

## Conference Report

# The International Journal of e-Planning Research 2016 Annual Conference: Lisbon, March 31 - April 1, 2016 Conference Note

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The first Conference on 'Urban e-Planning' organized by the International Journal of E-Planning Research and the Institute of Geography and Spatial Planning, University of Lisbon, within the framework of the 'Urban E-Planning Research Network' (UEP-NET), was held in Lisbon, on 31 March and 1 April 2016, with the aim to explore and discuss recent developments, emerging issues and future challenges in the field of urban e-planning. The program was structured in 13 sessions, 2 plenary meetings and 11 parallel panels. Fifty-four papers were effectively presented and discussed in the 13 working sessions, involving authors from 24 countries: Australia, Austria, Belgium, China, Czech Republic, Denmark, Ireland, Kosovo, Finland, Germany, Greece, Israel, Italy, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, The Nederland, United Kingdom, and the United States of America. The program was structured in three main themes. In the first, focused on 'Smart Urban Governance', papers confirmed that cities have been unevenly engaged in the new city paradigm, with numerous potential negative aspects being raised in the various case studies discussed. The second theme explored the theme of 'Citizen e-Participation' from different perspectives, with papers focused on the use of social media, crowdsourcing and volunteered geographic information, among other new ways of engaging citizens in the planning process. The third theme, titled 'Critical Approaches and Methods in Urban e-Planning', included papers with different points of view on the use of new technologies in urban planning.

In the opening plenary session, Ian Bishop, from the University of Melbourne, Australia, presented the Australian Urban Research Infrastructure Network, created in 2010, in a paper titled "The AURIN story – developing access to e-planning information for all of Australia". Ian Bishop described the AURIN infrastructure, which has currently over a thousand multi-disciplinary datasets from more than thirty different data sources, and over one hundred spatial analytical tools available via an on-line portal, discussing after that the lessons learned in the AURIN implementation process, the feedback from the user experience, and concluded his presentation with an exploration of the next steps that aim to enlarge the scope and reach of this extraordinary resource.

The first plenary was followed by two parallel panels. The first examined and discussed smart cities and smart governance cases dealing in particular with key theoretical and methodological issues. In the first of the five papers included in this panel, Stan Geertman, from Utrecht University, The Nederland, in 'Smart Governance: what is the name?', raised the question of the different definitions of

smart city, seen increasingly as much more than simply a question of ICT use, including also the role of human capital and education, social and relational capital, governance, and sustainability issues. The discussion was centered in one of the six components of a smart city - smart governance -, the other five being smart living, smart economy, smart environment, smart people, and smart mobility. The discussion was focused on the meaning of this component and in what it entails for planning in practice, on how and to what extent it can improve planning practice. The second paper - "Towards a methodological approach for measuring smart cities and communities' performance"-, by Akrivi Leka, Maria Panagiotopoulou and Anastasia Stratigea, from the National Technical University of Athens, Greece, presented a methodology to measure smart cities performance, compared different methods and the most relevant indicators, and based on that discussed how to assess and monitor smart cities performance with respect to sustainability.

The remaining three papers dealt with specific case studies. The first - "ICT-Smartness in the Smart City of Vienna" -, by Werner Pleschberger and Daniel Sebastian Muehlbach, both from BOKU University of Natural Resources and Life Sciences, Austria, discussed the smart city project in Vienna. At the centre of Pleschberger and Muehlbach' approach in this paper was the discussion of the relative importance of ICT and other human and social determinants in the vision and practice of smart cities, illustrated empirically in this paper by an analysis focused on logistics and mobility. The second of these case studies, by Olga Gil, from Universidad Complutense de Madrid, Spain, titled 'Networking Spanish cities. The RECI network (Spanish Network of Smart Cities)' explored how successful has been this initiative for the governance of cities in Spain. The last paper 'Approach to smart city model in urban planning, example of Szczecin', by Olga Gazińska, from Wrocław University of Technology, Poland, explored the use of smart technologies within the planning process in a municipality situated in the north-west part of Poland, which is confronted with huge deficits in basic infra-structures, and discussed the limits of the smart city model in this context.

