and of tourists, who are often pressed for time and could find in the attractions of the park a reason to slow down and relax.

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**IMAGES SOURCES**

Figg. 1,2: Images elaborated by Francesco Fagnini, Lynx

Figg. 3: www.forumvirium.fi

Figg. 4,5,6: author: Marichela Sepe

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