From Urban Labs in the City to Urban Labs on the Web

Viviana Lanza, Lucia Tilio, Antonello Azzato, Giuseppe B. Las Casas, and Piergiuseppe Pontrandolfi

Università degli Studi della Basilicata, Viale dell'Ateneo Lucano 10, 85100, Potenza, Italy
{lanza.viviana,luctil82}@gmail.com

Abstract. This paper reports an experience of planning participation, lead during 2010, with the objective to adopt traditional and innovative forms of participation, in the context of planning process simulation. The experience aimed at enhancing confidence in spatial planning processes, in a context where participation is not yet a custom. Some months later, a new attempt has been lead, to enlarge the set of adopted tools and test some electronic tools for e-valuation, asking citizens to involve other citizens, in order to enlarge the community.

Keywords: planning, e-participation, e-decision tools.

1 Introduction

The research presented in this paper is related to an experience of planning participation, lead in 2010 in the city of Potenza (in the south of Italy), where participation has not yet been strongly applied, with the aim of test both traditional and innovative tools for participation; in particular, here is presented the experimental and innovative component (for Potenza reality) of participation process, concerning the role of Internet and electronic tools in participation.

Considering that, according to [1], *Internet is the biggest public space that humanity has known [...], a place where all people can express themselves, gain knowledge, get ideas and not only information, deny, dialogue, participate to common life and so, build a different world where everyone could feel equally citizens*,], therefore it can be used to involve citizens in participation processes.

As affirmed in [2], e-tools seem to be attractive to promote participatory practices among citizens, because they are becoming more and more familiar to them, and help to overpass the traditional difficulties related to citizens' involvement. E-tools help to supply correct information, improve communication quality and wide interaction, so citizens who finally feel involved in the process, are stimulated to act and participate, and they succeed to propose and discuss, contributing to reinforce the bottom-up approach [3]. Several studies in literature highlight how the way in which information is presented influences the real perceived information and therefore the participation rank [4]; a pilot study in 2004 [5], for instance, shows some differences between traditional public meetings and other ones with the use of advanced technological tools: the latter had a higher popularity level, considering, for instance, that

B. Murgante et al. (Eds.): ICCSA 2012, Part II, LNCS 7334, pp. 686–698, 2012.

knowledge and learning benefit from, between several other aspects, a large use of visual systems as maps and imagines [6].

Nowadays, as observed by Thomas and Streib already in 2003 [7], citizens visit more and more websites, where they suppose to retrieve all needed information and where they try to interact with Public Administration. Moreover, several new tools are today available, contributing to enhance interaction: communities and social networks are the modern spaces where people can socialize, share contents and experiences, contribute in developing projects, and so on, and every day several new services are available, not only on the web, but also for smartphones, as the apps: exchange of information and social interaction are facilitated, and different types of groups of users interested in a particular field can born [8].

The *www-scenario* is generating changes in the way people communicate, transforming citizens in e-citizens, and determining also a different approach in the relationship between citizens and politicians and planners, and in the way in which they explore future. Public Administrations started using new technologies more and more often, with the aim of establishing a direct and transparent relationship with citizens, and building consensus in processes that are more and more democratic, due to citizens' involvement [9].

The paper is organized as follows: in the next section is presented a study case with an overview concerning e-participation approach and adopted tools. Some remarks about impacts of adopted tools on e-citizens are presented in third section, and the fourth introduces a second phase of electronic participation, with a stronger development of e-decision tools. Results analysis and future perspectives close the paper.

2 Electronic Participation Approach and Adopted Tools

In the light of the preliminary remarks, and with the idea that participation is something of objectively good for all community (mentioning Arnstein thinking [10]), in the city of Potenza a participative planning process has been simulated during 2010, testing both traditional and electronic participative models.

The entire process has been developed in four workshops in eight sub-areas of the town, referring to the approach of Consensus Solution, as one of several tools, developed in the United States with the goal of finding consensus solutions between stakeholders in conflict situations, through progressive reductions of disagreements. This approach recognizes that not all decisions can satisfy every stakeholder, and affirms that the real purpose of participative processes is not to find agreement, but to find a solution that stakeholders consider acceptable, because they feel that it has taken into account all points of view, in a fair and transparent process. In this context, therefore, an expert and neutral facilitator is fundamental in order to manage workshops; facilitators are super-partes actors, they can encourage participants to dialog and discuss, and they guarantee respect for everyone's opinions.