The first paper included in Panel 2, by Diana Soeiro, from the New University of Lisbon, Portugal, "Addressing the epistemology of urban e-planning: how can new reference geographical systems impact urban planning?" discussed the impact of new geographical systems in the way we plan cities and even in our understanding of what urban planning is. This was followed, in the second paper "Context-aware participation and governance: interaction designs for smart cities", by Ulrik Ekman, from the University of Copenhagen, Denmark, by a discussion of what the author names the unresolved tensions between a governance by the context-awareness of embedded ICT systems and the human context-awareness linked to citizen participation. In the third paper "Towards a metrics of spatial justice", Sarah Bissett Scott, from Anglia Ruskin University, UK, discussed if democratization of space through the application of new digital technologies can be achieved, illustrating this with a case study of urban regeneration in the UK. In "Disclosing the techno landscape: fictional explorations of operative territories", Luis Costa Monteiro, from the Catholic University, Portugal, explored the aesthetic dimension of urban landscape in the digital age with the aim, in his own words, to "re-create a ground with both physical and digital means, visualizing the urban landscape as a path, open to our wishes and desires". The last paper in this panel, titled "Data based benchmarking in communal planning", by Zbigniew Paszkowski and Katarzyna Krasowska, both from West Pomeranian University of Technology in Szczecin, Poland, examined and discussed the current possibilities to collect and storage different kinds of data relevant for the development of the municipalities.

In the following panel Georg Gartner from the Vienna University of Technology explored and discussed in "Crowdsourcing the emotional perception of urban space" the collection of subjective perception of space and the process of deriving mental maps from it, using volunteered geographic information to gather emotional views of the city by allowing users of a Web 2.0 community to contribute and share their emotions. Jiří Pánek and Vít Pászto, both from Palacký University Olomouc, Czech Republic, in the following presentation titled "Subjective and emotional mapping: the process of e-participation in urban e-planning" described the implementation of a web-based

crowdsourcing tool for the collection and visualisation of emotion-based information on maps. The tool was used in a case study of a neighbourhood development consultation in Pířbram, a city in the Czech Republic, and it is expected to be possible to replicate this methodology in other geographic areas as well as in other issues or sectors. The third presentation “Crowdsourcing and living labs in support of smart cities development”, by Chrysaida-Aliki Papadopoulou and Maria Giaoutzi, from the National Technical University of Athens, Greece, examined and discussed crowdsourcing and living labs, in the context of smart cities, seen by the authors as two approaches that serve the goal of being smart by promoting the development of new cooperative and co-creative forms. In the fourth paper presented “Prospects and challenges of crowdsourcing for improved urban stormwater management”, Line Barkved and Isabel Seifert-Dähnn, from the Norwegian Institute for Water Research, Norway, addressed how crowdsourcing can be used in urban stormwater management, being this phenomenon one of the major water challenges in certain urban areas. The authors combined a literature review on crowdsourcing for urban water issues with an empirical case study in Oslo, Norway, and explored how crowdsourcing can assist urban stormwater management. The last paper “From crowd data to augmented cartographies”, by David Leite Viana from Escola Superior Gallaecia, Portugal, and Isabel Carvalho, from the CIAC – Centro de Investigaço em Artes e Comunicaço, Portugal, was focused on collaborative mapping processes, through the application of digital tools, and the analysis of the urban form carried out with ‘Trac(k)ing’, a new methodology for morphological analysis.

