Citizen involvement in public services design. The SPAC3 case study.

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ABSTRACT

In the last years new relational systems between citizens and Institutions have been arising. One of the main effects of such transformation is an increasing citizen engagement in designing public services. The motivations, modes, and effects concerning this practice are relevant research topics addressing political, social, and economic issues. In this paper the authors present the SPAC3 project, as it involved the citizens in the design process. The project aims to allow families of the Municipality of Bergamo (Italy) to access services and information dedicated to them in a more effective way. Here, the authors will focus on the analysis carried out in the project, by pointing out the methodology and the main achieved outcomes, and the features of the identified solution. In the end, the SPAC3 project has been a good opportunity to think about the complex relationship between citizens and Institutions in order to strengthen it.

Keywords: Public Services Design, E-Government, Human-Centered Design, ICT, User-Centered Design, Co-Design, Citizen Engagement.

INTRODUCTION

Nowadays, due the more active role of citizens into the decision-making processes, the services offered by the Institution begin to be greatly influenced by the uses and the needs showed by people who are affected by them. This is the effect of an increasing openness and collaboration between citizens and Institutions. This emergent process of change is also sustained by a growing amount of public services, information, and government tools delivered online, through the Internet. It also shows clear opportunities for the future improvement of e-participation services, including crowdsourcing (United Nations, 2014).

Design practice offers many tools to improve the quality of public services and ideate innovative solutions for citizen participation, but some considerations have to be made in order to undertake a proper process of improvement. A greater attention has to be paid to what citizens need, especially as the adoption of e-government services is influenced by several factors and variables (Klier, Pfleger, & Thiel, 2015). Moreover, the state of the online public services delivery has to be evaluated. In fact, Institutions all around the world have different levels of services digitalization and citizen's involvement. In Europe, only 40% of EU citizens now access online government services, but the number might increase thanks to new strategy for creating compelling digital platforms, especially those that emphasize convenience for customers (Kirchherr, Klier, & Stern, 2015).

In this article, the authors illustrate the case study of the SPAC3 project, a digital platform which allows families of the Municipality of Bergamo to access to interactive services and needed information in a more effective way. SPAC3 is a project funded by the Lombardy Region. It has a

strong service design component following a Human-Centered Design approach, as this one combines the operative aspects of the design of systems with social challenges, paying specific attention to the future users of the system that will be designed. This approach has a co-evolutional nature based on three different perspectives woven together, i.e. user research, service and interaction design, and technological potential, for the definition of solutions at once visionary, innovative, and capable of stimulating user engagement and participation and co-building knowledge (Blomberg, & Darrah, 2015; Hassenzahl, 2010; Holtzblatt, & Beyer, 2014).

The citizens have been engaged throughout the whole SPAC3 e-service design process. Data and information about the specific target of end users were especially collected through an online survey aiming at gathering a comprehensive picture of how the citizens perceive, approach, access, and enjoy Institution services. The findings of this activity have been analysed to design an innovative public e-service and to analyse some theoretical and more general issues related to the citizen engagement processes in designing public solutions.

In detail, this paper is organized as follows: the first section illustrates the importance of the user-centered approach in the design of public solutions; the second section focuses on the theoretical and empirical purposes of the research, illustrating the SPAC3 project; the third focuses on the survey conducted on the user experience, by pointing out the followed methodology and the main achieved outcomes; the fourth section focuses on the concept generation process and on the main features of the SPAC3 web application; the fifth section focuses on a discussion concerning the complex relationship between citizens and Institutions in order to strengthen it through different stages (contact, engagement, negotiation, and agreement); finally in the sixth session conclusions and future works.

CENTRALITY OF CITIZENS IN DESIGNING PUBLIC SERVICES

In the last several years the design research has been focusing on the positive effects of considering the human aspects in the different phases of design process, evaluating the different levels of people direct involvement too. In detail, from an initial openness towards a User-Centered approach involving users as subject, design moved to a more collaborative process involving designers, researchers, and users as partners, then these two approaches began to influence one another (Sanders, & Stappers, 2008). The benefits derived from the evolution of the two approaches has been emerging also into the public sector, as private and public organizations have increasingly been inclined towards the active engagement and collaboration of the user into the city services design. In general, citizens have gained more influence in the public decision-making processes and a central role in the definition of the delivered public services. This change has been made evident by the far-reaching success of different ideas, such as the open government doctrine, the smart communities, and the sharing economy solutions, that highlight the shift towards a decentralized model of governance.