2.1 Electronic Participation Tools

Some e-participation tools have been developed to enrich traditional participative approach; analyzing the wide possibilities that the World Wide Web supplies, decision fell down on web 2.0 tools, which are becoming more and more familiar to users, with the aim of capitalizing on this familiarity as the key-element to stimulate interaction and participation. Therefore, we adopted the e-participation kit of Lanza, Prosperi [11] synthetically shown in next figure.

The e-participation kit is composed by four main kinds of tools covering the main kinds of interaction that can be achieved. The whole kit considers as the reference point the social tools, related to sharing, mapping and decision tools.

Fig. 1. The kit of e-participation adopted in the Urban Labs (our elaboration)

2.1.1 Social Tools

Social tools, as called in the e-participation kit, include all those tools that at now are generally indicated as social networks. Social tools, in fact, are developed to connect people with the same interests, creating some communities, where users have possibility to exchange opinions, discuss, comment, and keep informed, in synchronous and asynchronous way. In the World Wide Web, there are several services and platforms, from which we adopted two kinds of tools: first one is a Ning platform, and the second one is Facebook.

Ning is a very complete platform, born with the aim to build communities, including a blog, a personal page for each user, a chat, a mail service, some multimedia tools and so on. The account, available at www.lup-lisut.ning.com, has been created with the aim of keeping on activities of physical labs. The created community is composed by coordinators of labs, citizens who participated to physical

workshops, and other interested citizens. The overall activities on Ning platform were not really high, and the number of reached users was low[1].

Fig. 2. The adopted social tools

Considering these data as a symptom of unsuccessful of Ning platform, a Facebook account was created, with the aim of enlarging community, taking advantage of the Facebook high popularity. Before to understand users difficulties with Ning platform, Facebook was not taken into account, supposing it could create confusion about lab mission, and retaining a threatening the possibility to reach rapidly a great community, that, in the testing phase, we were not able to manage. Facebook account (lup lisut) today counts about eight hundreds users and it has been used to publicize events and to enlarge community, maintaining ning platform as the reference point in the web.

The decision to "be on facebook" comes from the observation that it's one of the most popular social network, and in Italy, as it is the first social network available in Italian language, it connects a very high number of users, strongly higher than those of twitter, for instance. Considering data in [12], Facebook reaches about 16 millions of Italian users, while for twitter there are about 1,5 millions.

[1] At now, ning is no more a free platform, and for this reason, the Urban Labs promoter bought an account, in order to storage all materials retrieved during activities; the access to the platform is always free, and users can continue to register and participate for free, but unfortunately, even if the account is active, not all materials have been made available again.

2.1.2 Sharing Tools

Tools developed with the purpose of sharing information, as documents, images, other multimedia, ..., are grouped in this category. They are adopted in order to make transparent the process through spread diffusion of produced documents. We used several platforms and services, deepen described in the next list:

- Boxnet provides a solution to manage several kinds of documents online, sharing with other users simply by a link. Boxnet (luplisut) is the storage platform of urban labs, where each kind of documents is stored and a link is supplied and diffused to the relative users. For instance, some documents have been shared only among coordinators, other with citizens and so on.
- YouTube is the most known platform to upload and share videos.

Fig. 3. The adopted sharing tools

- Vimeo is another platform, less known and diffused, to upload and share videos. The exigency to have both, YouTube and Vimeo (account luplisut in both cases), depends on the service characteristics. In particular, YouTube allows uploading video up to 15 minutes, while in some cases, we need to upload longer videos, and we did this with Vimeo account.
- Flickr is a platform devoted to photosharing. It allows uploading freely a certain amount of image per week. On Flickr (account luplisut) we uploaded the first images of urban labs organization. In a second phase, we preferred to use the Ning platform also to share photo, taken during workshops.

- Slideshare is a web platform devoted to diffusion of slides and other similar stuff, where are stored slides showed during workshops (account luplisut).

