OPENKNOWLEDGE AND OPENGOVERNMENT: THE EXPERIENCE OF THE MUNICIP@ZIONE LIVING LAB PROJECT

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This work describes the research activity related to the field of open government developed in the municip@zione living lab project. The municip@zione project covers topics of the Italian Digital Agenda and in particular of the Digital Administration. In this work the project is firstly presented, successively the attention is focused on the on the e-participation experiment. The project is still running, but the first results achieved by the analysis carried out until now refer to the concept of "Media Accountability". Specific attention is paid on the e-participation aspect by considering both technological and social interaction aspects introducing a "conceptual map" tanks to which a cost-benefit analysis can be performed in the field of e-participation.

1 Introduction

The Living Lab (LL) project modality has been introduced by Mitchell (Tang *et al.*, 2012, Chatzimichailidou *et al.*, 2011), it represents a user-centric approach for conceiving, prototyping, validating and refining complex solutions in real life contexts. In the European Union the LL strategy has a specific network called ENoLL (http://www.openlivinglabs.eu) which was founded in November 2006. The EU intends the LL as a "real-life test and experimentation environment where users and producers co-create innovations". Many LL Project have been funded (Schaffers *et al.*, 2011, Mu *et al.*, 2012) covering the following areas of interest: smart cities, future internet, cross –border and –sector collaboration, user centric design and big data.

In Italy there are many different activities under the umbrella of LL (Di Lecce *et al.*, 2014): a relevant role is played by the Apulia Region which – through its in-house consultancy company, InnovaPuglia, has launched different calls for proposal known as "Apulian ICT Living Labs" (http://livinglabs.regione.puglia.it/). The calls are constituted by two steps: in the first one enterprises, research centres, academies and public organizations are invited to submit needs that can be met with a LL project, successively (second steps) project proposals are presented to satisfy the previous needs. The areas of interest are the following: environment, regional security and protection, cultural heritage and tourism, electronic government for PA, health, renewable energy, education, sustainable mobility. Key aspects of the Apulian vision of LL are:

- Participation of "Quadruple Helix" actors (Government, Academia, Enterprises + End Users) in the supporting partnership (aka PPPP = Private Public People Partnership);
- User Driven, Open Innovation;
- Real-life Experimentation.

The "*Apulian ICT Living Labs*" initiative represents a key element in order to connect in a network the stakeholders on the territory, that is, the citizens, the productive activities, the institutions and in general all the subjects bearing collective interests in view of the EU program. Starting from the experience of the first LL, the Apulia Region elaborated the strategic document that defines the pillars of the investments in the period 2014 – 2020. In Spring 2014 a draft of this document is being submitted to public consultation (http://www.sistema.puglia.it/SistemaPuglia/smart_puglia2020).

Based on *Apulian ICT Living Labs paradigm, "municip@zione"* initiative responds to a "user need" expressed by the Lecce Municipality (ref. "*Mappatura dei Fabbisogni - Pubblicazione del 27/07/2012*" in http://www.sistema.

puglia.it/SistemaPuglia/smartpuglia2020) and it has been the winner candidate in response to the need related to platforms for the dynamic interaction between government and users as described below:

> *RFB_350 - In order to reconnect citizens in political life and reinforce the confidence in the institutions, there is the need of a bidirectional communication system between public administration and citizens. General principles are transparency and continuous evaluation of the effectiveness of political and administrative action of a municipality with respect to the primary needs of the population. The system shall:*
> * *be accessible by means of modern technologies and tools (PCs, tablets, smartphones),*
> * *allow an equal exchange of ideas among a group of people and institutions,*
> * *allow the aggregation of citizens,*
> * *allow the possibility to report problems related to the city (rough road, disabled parking area, etc.),*
> * *allow alerts to the competent authorities and allow monitoring of reports made,*
> * *allow the consultation of official documents.*

The paper is organized as follows: in section II the municip@zione project is presented and discussed, in section III the attention is focused on the e-participation process within the contest of e-government and open-government, finally section IV contains conclusions.