Panel 4 included papers focused on the use of social media and mobile participation in urban planning. Francesco Scorza, Piergiuseppe Pontrandolfi, Federico Amato and Beniamino Murgante, from the University of Basilicata, Italy, in the paper titled “Information opportunities coming from social streaming and citizens’ unaware data production”, explored the use of open data 2.0 and social-network interactions to improve planning processes, and discussed preliminary results in the management of social-network, combining semantic analysis with spatial statistics. In “Social media data-analysis in urban e-planning”, Pilvi Nummi, from Aalto University, Finland, presented a review of recent publications related to social media data-analysis in urban planning with the aim to analyze the kind of social media data used, the main aspects that are found in data-analysis and how the analysis results are used in urban planning. The third paper “Social media - potentials and challenges for planning”, by Simone Theile, from Kassel University, Germany, discussed the differences between on- and offline-action, giving examples of how online dynamics in social media can have effects on urban planning, suggesting the need for planners to interpret online-discourses in a different way from offline ones. The fourth paper “How Web GIS and GPS make e-participation possible or more efficient”, co-authored by Igor Bizjak and Barbara Golićnik Maruřić, from the Urban Planning Institute of the Republic of Slovenia, addressed e-Participation as a tool for tracing cyclists on their routes in Ljubljana, the capital of Slovenia, based on Web Geographic Information System and on the Global Positioning System.

In the first paper in panel 5 - “A web-based platform for crowdsourced reports and social media participation to improve urban smart environments” -, Jose-Pablo Gomez-Barron discussed the use of smart technologies in urban areas to enable citizens to act as distributed sensors that can manage valuable information for the development of the city, a paper co-authored with Miguel-Angel Manso-Callejo and Ramon Alcarria, from Universidad Politecnica de Madrid, Spain. The following paper, “A smart(er) destination management system: foundations and applications”, by Yeongbae Choe, Jason L. Stienmetz, and Daniel R. Fesenmaier from the University of Florida, USA, dealt with the notion of smart tourism, whose primary goal is to create and deliver the touristic experiences, maximizing the value created. Yeongbae Choe argued that the focus should be on the traveler and on the alternative ways of enhancing the destination experience. In the following paper “The historic city smart-guide”, Zbigniew Paszkowski from the West Pomeranian University of Technology in Szczecin, Poland, described the way in which the history of cities, its urban forms and architecture should be elaborated and presented through the use of new information and communication technologies. The author presented the case of a digital historic guide and of how it can be used to promote cultural

tourism. Claudia Vicentelo, from the University of Illinois at Urbana-Champaign, USA, in the last paper of this panel “K-Planning in cyberenvironments: urban generation of smart cities” examined and discussed a new planning paradigm ‘knowledge planning’, as an alternative to the notion of smart city, going beyond mere technology operation.

Panel 6 included papers that crossed two or more of the themes proposed for the conference: Smart City Governance, Citizen e-Participation and Critical Approaches and Methods in Urban e-Planning. Tong Wang, Qi Han and Bauke de Vries, from the Eindhoven University of Technology, The Netherlands, in the first paper “Application of case based reasoning for industrial area redevelopment”, presented a case based reasoning approach to construct an industrial area redevelopment strategy on the basis of similar past redeveloped industrial sites, illustrated by a case study in the North Brabant region in the Netherlands. For the authors, the method applied provides a simple and flexible way to construct sustainable redevelopment strategies in industrial areas. This was followed by “Planning and the growth of the technology sector”, authored by Joe Kilroy and James Harris from the Royal Town Planning Institute, United Kingdom, in which James Harris discussed the role planning has to play in creating the kind of places that attract tech firms in order to allow economic growth in a wider area. Carolin Schröder, from the Centre for Technology & Society, TU Berlin, Germany, explored different aspects of the relation of ubiquitous technology and socio-political aspects of citizen participation in the paper titled “The limits of ubiquity: mobile participation in urban development”. The last presentation in this panel “Design patterns for integrating digitally augmented pop-ups into community engagement” by Joel Fredericks and colleagues from the University of Sydney and from Aurecon, Australia, explored the opportunities of translating existing community engagement techniques into digitally augmented pop-up interventions for feedback around infrastructure in the built environment, combining digital and physical media.