2.1.3 Mapping Tools

Mapping tools are able to integrate Geographic Information System and public participatory tools (one of the latest innovation in the field of electronic participation). There is a large literature concerning the use of GIS in public and participatory planning (for instance, see Obermeyer [13]), also concerning the latest development, related to the diffusion of tools such as Google maps, making not expert users able to manage geographic information (consider the concept of Neogrography in Hudson-Smith et al. [14]) .

Between the several available tools, we chose to use Google Earth and Google Maps.

- Google earth is a free software enabling to surf on the earth surface, to define maps through markers, path, other shapes and content, and also to upload kml files. So, users can exchange their maps: the knowledge framework maps, created in a GIS environment, and used to support the planning process, have been exported by in kml format, and shared (through our box.com platform). Due to sensibility of some data, this kind of information has not been made available to everyone, but limited to citizens participating in workshops.

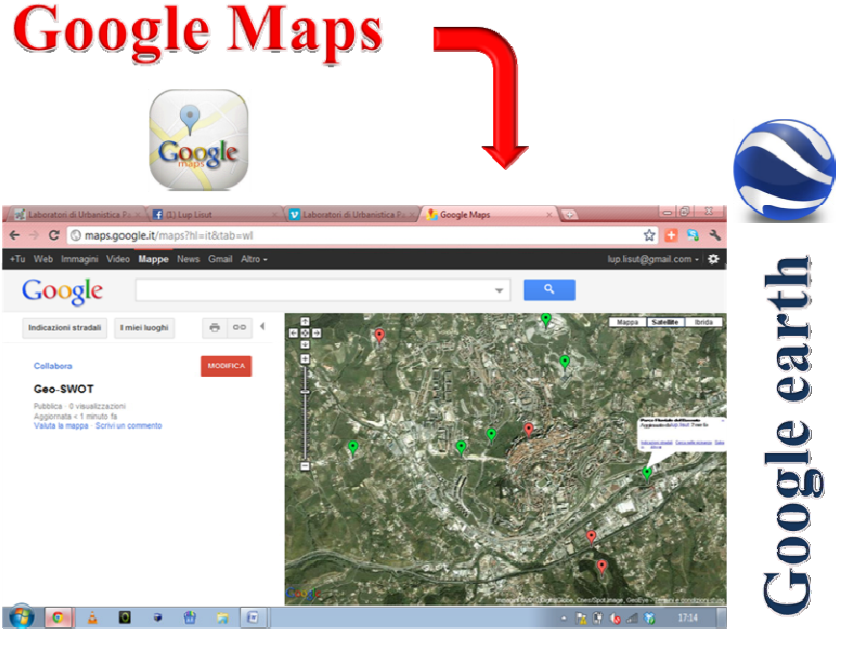

Fig. 4. The adopted mapping tools

- Google maps is a service offering powerful, user-friendly mapping technology. The GEO-swot analysis, built during workshops, has then been re-produced on Google maps: citizens have created some mashups [15], linking information, photos, and comments to a specific location.

2.1.4 Decision Tools

According to [11], in the decision tools category are grouped all those tools useful to register users preferences. Electronic vote is the best tool in order to take into account users' preferences, allowing considering preferences about several alternatives, but generally is difficult to translate these preferences during a decisional process; the main problem is related to vote legitimacy. Therefore, electronic vote make users feeling that their opinion is relevant.

Fig. 5. The adopted decision tools

Another kind of tools in this category is the survey. Even if it is a softer tool than electronic vote, it supplies the possibility to register opinions and take into account users preferences in a not-direct way, using information from surveys. In Potenza case, considering that the planning process was just a simulation, a simple survey, powered by Google docs, has been created, diffused on the Ning platform and between citizens participating in workshop (https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dGtEejh5MjBWNGgzNU1RU3lxOWNDWUE6MQ#gid=0), with the aim to collect more information about "life quality in the city", and using perceptions and opinions of city users. Citizens have been

induced to reflect on several aspects by their own, and then results of surveys have been presented during workshops in order to collectively comment.