2 The municip@zione Project

The project *municip@zione* is among the topics of the Italian **Digital Agenda** (http://www.agid.gov.it/agenda-digitale) and in particular of the Digital Administration extending the concept of the innovation of the Public Institution beyond the digitalization to get to the opening of decisional processes to citizens and to the territory thanks to the use of infotelematic media.

This empowerment of citizens was planned by the EU Commission that in the Digital Agenda intended to contribute to the development of opportunities in the economic network, in society and in culture. As for the citizens in fact, mainly for young people, Internet has now become part of the environment, of daily life, of future perspective. There are some digital habits where also the political dynamics will have an expression through the civic or political use of digital media (Ref. *"LaPolis - Laboratorio di Studi Politici e Sociali"*- Urbino University). Since the Municip@zione project deals with open participation to the politic decision process, it is of interest to observe table I reported in (Diamanti, 2013). It is clear that many people during the last month before the election search for information on the Internet, moreover during the last 5 years there has been a strong increase of this trend.

Table 1
SURBEY BY ELECTION MONITORING UNIT LAPOLIS
(Univ. of Urbino), March 2013 (basis: 1528 cases)

HOW OFTEN, DURING THE MONTH BEFORE THE ELECTIONS, HAVE YOU RECEIVED INFORMATION ON POLITICAL ELECTIONS FROM THE FOLLOWING SOURCES? (V. %)			TOTAL	DIFFERENCE 2013 - 2008
Television	24,8 sometimes	65,4 often	90,2	+ 1,0
Newspapers	31,2 sometimes	32,1 often	63,3	-10,7
Friends, family, colleagues	39,2 sometimes	15,5 often	54,7	-0,1
Radio	26,4 sometimes	21,2 often	47,6	+ 0,1
Leaflets and flyers	32,4 sometimes	14,4 often	46,8	-22,3
Election posters	34,3 sometimes	12,2 often	46,5	-14,9
Magazines	26,1 sometimes	16,1 often	42,2	-14,3
Internet sites	19,3 sometimes	19,9 often	39,2	+ 15,8
Political demonstration you participated in	14,9 sometimes	3,6 often	18,5	-0,8
Contacted by candidates via telephone/internet	12,0 sometimes	2,8 often	14,8	-6,7
Contacted by the candidates personally	11,0 sometimes	3,3 often	14,3	-8,8

From this point of view it is possible to say that the Digital Agenda goes beyond the terms of technological innovation stimulating a real vision: starting from the development of strategies based on the digital innovation of infrastructures and services of public administration, we get to the conception of an involvement of citizens into a phase of formation public decision making process through web platforms and tools designed and implemented in order to promote the participation to public life ("civic media").

Municip@zione has the aim to test innovative tools of "digital citizenship" by taking into account not only technological aspects (i.e. Digital Administration tools, web-based tools, etc.) but also participatory mechanisms of citizens in the decision-making process of a Municipality. More specifically the project is organized in the following macro-activities:
1. identification and definition of milestones within a Municipality decision processes;
2. overview of already existent technological tools of digital citizenship;
3. prototyping and testing of an innovative tool.

The first activity is designed in order to address the e-participation through open government tools. It is clear that many of the involved data are "open data".
These activities are planned to be carried out taking into account feedback

provided by users since the early stages of the project, in fact each activity has many cycles of co-design (Interactive and Iterative Co-Design Phase) co-development, shared verification and test.

Users of the e-open-government system fall into the following categories:
• Administrative Contributors;
• Institutional Decision Makers;
• Citizen Contributors;
• Open Data Consumers.

Users are involved by adopting forums, focus groups, workshops, meetings, social networks, websites, etc.. Citizens are called to provide feedback in order to:
• evaluate the possibility to be involved in decision processes;
• evaluate the possibility to create new decision processes;
• evaluate the prototype giving the possibility to evolve it;
• verify the sustainability of the technological tool as well as the entire process;
• evaluate future developments.

The partners of the project are three SME (PARSEC 3.26 – lead partner, CO.M.MEDIA, TELERAMA). The three SME are supported by DyrectaLab (a Private Research Laboratory certified by MIUR) which has the aim to address and evaluate all the activities from a methodological point of view.