In this context, on the one hand, the citizen is the focus of the design process, as main user of the services delivered by the Institutions. On the other hand, the citizen is considered as a value and innovation carrier, so he/she is directly involved into a collaborative design process. One of the key-difference between these two methods is the level of involvement of users, or citizens, into the design process, that is more passive in the first case and more active in the second one. However both look at fulfilling user needs and developing suitable solutions.

So, the cooperation between citizens and government in improving the design, production, and delivery of public services is increasing. According to Kannan & Chang (2013),

Today there is an opportunity to go beyond traditional forms of citizen participation such as voting and testifying at public hearings. The rise and increasing pervasiveness of digital social media -Facebook, Twitter - have dissolved the many technical barriers to widespread and sustained citizen involvement in actually co-producing and co-delivering public services (p. 6).

In effect, the citizen has gained an increasing prominent role in the innovation of the city as technologies have created the basic conditions for an easy interaction between citizens and Institutions, and in general among people (Schuurman, Baccarne, De Marez, & Mechant, 2012). In general, the widespread of the ICTs, especially the Internet and web technologies, has significantly been changing the mode and tools that connect citizens and Institutions, supporting and redefining the information, communication, and transaction-related interactions occurring between them (Chun, Shulman, Sandoval, & Hovy, 2010; Fang, 2002). In detail, technologies, especially ICTs, strengthened the local experience and engagement of citizens, allowing a more active and incisive role of local people, even over Institutions (Castells, 1998). Then, by allowing large scale distributed collaboration, information sharing and creation of collective intelligence, the so-called Web 2.0 have increased the grassroots demand for openness within the government supporting and fostering citizen participation (Chun et al., 2010). Furthermore, through technology-mediated participation, citizens are sharing skills and knowledge to create different kinds of services that advance a sense of community (Preece & Shneiderman, 2009). In detail, social media foster social interaction among people by creating and sharing information, user-generated or crowdsourcing contents and connections. In this way, they empower and support citizens to achieve common goals or interests (Bertot, Jaeger, & Grimes, 2010).

There are several collaborative methodologies that can be adopted in the design of city services. They may differ on how citizens, designers, other stakeholders, and technical systems interact. In general, it may be argued that they aim to the creation or the achievement of a certain value for a defined group of people. In making this, all these design solutions deeply deal with problem solving and the so-called design thinking. The latter, by involving the reframing of the problem situation in a co-evolutionary process, may bring to innovation, if the new frame adopted transforms the existed practices (Dorst, 2010). Currently, the collaborative practices emerging into the Human-Centered Design field are expected to produce new value for all the communities and the stakeholders involved into the public processes, improving as a consequence the relationship between citizens and Public Administrations. In this sense, the motivations, modes, and tools concerning the success of the citizen engagement process in designing public solutions are fundamental research topics.

The evolution of public or e-government services towards an increasing bidirectional interaction between governments and citizens yet showed the importance of the adoption of a User-Centered Design methodology (UCD) in the development of these services, in order to really meet the citizen's needs in using digital services. The study of Kirchherr, Klier, & Sternet al. (2015) focuses on the importance of offering a good user experience through digital channels, in order to avoid "e-government dropouts". In this regard, the co-design practice goes further the UCD methodology by emphasizing collective creativity into the design process, starting from its early phases, in order to designing for the people experiences in a broader perspective.

According to Steen, Manschot, & De Koning (2011),

Co-design is critical to service design because different perspectives, and a productive combination of different perspectives, are needed in order to understand both a service's demand side, i.e. users' and customers' needs, and its supply side, i.e. technologies and processes, in order to develop successful services (p. 53).

Focusing on the city context, from the openness to the citizen perspectives results a transformation in the relationship between people and Institutions, which affects the design of public services, as it embraces all the experience of the user on a human level scale. So, although the shift of governance approaches were an ongoing process, Institutions are working at different levels of awareness and engagement to the creation of a system of relations with citizens that

could really offer sustainable and desirable public services. The transformation of government practices requires an effective and meaningful conversation, where information should flow from the government to the citizens and from citizens to the government, but also among citizens (Chun et al., 2010). In this sense, design can help to create fundamental changes and social transformations (Burns, Cottam, Vanstone, & Winhall, 2006).

THE RESEARCH PURPOSES

In this paper the authors intend to investigate both empirical and theoretical concepts related to the topics presented in the previous paragraph through the evaluation of the results derived from the SPAC3 project. More details about this project are provided in the following paragraph.

The SPAC3 project has represented an opportunity both to discuss the implications of the new processes of interaction between the Institutions and the citizens and to apply the achieved outcomes in a concrete context. In fact, the survey administered within this project and discussed in the next sections, has had two main purposes.