3 How Citizens Used Developed Tools

Experimentation assumptions rely on the idea that e-participation could be the innovative gymnasium to exercise the evaluation and the monitoring of citizens behavior concerning social daily life: research aims at producing some ideas about life quality, and ways to improve, to help decision makers, through citizens involvement in workshops, and supported by electronic tools. The experience cannot be considered completely successful. The traditional experience presented a certain degree of expected results achievement, with several citizens proposals, but at the same time, the electronic experience, considering that the web community activities were NON INTENSE, has been not so successful, not producing interesting results in terms of citizens contribution to planning process.

Therefore, it represents anyway an important step towards a new approach in participative planning, in particular concerning aspects related to knowledge framework sharing and aspects related to citizens' perception of re-thinking the town with their own perspective.

Main critical aspects, anyway, are related not on the adopted methodological approach, but mainly on the perception of the real utility of process: citizens felt that their contribute was not really taken into account during the decision process, and so their motivation was strongly weakened.

Concerning the electronic participation, some questions are yet open: which is the hitch that made difficult electronic participation? Are citizens, in this context, not yet ready to be e-citizens? Are there some technological aspects to consider, as the digital divide? A partial answer, in particular concerning mapping tools, could be found in Rocha words [16]: *when it is required to participate in public participatory GIS, the technological prowess and self initiative of the citizen makes a difference. And since the geospatial information is more difficult to manage, we will get less participation in the geospatial realm, with less skilled citizens.* This assumption reinforces the idea that, as Burby declares [17], *the key is for planners to work hard to both educate and learn from citizens,* and that citizens need to get use to participate. Our platform doesn't require any installation or other special requirements, but anyway the whole system has been percept by citizens as complex and requiring too much attention, and there was not enough time to make citizens confident with the available tools: the education role has not been completely carried out.

Anyway, for the success of a participatory process (whether electronic or not), it is believed helpful to a greater role to the "decision making" of citizens: it is for this reason that it has been carried out a new phase of participation based on decision tools, as described following.

4 From Strengthening Decision Tools Role towards e-Decision Tools

Considering some differences in the way citizens deal with the proposed e-tools, a preference was noticed referring to the survey on the life quality, disseminated through Google docs. Most of the citizens participating to workshops answered to the survey, but only few of them post comments or multimedia or used in other ways the available tools. Probably, citizens felt the need to express their opinions, even if in a closed way (questionnaire provided closes questions with a set of possible answers), and they choose to answer to the survey on the web. From this consideration, in 2011 *e-valuation* project is born, with the main aim of strengthen the role of decision tools in a participatory process, testing the kit of e-participation tools dedicated to decision and adopting an approach strictly similar to that one of survey. *e-valuation* project has been conceived as an iterative process, synthesized in the figure 6.

A new survey has been structured, as a decision tools, asking to e-citizens an evaluation of intervention proposals, defined by citizens during workshops in 2010. This *e-valuation* survey has been built and disseminated using Google Docs. As already tested with life quality survey, the tool is really simple to implement and use, and it enables to manage all the voting process, and to analyze answers.

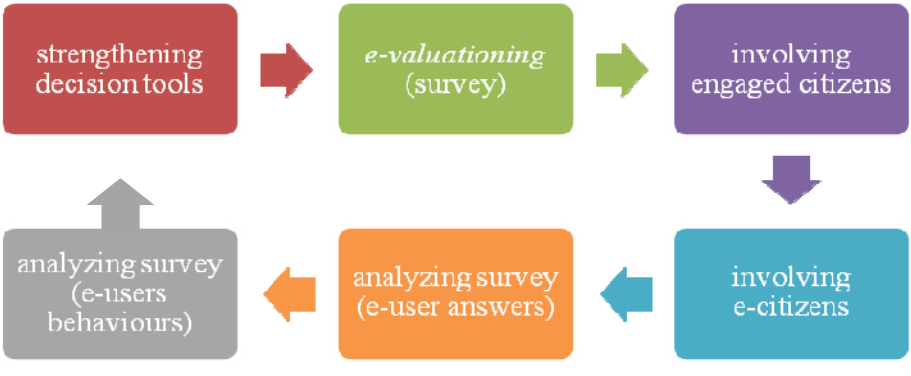

Fig. 6. e-decision process

The survey is divided into three sub-surveys, coherently with intervention groups: interventions have been categorized into three main groups, the strategic interventions, grouping those characterized by a strong investment and producing strong transformation on territory and strong effects on the town, the ordinary planning interventions, grouping those aiming at improving life quality through narrow transformations, and not-physical interventions, grouping mainly strategies and policies that not imply physical transformation. Some documents have been provided, containing details about interventions, as technical sketches and tables, rendering, information about objectives that the intervention can contribute to reach, stakeholders that can carry out the project (are they public, private or mixed?),

financial resources availability and estimated costs, referred to sub-interventions to realize in order to implement the total intervention.