In the second day, five panels and the closing plenary session completed the scientific program of the first Conference on Urban e-Planning. Papers in panel 7 explored two or more themes proposed for the conference. In the first paper “Kosovo citizens shaping their future: from traditional to e-participation”, Sadije Kelmendi and Dafina Karahoda, from UN-Habitat, Municipal Spatial Planning Support Programme, Kosovo, argued, based on case studies in Kosovo, that the methods of public participation should be adjusted according to the socio-economic context, but also according to the intended level of public participation. The following paper “Building city dashboards in small municipalities” by Francesco Scorza, Giuseppe Las Casas, Federico Amato and Beniamino Murgante, from the University of Basilicata, Italy, described and discussed the experience of the municipality of Potenza in the creation of a municipal dashboard. Beatriz Santos Sánchez, from the Government of Aragon, Spain, analyzed different web-based participation systems in urban planning implemented in Spain in the paper “New technologies, participation and urban planning in Spain”. Wenshu Li, from the Wuhan University, China and the Eindhoven University of Technology, The Netherlands, with a presentation titled “E-Participation in urban planning and management for small towns in china: challenges and opportunities”, co-authored with Harry Timmermans, from the Eindhoven University of Technology, The Netherlands and Ming Zhang, from the University of Texas at Austin, USA, summarized the Chinese current progresses about e-participation in smart city construction.

In panel 8, the first paper “Literature review on the use of electronic tools in governance of urban green infrastructures and participatory urban development” by Maja Steen Møller, Anton Stahl Olafsson and Cecil Konijnendijk van den Bosch from the University of Copenhagen, Denmark, and Ellen K. Gunnewiek and Elsje Kaptijn from the Wageningen University, The Netherlands, provided a critical literature review of how e-governance is integrated in the field of urban green infrastructure planning and management, and suggested guidelines on how to integrate future electronic tools for inclusive governance of urban green infrastructures. Michele Campagna, from the Università di Cagliari, Italy, in “Geodesign: opportunities for strategic environmental assessment in spatial planning” examined and discussed major issues and pitfalls of strategic environmental assessment applied to spatial planning, based on practical examples of how major strategic environmental assessment

shortcomings may be addressed by geodesign methods and relevant planning support technologies. The third paper “Interactive integrated assessment models for increasing awareness in participatory planning”, by Elias Grammatikogiannis and Maria Giaoutzi, from the National Technical University of Athens, Greece, examined the role of new approaches aimed at informing citizens about the impact of their behavior on the environment. In “The territorial planning and development tools in trans-boundary areas. The study case of the otalex-c space”, Alexandre Diaz Castanho, José Cabezas Fernández, and Luis Fernández Pozo, from the University of Extremadura, Spain, examined the OTALEX project in the context of INTERREG projects between Spain and Portugal. The last paper “Ornamental trees with allergenic pollen in urban e-planning: the case of plane trees in a Mediterranean environment” by J.M. Maya-Manzano, S. Fernández-Rodríguez, A. Monroy-Colín, I. Silva-Palacios, R. Tormo-Molina and Á. Gonzalo-Garijo, from the University of Extremadura, Spain, dealt with the role ornamental trees can play in environmental urban design.

The following panel included four papers. The first by Anna Trono, Corallo Angelo, Fortunato Laura, Pettinato Francesco, Schina Laura and Vestito Daniela, from the University of Salento, Italy, - “Cultural events management and urban e-planning through bottom up users participation” - presented the results of an empirical study in Puglia region, in Southern Italy, using information and communication technologies to explore the potential of the Folkture platform in the field of Urban Planning, starting from data produced during a cultural event in which the crowd created added-value information from simple insights. This was followed by the paper “Creating meaningful place units in cities for quality of life analysis and urban planning” presented by A. Györi and co-authored by E. Papadakis, K. Atzmanstorfer and T. Blaschke from the University of Salzburg, Austria. Anna Györi described and discussed the process of creating meaningful place units based on physical and psychological barriers, and proximity dependent on accessibility and context. The third paper “Transparent urban planning measures for citizens’ e-participation” by Mihaela Aldea, Oana Luca, Florian Petrescu, Cristina Iacoboaia, Mihai Șercăianu and Florian Gam, from the Technical University of Civil Engineering Bucharest, Romania, and Eberhard Parlow from the University of Basel, Switzerland, examined and recommended tools for the main stakeholders involved in the urban planning process, using a mixture of techniques such as remote sensing, GIS, Web-GIS, crowdsourcing in order to support data collection and the transparency of the decision making process. The last paper “Enabling pupils to contribute to societal challenges and participatory processes” by Thomas Schuppenlehner, Renate Eder, Boris Salak and Andreas Muhar, from the University of Natural Resources and Life Sciences, Austria, and Sonja Gabriel, from the University College of Teacher Education of Christian Churches Vienna-Krems, Austria, examined different ways in which geographic information systems can be used to assist the citizen participation process in urban planning.