The first purpose was to identify with the real citizens some requirements for the design of a public e-service fallen within the SPAC3 project.

The second one was to analyse some theoretical and more general issues related to the citizen engagement processes in designing public solutions. About that, the main question emerging in the debate about the centrality of citizens in designing public services concerns how they could really be engaged in these processes. Indeed, as many citizen feedback initiatives fail in creating a real civic engagement, this is a fundamental research topic. According to the conceptual framework elaborated by Peixoto & Fox (2016) only if the feedback provided to the service is publicly disclosed, citizen engagement can be generated and consequently collective action can be, too. Although the SPAC3 application is not a user feedback platform, it has been intending to start a real civic engagement process leading to collective action as service platform. According to this, our hypothesis were:

1. Citizens could be not totally inclined to an active engagement in designing public solutions.
2. The citizen engagement in designing public solutions is possible if a progressive and structured process of approach between citizens and Institutions is established.

The SPAC3 Project

SPAC3 (Smart Services of the Public Administration for the Citizen Centricity in Cloud) is a project supported by the Lombardy Region through the POR-FESR program 2007-2013.

The aim of this project has been designing and realizing interactive services for the Municipalities of Milan and Bergamo through the citizens involvement and participation.

The initial analysis on the services provided by these Institutions had brought out significant weakness, mainly related to a limited availability of online functionalities, a poor integration among the similar existing services, a variety of access points to the same service domain, a limited user profiling during the interaction with the services, a poor support in the selection of the needed services, a low quality of the communication between citizens and Institution, and a lack of the interaction among the citizens.

One of the outcomes of this analysis has been the definition of the "Smart Agenda for the families" scenario, which aims to promote an interactive service addressed to the families of the Municipality of Bergamo allowing them to access to the needed information and services in a more effective way. The core of the SPAC3 project consists in the definition of the specific features of this scenario through an engagement of the people who will really use them.

THE SURVEY ADMINISTERED WITHIN THE SPAC3 PROJECT

In this section the authors focus on the methodology followed for the administration of the survey to the citizens of the Municipality of Bergamo, fallen within the SPAC3 project, and on its main

outcomes. The aim of the survey was both identifying the requirements of a public e-service addressed to the family of the Municipality of Bergamo, and to discuss some theoretical concepts related to the citizen engagement processes in designing public solutions.

Methodology of the Analysis

Before the development of the survey, a previous in-depth analysis on the existing family services (that are all the services provided to the family as a nucleus or to a single individual as a part of the nuclear family) made available by the Municipality of Bergamo and on the touch points between citizens and Public Administration has been realized. From this analysis, which involved some municipal administrators, it emerged that the Municipality of Bergamo makes available 12 main services addressed to the nuclear family (libraries, gyms, sports centres, socio-cultural centres, play areas, game rooms, kindergartens, spaces for youth, leisure centres, family centres, senior centres, maternity allowances, allowances for household) and 8 touch points between citizens and the Institution (the Municipality of Bergamo website, the websites associated to the Municipality website, social networks, email and certified email, discussion forums, mobile applications, office for relations with the public, call centre).

The outcomes of this analysis have been employed in defining the structure, the questions, and the contents of the survey addressed to the citizens.

The authors have decided to design a structured questionnaire, with closed questions (check boxes, ranges questions, and multiple choice questions), open questions, and Likert scales. Indeed, this kind of questionnaire allows answering specific questions, to reach many people with low resources, and to collect multiple points of view, which are the main needs for the analysis. The authors have also decided to administer this questionnaire with an online form, since it allows to easily and quickly reach a large number of people.

Afterwards, the target of the questionnaire has been defined. Generally, the respondents have been:
1. people living in the Municipality of Bergamo, and
2. people not living in the Municipality of Bergamo, but who have used at least once the family services made available by this Municipality.

The decision to administer the questionnaire to the families (rather than to single individuals) has arisen from the opportunity to obtain a more extended target coverage. Moreover, the authors considered appropriate to ensure that the respondent was a unique family member who collected data regarding the entire nuclear family. It has allowed also to easily gather the information relating to individuals whom might be more hardly reach by an online questionnaire (for instance, the elderly and children).

The survey was split in 5 main sessions:
1. personal data and composition of the family members;
2. use and frequency of use of the touch points between citizens and the Institution;
3. citizens' needs concerning these touch points;
4. use and frequency of use of the family services made available by the Municipality of Bergamo;
5. citizens' needs concerning these family services.