As during workshops, also in the case of *e-valuation* survey, citizens have been asked for order interventions according to priority, and considering that decisions about interventions depends on three main criteria: the strength of the relation between interventions and objectives, the costs and the priority identified by citizens. In order to avoid some possible influence, voters, both during workshops and in the electronic survey, have not been informed about scores that interventions obtained for the two first criteria. Priority assignment is mandatory, in order to avoid a partial survey completion.

Concerning dissemination phase, a chosen sample of citizens already involved in workshop has been contacted, in order to involve them in divulgation. Through emails, citizens have been asked for their availability to continue to help Urban Labs, in a new manner: help to involve other citizens! The *pass-the-word* approach has been the primer of a crowd sourcing [18] mechanism that we tried to start, since the users have voluntarily allowed to exchange information. In the future, this kind of mechanism can be used in order to contribute to proposals. At now, citizens were asked to answer to a survey, indicating some preferences about proposals. Tomorrow, they can produce some proposals, contributing to plan design. Moreover, they can supply information, and feed the knowledge framework.

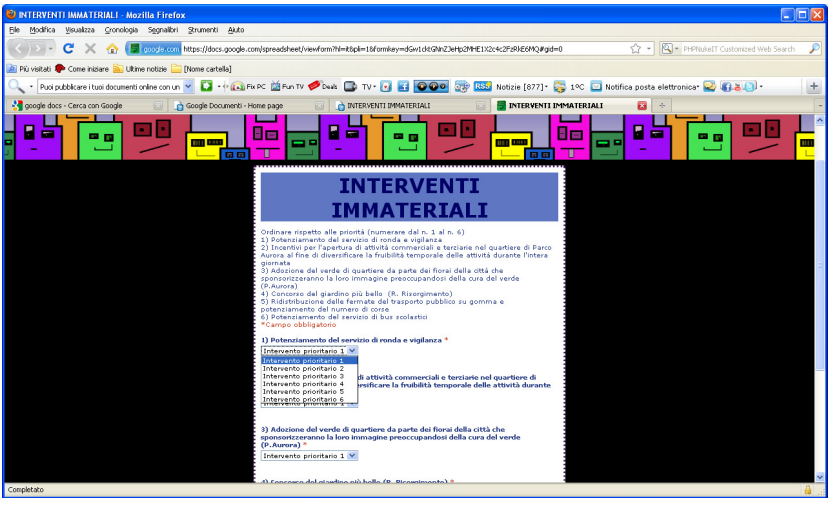

Fig. 7. Screenshot of the e-valuation survey, concerning in particular one of the three interventions categories: the no-materials interventions

In the e-mail, containing the link to the *e-valuation* survey and some instructions (strategic intervention: https://docs.google.com/spreadsheet/viewform?formkey=dG1TT0tybTd4eldPbEZXWjlkckdwR1E6MQ; ordinary planning interventions: https://docs.google.com/spreadsheet/viewform?formkey=dEdONzh1anlvTDg3RGg2Ukw4UllVR3c6MQ; not physical interventions: https://docs.google.com/spreadsheet/

viewform?formkey=dGw1cktGNnZJeHp2MHE1X2c4c2FzRkE6MQ), they have been asked to contact friends, familiars, colleagues living in their same district, and invite them to express a vote to interventions conceived during workshops, as they already did. The basic idea is to stimulate involvement through citizens that have been involved, and that, accepting to help us, are strongly motivated into the achievement of their mission. Moreover, they were asked to help their friends, familiars and colleagues, in reason of their knowledge of interventions and of the voting procedure.

5 Analyzing Survey: Remarks on e-Citizens' Answers and Behavior

Looking for similarities or differences behavior in involved citizens and e-citizens, certain coherence can be revealed: both perceive interventions in the same manner, and both seem mainly interested in spaces organization, as is showed in figure 8.