In panel 10, Evandro C. Santos, from the Jackson State University, USA, explored and discussed in “FCC’s national broadband plan applications for walkability and bikeability developments in the smart city context”, a digital tool for Big Data generation through the Federal Communication Commission – FCC’s. This was followed by the paper by Thijs Dolders, Mart Reiling, Marlies Brinkhuisen and Ron van Lammeren, from the Wageningen University, The Netherlands - “Designing a runner friendly city. The role of crowdsourced data in urban landscape design” -, in which the authors presented and discussed design principles derived from crowdsourced data to improve the spatial conditions of urban public space for running. The third paper in this panel “Development of mobile sensor technology and well-being app to co-design potential solutions which improve mobility and wellbeing in older people” by Howard Cambridge, Radek Rudnicki and Steve Cinderby, from the University of York, United Kingdom, summarized findings from one study, part of a larger project undertaken to investigate these interactions with older participants using a mixed methods approach that included low-cost mobile sensor packs mounted on participants’ scooters to quantify routes alongside qualitative feedback on these journeys quality and users wellbeing interactions. The fourth paper “Operationalising sustainability within smart cities: towards an online sustainability indicator tool” by Conor Mark Dowling, Stephen Walsh, William Hynes, Stephen M. Purcell and Mary Lee

Rhodes from Trinity College Dublin, Ireland and Future Analytics Consulting, Ireland, argued that for successful assessment of urban sustainability, a set of multi-dimensional indicators is required, an idea discussed in this presentation by means of illustrative case studies across Europe supplemented by assessment of key stakeholder perspectives. In “Operationalising resilience within planning practice: towards an online decision support model” Aoife Doyle, Ehiازه Ehimen, William Hynes and Stephen M. Purcell from Future Analytics Consulting Ltd, Ireland, presented findings from two EU funded projects, which aim to explore the development of e-tools and processes to equip the planner with the capacity to benchmark or assess the resilience of existing and future urban development projects.

In the last panel, the first paper “Participatory mapping practice to bridge community and government for responsive e-planning” by Françoise Urban-Ferauge, from the University of Namur, Belgium, explored and discussed the sharing of experiences inspired by the implementation of various PGIS projects in multiple urban environments, an opportunity to discuss learning and to highlight ethical issues in participatory and responsive e-Planning. Ulla Berglund and Kerstin Nordin from the Swedish University of Agricultural Sciences, Sweden, presented in “Visualization of results from the use of children’s maps in GIS as a basis for planning and management of outdoor environments” the method Children’s Maps in GIS, built primarily as a tool for municipalities to develop local environments taking the children ideas as a reference, and discussed its application in six Swedish municipalities. In “Reshaping the planning process using local experiences: utilizing PPGIS in participatory urban planning”, Maarit Kahila-Tani, from Aalto University, Finland, presented a new model for participatory planning, exploring the Finnish innovation SoftGIS, a specific PPGIS tool, which refers to a collection of Internet-based questionnaire and participation tools that allow the locality-based study of human experiences and everyday behavior. In the following paper “Positive and negative place experiences in the urban fabric: PPGIS and softGIS promoting citizen responsive urban e-planning”, Eleni Tracada, from the University of Derby, United Kingdom, described a project for students in Higher Education through which urban areas in the city that they studied were analyzed via PPGIS and softGIS practices, intended to be exhibited and discussed with local authorities and eventually implemented in future urban master plans. In “How technologies can enhance open policy-making and citizen-responsive urban planning” - Francesca De Filippi, Cristina Coscia, Anna Cantini and Roberta Guido from the Politecnico di Torino, Italy, explored an innovative approach to enhance open policy-making and citizen responsive urban planning which integrates citizens’ perspective through their effective engagement and use of a technological collaborative platform, based on the case of MIRAMAP, a governing tool for Mirafiori Sud district in Turin, Italy. The last paper in this panel, “DIGI-TEL – People Oriented Technology”, by Zvi Weinstein, from Tel Aviv University, Israel, presented and discussed the digital policy followed by the city of Tel Aviv in Israel.