Therefore, the three main investigated variables were:
1. the levels of interaction between the Municipality and the citizens. Here, the authors have identified three levels (for each level of interaction specific citizen activities have been identified): Level 1: citizens ask information through the identified touch point; Level 2: citizens perform administrative procedures; Level 3: citizens take part in decision-making processes;
2. the 8 touch points between the Municipality and the citizens;
3. the 12 family services made available by the Municipality of Bergamo.

These variables have been used in developing the questionnaire, by defining questions that correlate two variables at the time. Moreover, the questionnaire has been organized so that these variables

identify both the current situation regarding the use of the touch points and of the family services, and the willingness of people in using these services, and their future modes of use.

Outcomes of the Analysis
The online survey was spread both through institutional channels (e.g. Municipality of Bergamo website, websites of the SPAC3 partners, and email) and non-institutional ones (e.g. social networks, etc.). Overall, the survey involved 114 respondent families, for a total of 338 people. Following, the authors show the main outcomes of this survey.

Use Of The Touch Points Between Citizens And Public Administration
85% of the respondent families generally use the touch points between citizens and the Municipality of Bergamo.
In details, Figure 1 shows that almost half of them use very frequently the Municipality website, which in fact is the most used channel. On the contrary, Figure 2 shows that more than 90% of them does not use the discussion forums, which are the less used channel. The question related to these data is: "*Has one or more members of your family ever used the touch points between citizens and the Municipality of Bergamo?*"
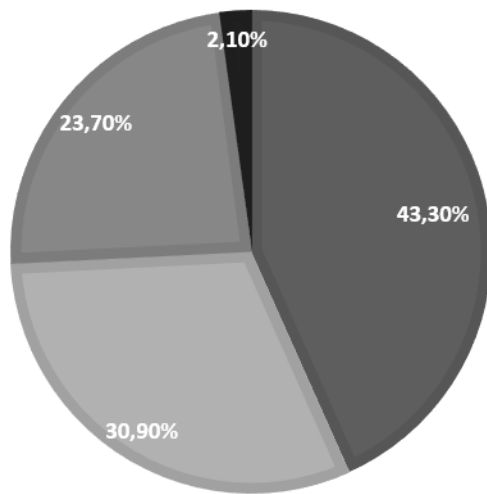

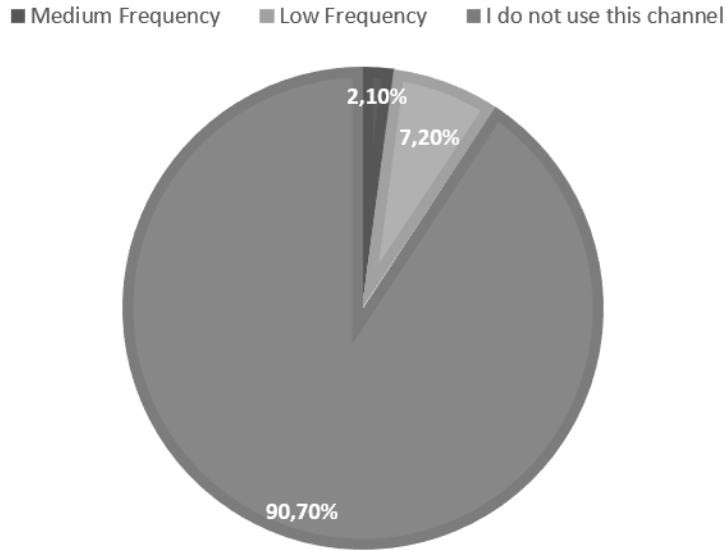*Figure 1. Frequency of use of the Municipality of Bergamo website*

Figure 2. Frequency of use of the Bergamo discussion forums

Figure 3 shows the kind of activities that the respondent families have performed through these touch points (question: "*Which of the following activities has one or more members of your family carried out at least once through the touch points with the Municipality?*"). The respondents have mainly performed activities that ask a low level of interaction with the touch points. Indeed, more than 90% of them have performed basic activities, such as the access or the request for specific information (e.g. municipal resolutions, opening hours of the offices, information on events, etc.), while only little more than 9% have performed more interactive activities (i.e. the use of digital or electronic signature). Data show that the percentage of respondents who performed the listed kind of activities gradually decreases with the increase of the required interaction level.