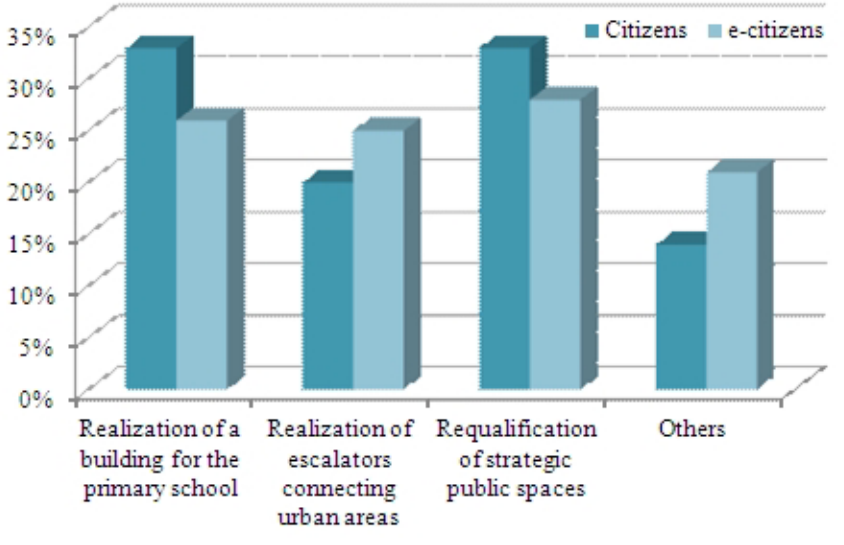

Fig. 8. Comparison between percentages of "high priority" rank in strategic works expressed by citizens and by e-citizens

Concerning results, voters express an implicit preference towards one of the three categories of interventions that is the ordinary planning interventions: answers are most concentrated on this category, revealing the implicit preference to involved e-citizens, that prefer some small projects, able to produce, in short period, improvement in life quality.

It is important point out that citizens consider as priority interventions that improve neighborhood quality and more generally life quality, with modest financial resources but easy to carry out. In fact, the interventions that have been considered as priority

concern accessibility and usability of public spaces, both in terms of quantity and quality. Those interventions are as well related to improvement of social spaces, not enough and not well-equipped, and finally are related to safety augmentation.

Answers were surprising, because they do not reveal differences between a citizen and an e-citizen; often, people strongly using internet, develop more consciousness and a higher level of understanding, and he is generally more skilled etc, so that we expected to retrieve these differences in survey. Instead, they answer in the same way of citizens. This can mean that:

- Problems have been well identified, and proposed solutions are the only possible to solve, so that everybody recognize their utility.
- Survey is not deepening enough to allow a sensitive difference in responses.
- Citizens and e-citizens in Potenza cannot be distinguished.

Probably, these aspects are all present in our context, and in order to a deeper understanding some advanced inquiry is needed. Probably, a different way to involve e-citizens could produce different results.

Therefore, all efforts are not effective if there is not integration between citizens and decision makers. A citizen has the right to take part in the decision-making process by expressing his preference, and the decision maker has really the power to act and take the final decision for the development of strategies in the city; in a new perspective, citizens will not take the place of the decision maker, but they can contribute to the process and express their preferences as a part of the global preference expressed by decision maker himself. Moreover, if the evaluation or *e-valuation* process doesn't allow to find shared solutions, representing a global approval, but it emphasizes some irreconcilable positions, this doesn't mean that the process has failed, but that it has developed its full role in decision-making aid [19].

Last remark refers to the exigency that Administrators must be involved in such a process: *who have the power to act must be integrally involved in developing a strategy* [20]. If this does not happen, the efficacy and effectiveness of the process itself decrease, and citizens continue to feel not involved in choices. All kind of tools – and as showed there is a large amount of – can help into structuring participatory and e-participatory process, contributing brick after brick to a better planning process.