The conference ended with the second plenary session. Margit Scholl, from the Technical University of Applied Sciences Wildau, Germany, discussed issues of good e-government from a users perspective in the paper titled “Research-Based and Genetic Learning in the Study of Administration and Law: What Lessons Can We Learn for “Good e-Government” from a User-Centered Evaluation of the Websites of European Capitals?”, and Amin Y. Kamete, from the University of Glasgow, United Kingdom, in “The Vandalizing of a Concept? – Seeing and Doing e-Planning in the North and South”, ended the conference with a challenging set of insights and questions on the true nature of the planning endeavor, and therefore of e-planning itself, seen by the author as an empty signifier.

In sum, considering the relatively dense program, briefly described in the previous paragraphs, the quality of the papers presented and the merit of the debates, we can certainly conclude that this first annual meeting of the International Journal of E-Planning Research fully met the aims defined initially. The 54 papers explored, from multiple points of view, the themes proposed for the conference, challenging established ideas and definitions and exploring new approaches, methods and tools. If in some of these papers there is a clear endorsement of the advantages and potentialities of the new digital technologies for the development of a better urban planning and for building smart cities, for other authors these shifts are seen from a more critical perspective, one in which technology is

perceived as a tool and not as an end, pointing, for example, for the need to raise privacy awareness and to focus more on users and citizens and less on technology, and for the need of validation of these new tools and approaches before more firm conclusions can be reached. In both cases it seems to be present the idea that citizen engagement in e-planning and in a smart city requires face-to-face contacts as well as new tech interfaces, since the old interfaces no longer seem to be enough.

If the papers focused on citizen e-participation explored new and innovative ways to engage citizens in the planning process, the way proposed for doing it differed from paper to paper. The opportunity to contact and discuss this diversity of perspectives is certainly one of the positive aspects of the conference.

From these papers emerges the idea that e-participation requires people willing and able to participate and this requires trust, education and training, without which these new digital technologies per se will fall below its full potential. In fact, one of the challenges confronting the institutions in some, if not in most, of the case-studies presented at the conference is how to keep alive the digital systems created or how to overcome the digital divide in order to promote citizen-centric planning practices. It also emerged the idea that there are deep differences across countries, or rather across the different planning cultures, which raises questions on how to do international comparative research in this field, a point we aim to address in future IJEPR meetings. This is also the case with the underlying digital divide, which differs from country to country, as well as the impact these technological innovations have on vulnerable citizens, aspects that seem to require further research and discussion in future meetings organized or endorsed by the International Journal of E-Planning Research.

A selection of the papers presented in the first Urban e-Planning Conference will undergo the IJEPR standard peer-review process, for possible publication in 2016 and early 2017. Additional information on the conference, its full program, abstracts, oral presentations, and a photo gallery, among other aspects, can be found at the conference website: <https://sites.google.com/site/ijepr2016conference/>. The second International Conference on Urban e-Planning will be held at the University of Lisbon, Portugal, in 2017. Its program includes again some of the themes discussed in the first conference and new issues as well.

To conclude, a word of gratitude to all those engaged in the organization of the first IJEPR Conference: authors of the papers presented; members of the scientific committee; chairs and discussants in each panel and plenary sessions; administrative staff in the hosting institution, the Institute of Geography and Spatial Planning – University of Lisbon; and the group of students in the Institute who acted as volunteers in the supporting activities during the two days of the conference.