However, the number of respondents who claimed to have carried out the activities concerning a real citizen engagement (e.g. sending of alerts, proposals, participation in surveys, etc.) is satisfactory.
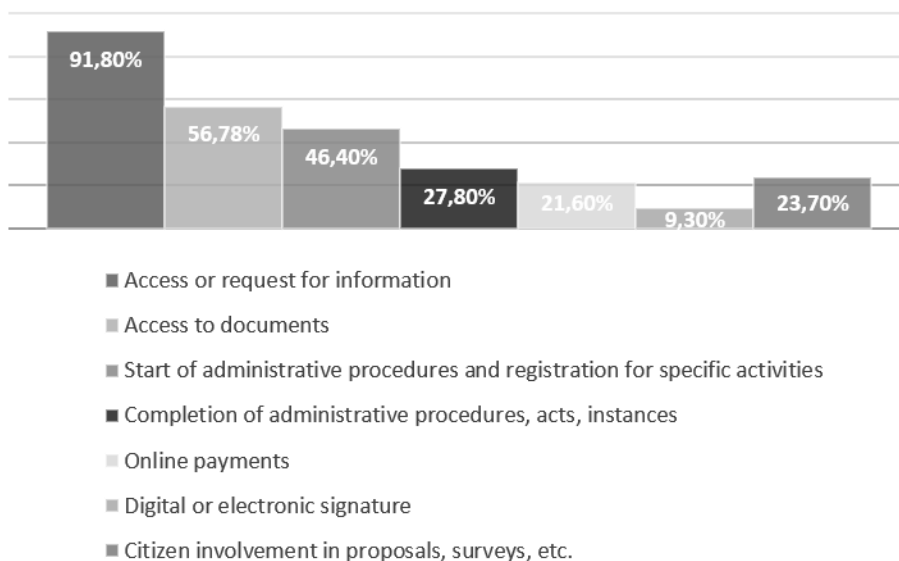

■ Access or request for information

■ Access to documents

■ Start of administrative procedures and registration for specific activities

■ Completion of administrative procedures, acts, instances

▫ Online payments

■ Digital or electronic signature

■ Citizen involvement in proposals, surveys, etc.

Figure 3. Percentage of respondents per kind of activities carried out through the touch points between citizens and the Municipality of Bergamo

Propensity Use Of The Touch Points

Then, the authors have investigated the main elements that the respondents would like to see implemented in the touch points with the Municipality and that could increase their propensity in using them (question: "*Which elements could encourage you to use the touch points with the Municipality of Bergamo or could enhance your experience with them?*").

Figure 4 shows the average (on a scale from 1-totally disagree to 5-totally agree) of the most favourite elements. The most important one is the possibility to access to a unique service which joints all the family services, followed by the need to customize the characteristics of the service itself (e.g. the access to specific features, the mode to access to these features, etc.), in order to allow the users to visualize only the elements he/she is more interested in, and to support the user interaction. On the other hand, the elements considered less important are related to the use of specific devices (i.e. the use of voice commands for the interaction and the interactive television).
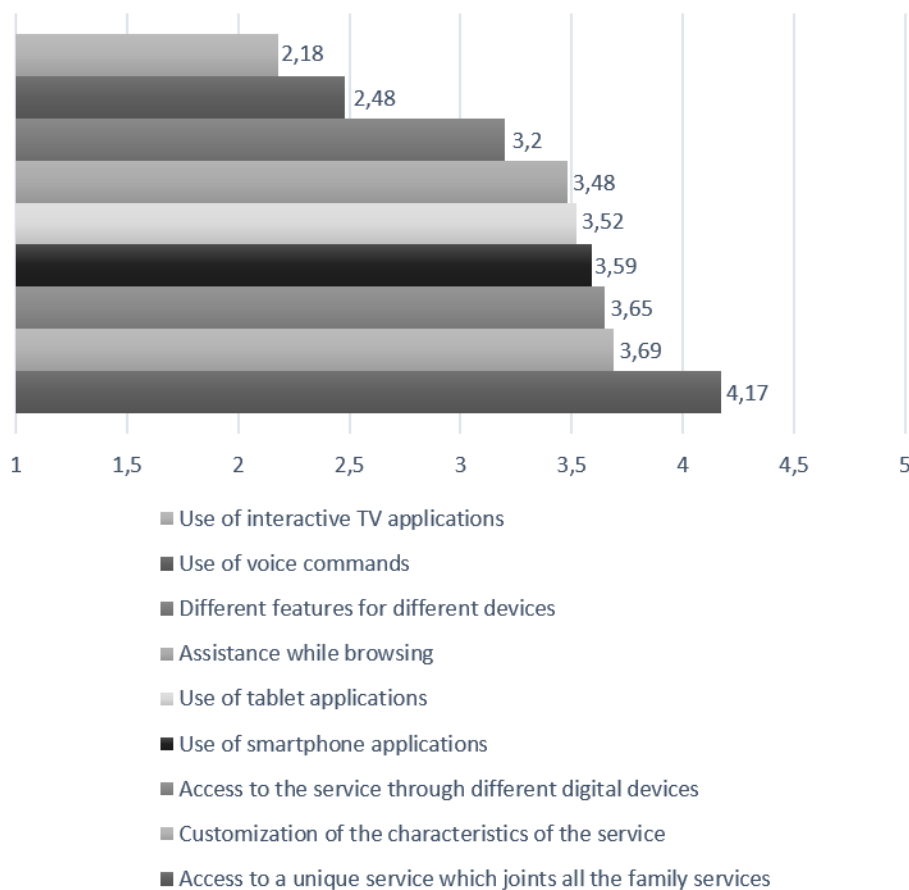