The system has two technological components:
• A web component that will enable the interactive users participation;
• A digital terrestrial television component, which presents a selection of contents in the web component.

Figure 1 shows the interaction of different actors within the decision making process. Citizens and other social actors can access the system by web portals as well as using smartphone: they have access to many services and can provide participation contributions related to specific topics. Institutional Decision Makers can interact with the first category of users by using the system back-office.
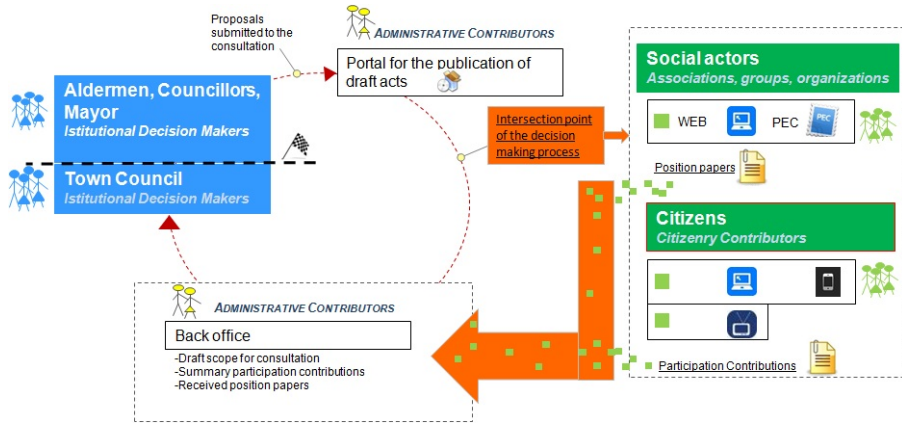
Fig. 1 - Interaction macro process in municip@zione framework

Given the described project, the living lab modality is adapted as reported in figure 2: needs are firstly identified in order to establish requirements, prototype is designed and iteratively buided anter many evaluation steps.
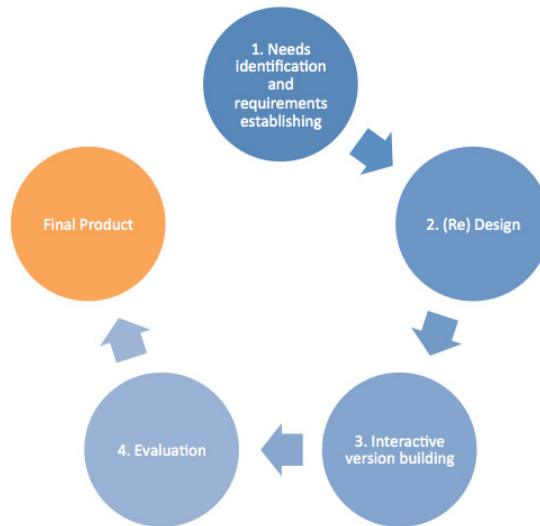

Fig. 2 - Living Lab approach within municip@zione

During the first phase of the project, in order to define the *municip@zione* system and the participative processes that this enables, a "conceptual map" was elaborated (Section 4, Figure 3) that brought to light relevant aspects and

characteristics for a participative process based on or facilitated by a "civic media".

As highlighted in the conceptual map, a very important aspect resulting from the analysis was that the system and processes have to be certified also from a normative viewpoint, this means that these have to be in compliance with the laws and regulations of the institution that adopt them.

In order to thoroughly understand these aspects it is necessary to extend the model of interaction among the involved actors, include a "normative analysis" and start a focus group on decisional places and moments.

The tasks of the above mentioned specific focus group are:
- Evaluation of traditional participative processes already provided in the statute of the Municipality;
- Validation of the participative processes by municip@zione
- Elaboration of an official regulation of the participative processes based on or facilitated by "civic media".