References

1. Rodotà, S.: The role of Parliaments in the development in the Information Society. Keynote speech-inter-parliamentary. In: Union International Conference, Genova (2007)
2. Murgante, B., Tilio, L., Lanza, V., Scorza, F.: Using participative GIS and e-tools for involving citizens of Marmo Platano – Melandro area in European programming activities. Journal of Balkans and Near Eastern Studies 13(1), 97–115 (2011), ISSN:1944-8953, doi:10.1080/19448953.2011.550809
3. Knapp, S., Coors, V.: The use of eParticipation systems in public participation: the VEPs example. In: Rumor, M., Coors, V., Fendel, E., Zlatanova, S. (eds.) Urban and Regional Data Management, pp. 93–104. Taylor and Francis, London (2007) ISBN: 978-0-415-44059-2

4. Simmons, D.A.: Communicating with the public: an examination of national park planning workbooks. Journal of Environmental Education 19, 9–167 (1987)
5. Conroy, M.M., Gordon, S.I.: Utility of interactive computer based materials for enhancing public participation. Environmental Planning and Management 47(1), 19–33 (2004)
6. Conroy, M.M., Evans-Cowley, J.: e-participation in planning: an analysis of cities adopting online citizen participation tools. Environment and Planning C: Government and Policy 24, 371–384 (2006)
7. Thomas, J.C., Streib, G.: The new face of government: citizen-initiated contact in the era of e-government. Journal of Public Administration Research and Theory 13(1), 83–102 (2003)
8. Apostol, I., Antoniadis, P., Banerjee, T.: From face-block to facebook or the other way around? In: Proceedings of Sustainable City and Creativity, Promoting Creative Urban Initiatives. Naples (2008)
9. Panopoulou, E., Tambouris, E., Tarabanis, K.: A framework for evaluating websites of public authorities. ASLIB Proceedings 60(5), 517–546 (2008), doi: http://dx.doi.org/10.1108/00012530810908229
10. Arnstein, S.R.: A ladder of citizen participation. Journal of the American Planning Association 35(4), 216–224 (1969)
11. Lanza, V., Prosperi, D.C.: Collaborative e-governance. Describing and pre-calibrating the digital milieu in urban and regional planning. In: Zlatanova, S., Fendel, E., Krek, A., Rumor, M. (eds.) UDMS 2009 Annual Urban and Regional Data Management, pp. 373–384. CRC Press (2009), ISBN: 978-0-203-86935-2, doi:10.1201/9780203869352.ch33
12. Cosenza, V.: Quanti italiani usano twitter? post on blog (2010), http://www.vincos.it, http://vincos.it/2010/10/10/quanti-italiani-usano-twitter/ (last access December 2011)
13. Obermeyer, N.J.: The evolution of public participation GIS. Cartography and Geographic Informatin Systems 25(2), 65–66 (1998)
14. Hudson-Smith, A., Crooks, A., Gibin, M., Milton, R., Batty, M.: NeoGeography and Web 2.0: concepts, tools and applications. Journal of Location Based Services 3(2), 118–145 (2009), doi:10.1080/17489720902950366
15. Hudson-smith, A., Batty, M., Crooks, A., Milton, R.: Mapping for the Masses: Accessing Web 2.0 Through Crowdsourcing. Social Science Computer Review 27(4), 524–538 (2009), doi:10.1177/0894439309332299
16. Rocha, J.G.: The Participation Loop: Helping Citizens to Get In. In: Murgante, B., Gervasi, O., Iglesias, A., Taniar, D., Apduhan, B.O. (eds.) ICCSA 2011, Part II. LNCS, vol. 6783, pp. 172–184. Springer, Heidelberg (2011), ISSN: 0302-9743, doi:10.1007/978-3-642-21887-3_14
17. Burby, R.J.: Making plans that matter. Citizen involvement and government action. Journal of the American Planning Association 69(1), 33–49 (2003), doi:10.1080/01944360308976292
18. Howe, J.: Crowdsorcing. How the power of the crowd is driving the future of business. Three Rivers Press, New York (2008)
19. Plottu, B., Plottu, E.: Modèle pour l'opérationnalité de l'évaluation démocratique (M.O.D.E.): quelques précisions et enrichissements. In: Proceedings of Outils Pour Décider Ensemble (2012)
20. Eden, C.: Strategic thinking with computers. Longe Range Planning 23(6), 35–43 (1990), doi:10.1016/0024-6301(90)90100-I