Figure 4. The main elements that the respondents would like to see implemented in the touch points with the Municipality of Bergamo and that could increase their propensity in using them (average on a scale from 1 to 5)

For the different kinds of activities identified in Figure 3, the authors have also investigated the channels that the respondents would prefer to use. As an example, Figure 5 shows the data referring to the activity "access or request for information". As shown, the Personal Computer is the most favourite channel to perform this activity.
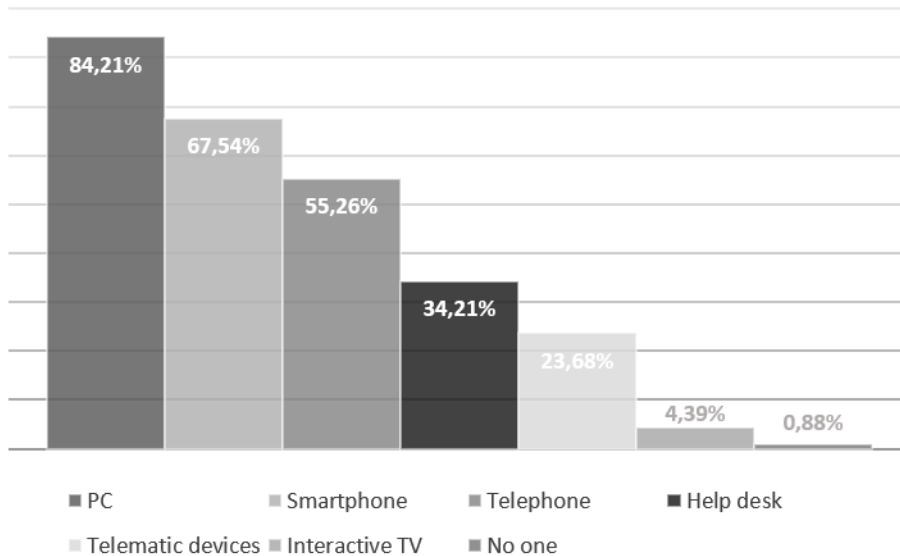
Figure 5. The most favourite channels for the activity "access or request for information" (percentage of respondents)