During this activity the focus group studied also other Italian experiences as for example Bologna Municipality and its "Regolamento sulla collaborazione tra cittadini e amministrazione per la cura e la rigenerazione dei beni comuni urbani". New actors and new resources in the public scenario of the Municipality are:
- Active citizens, these are defined as a specific kind of citizens that commit themselves in order to provide a "civic contribution";
- Civic Network, the area for citizens in cyberspace for the publicati of information and institutional news, for the use of on-line services and for the participation to shared interactive processes;
- Civic Media, the (digital) communication channel, connected to the civic network, for the collection, evaluation, voting and commenting of proposals promoted by the Institution or by the citizens.

The focus group is currently elaborating a draft of an institutional regulation as well.

3 E-participation

As an introduction to this section it is important to know that Lecce Municipality has presented its bid to become European capital of culture in 2019 (http://ec.europa.eu). In its first bid dossier the promoting committee proposed an holistic approach to innovation and development based on "utopias" aiming

to obtain the following specific utopias:

- DEMOCRAtopia, a model for a democratic participation, administration and government;
- POLIStopia, a model for the social welfare, inclusion and accessibility;
- EDUtopia, a model for knowledge through the transformation of the education system;
- TALENTtopia, a model for the valorisation of human and youth potential;
- PROFItopia, a model for new ways to manage economics, development of new jobs and cooperation;
- ECOtopia, a model for self –sustainability, environment and humanization of medicine;
- ESPERIENtopia, a model for new ways to travel, tourism and interaction;
- ARtopia, A model for the artistic creation and the role of artists in innovation.

In this scenario the municip@zione project can be seen as a possible way to better understand *DEMOCRAtopia*, especially for what is relevant to the fundamental and contemporary topic of "open government". We have to consider in fact that the recent political events, in particular 2013 Italian elections, highlighted a very important role of internet in political dynamics.

As already mentioned in the previous section, municip@zione is an e-participation experiment. At the date of publication of this paper, the experiment is still running, but the first results achieved by the analysis carried out until now refer to the concept of "Media Accountability" elaborated in the project.

It must be underlined that Civic Media are not social media. The basic feature of a social media is that these were designed and created for a more general use finalized. On the other hand, the fact that in some cases they were successfully used by politicians for a mobilisation of citizens does not modify their basic characteristics. On the contrary Civic Media were explicitly designed for a specific use in the political participation processes.

This concept is the basis on which the municip@zione team elaborated the conceptual map in figure 3. As can be observed, e-participation involves the following aspects:

- Rules must be defined;
- Experiential trust related to quality of contents as well as the compliance to rules;
- Technological aspects.
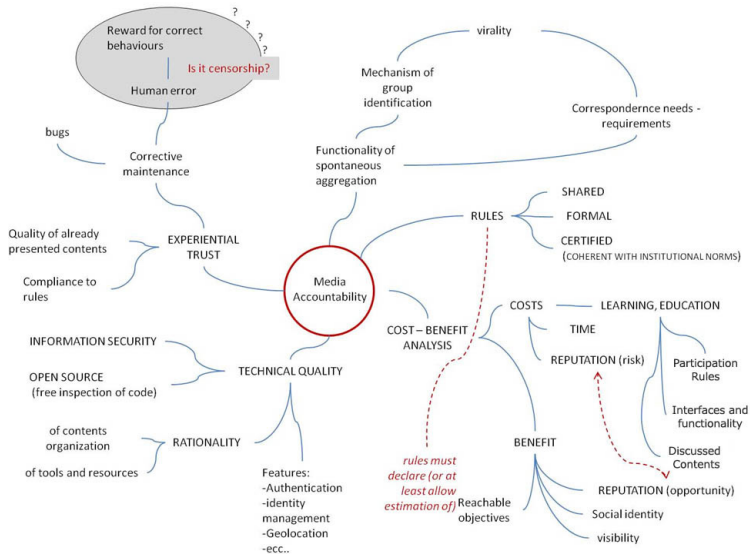
The conceptual map is detailed below.

Fig. 3 – The conceptual map

E-participation is a difficult process to be managed since its success depends on many variables, more specifically the participation in the online institutional decisions is complex since it involves time, the commitment of the participants and the relationship with the participation of the country.