User Experience With The Family Services

Among the 12 family services made available by the Municipality of Bergamo, the libraries are the most used one. On the contrary, the allowances for household are the less used family service. Figure 6 shows these outcomes (question: "*Have you ever used the family services of the Municipality of Bergamo?*").
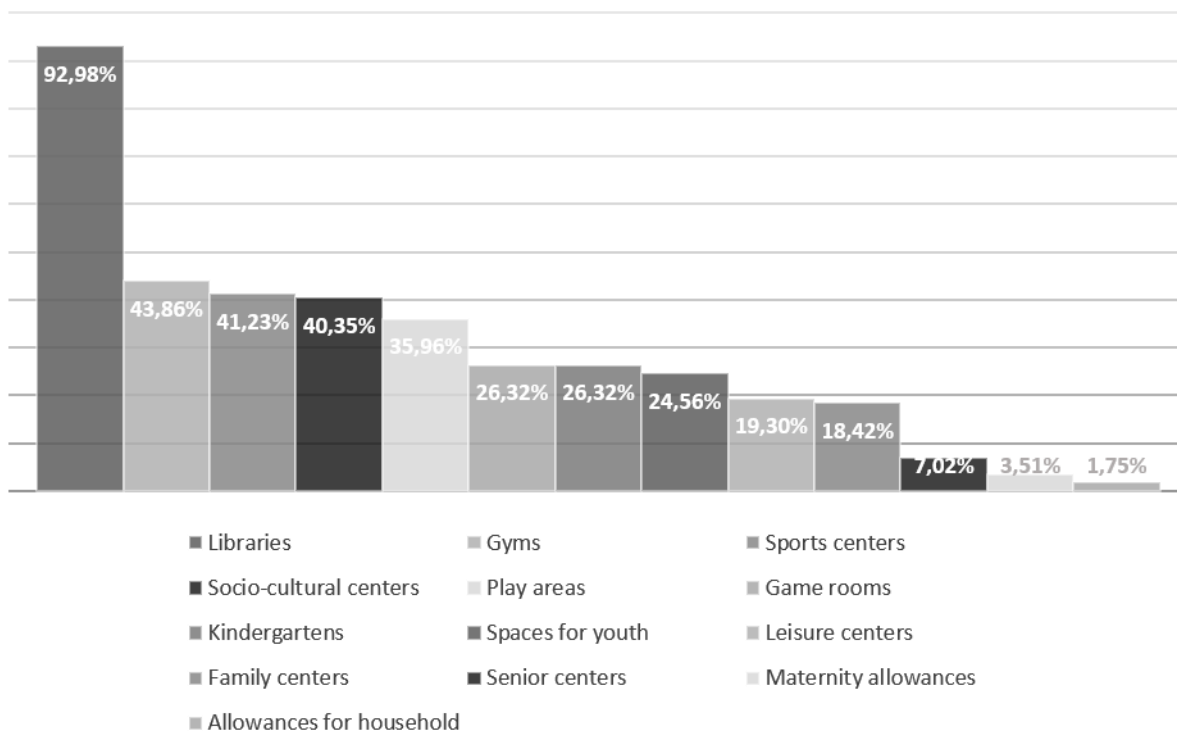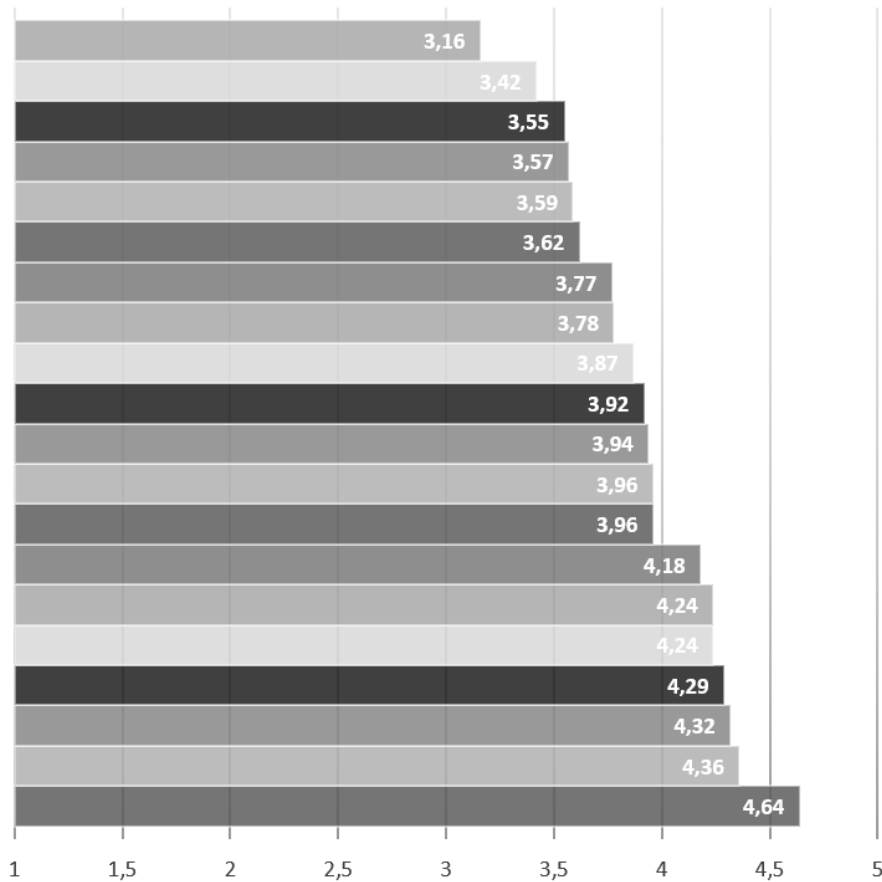

Figure 6. The most used family services (percentage of respondents)

The authors have also investigated the channels through which the respondents got familiar with the specific family services (question: "*What are the channels through which you get familiar with the*

family services of the Municipality of Bergamo?"). The most used channel is the word of mouth, followed by the Municipality of Bergamo website, the brochure/signage, the email, the social networks and forum, the public relations office, the mobile applications, and the call centre. So, the direct communication with other citizens has been an important element for the first contact with the specific family service, while the channels made available from the Municipality are less effective.