Moreover, the process of e-participation cannot be immediately operational since it is a learning process both technological and methodological, and it requires a transfer of power which corresponds to an assumption of responsibility.

The fact that participation requires time to be invested by both administrators and citizens, raises a fundamental question: **how participants can be and feel rewarded for their efforts**. A further element of complexity is the relation between online and non-online participatory activities which must be managed in a way closely related. The main limitations for the realization of a e-participation project are:

- The institutional culture: sometimes politicians tend to underestimate the benefits of public participation and have no awareness of the opportunities offered by new technologies for participation.
- The organizational culture: communication with citizens are assigned to a specific sector of the institution.
- Digital skills: in some cases, the institution's staff is not familiar with the available technical solutions.

- Public actors often do not take into account online proposals from ci-tizens.
- Participation initiatives have, generally, little visibility even on the in-stitutions websites and are not adequately promoted.
- Absence of parallel traditional channels for participation, which would increase the number of participants.
- Unclear definition of the objectives of participation.
- Poor definition of participation rules, procedures, timing, agenda.
- Lack of relevance of the topics covered, perceived as little urgent and important by the target audience.
- Document un-availability.

Among the main reasons for the failure of civic platforms there is the lack of an adequate framework for discussion and deliberation, defined by the participation standards and protocols. In general, most attention is paid to the technical aspects, underestimating the importance of the social aspects (De Cindio & Schuler, 2012).

An civic participation e-platform requires the creation of an environment which must allow the involvement of people, institutions and all social actors. From this point of view, the Living Lab approach offers many opportunities. In order to achieve this result, it is necessary to formalize a "participatory con-tract" (De Cindio *et al.*, 2012) which must define roles and rules of interaction. From the authors point of view, the contract should include:
- admission and/or exclusion criteria;
- communication rules specifying spaces and times in which actors can play;
- document publication policy (levels of access, timing, visibility, etc.);
- access privacy policy.

The last point requires further investigation. In fact, in order to encoura-ge participation, an anonymous login could be considered, this should allow freedom of expression but it is particularly suitable in some contexts in which, for example, topics under discussion are on the fun and recreation area. Many authentication can be considered even taking into account biometric ones (Im-pedovo *et al.*, 2012; Pirlo *et al.*, 2013). The dialogue on important social and political issues requires a mutual trust. On the other hand, given the aim of the municip@zione project, there are cases in which the identity and privacy of participants must be protected: a typical case is the public evaluation of an employee of an institution. In such circumstances, authentication techniques would be necessary to enable the protection of identity of the participants, but at the same time to make it visible to supervisors and/or discussion moderator.

Moderators have also the aim of promoting the contribution of all participants, providing feedback, ensuring a respectful exchange of views offering unbiased summaries of the discussions. In fact the last element to consider in the process of e-participation is related to the "experiential trust" regarding the frequency of uncorrelated, unsupported and wrong contributions.

E-participation should be sustained by an effective cost-benefit ratio: the citizen is willing to bear the costs of participation and trust on the platform if there is an individual advantage. Among the others, the main costs are related to the installation and usage learning of the system. The greatest benefits are:
- meeting the needs underlying the involvement;
- obtaining information;
- participation in a community;
- improving the reputation of the community.
- System technical features should be:
- Information security;
- Open Source code: this can be considered to be a kind of certification allowing an increased sense of trust within the system.

Conclusion

In this paper the living lab *municip@zione* project is presented: it has the aim to test innovative tools of "digital citizenship" by taking into account not only technological aspects (i.e. Digital Administration tools, web-based tools, etc.) but also participatory mechanisms of citizens in the decision-making process of a Municipality. Specific attention has been paid on the e-participation aspect by considering both technological (platform requirements) and social interaction aspects. Another very important aspect resulting from the analysis is that the system and processes have to be certified also from a normative viewpoint, this means that these have to be in compliance with the laws and regulations of the institution that adopt them. The specific contribution of this paper is the "conceptual map" for the deployment of an e-participation platform which involves rules, trust, technology and social aspects.

Acknoledgment

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