User Needs In The Access To The Family Services

Finally, the authors have investigated the main citizen needs perceived in the access to the family services and information. Figure 7 shows the main outcomes of this analysis. In details, it shows the average (on a scale from 1-absolutely yes to 5-absolutely not) of the most important perceived needs. The most important need is the possibility to access to a clear, detailed, and well-organized information. Other important needs are related to the digitization of bureaucracy, the use of a unique service which joints all the information and features related to the same service, and the possibility of online payments.

The bar chart displays the following values from top to bottom:

- 3,16
- 3,42
- 3,55
- 3,57
- 3,59
- 3,62
- 3,77
- 3,78
- 3,87
- 3,92
- 3,94
- 3,96
- 3,96
- 4,18
- 4,24
- 4,24
- 4,29
- 4,32
- 4,36
- 4,64

Legend:

- Interacting with other citizens
- Suggesting events to familiars or friends
- Involving children in the activities of the Municipality of Bergamo
- Organizing events
- Receiving general information
- To be involved in the projects of the Municipality of Bergamo
- Receiving punctual information, also if my request is not accurate
- Getting information without effort
- Receiving customized information
- Knowing possibilities of work and volunteering
- Receiving news and activate a personal agenda of events
- Booking services o spaces
- Enroll for courses, gyms, etc.
- Connection with the associations of the territory
- Online payments
- Security of data
- Use of a unique channel which joints all the information related to the same service
- Use of a unique channel which joints all the features related to the same service
- Digitization of bureaucracy
- Possibility to access to a clear, detailed, and well-organized information

Figure 7. The main citizen needs perceived in the access to the family services and information (average on a scale from 1 to 5)

SERVICE DESIGN CONCEPT GENERATION

The outcomes of the analysis of the survey have allowed a deeper awareness of the services related contexts, specifying the motivation behind the actions performed by the citizens. The data emerged from the conducted survey have been exploited during the design process. In details, on the basis of the finding from the survey, the authors have identified the design "space" that has represented an important point of reference for designing and developing the whole SPAC3 service.

The Figure 8 shows the SPAC3 user journey, which represents the user interaction process with the service during the different phases. The main different phases of interaction with the service are: "aware" (i.e. the promotion of the service), "join" (i.e. the user registration phase), "use" (i.e. the definition of the features to which the users access), "develop" (i.e. updates and changes to the service) and "leave" (i.e. the evaluation) phases.

		AWARE – promotion		JOIN – registration/authentication				USE – definition of the services							DEVELOP – updates		LEAVE – evaluation
		communication of the service	collection of information	request of authentication	creation of user profile	link to the family profile	update profile	search services	list of services	whish-list	request activation of services	confirmation	registration to the service	payment	renewal	update profile	service evaluation
USER	Family																
TOUCHPOINTS	Face to face		help desk/associations/people	help desk	help desk										help desk/associations/people		
	Web	newsletter/social				webpage/e-mail	e-mail						webpage	webpage		webpage/e-mail	survey
	Mobile							mobile app	mobile app/e-mail	mobile app	mobile app	mobile app					

Figure 8. The SPAC3 user journey

The digital solution of the SPAC3 service (available at: https://app.bergamo.spac3.it) consists in a web application which allows citizens of the Municipality of Bergamo to access through different digital devices to the main family services of a one-stop service portal. This specific technical solution (i.e. the web application) offers not only the advantages of all the digital tools (e.g. a continuous update of the information and contents, a high level of personalization, the possibility to carry out online administrative processes, etc.), but also some technical strength.

The web application has the following main features (that answer to the main outcomes emerged from the survey):

1. Service menu. The user can visualize in a tag cloud the available family services, split in eight different "events of life": being a citizen, birth of a child, raising a child, having a family, studying, free time, sport, living the environment. Each category is visualized as a box that has the name of the specific "event of life" and the number of the services that are part of it.
2. Service browsing. The user can access to the different services of a specific category. If the user selects a specific "event of life" he/she could access to all the services that are part of it.
3. Service information. The user can access to the information related to a single selected service. If the user selects a specific service (or he/she search it through the search bar), he/she could access to several related information: the map, the distance from the place

where the user is, the opening and closing times, the validity of the service, the phone contacts, and the related links (they can also lead the user to the pages that allow carrying out online administrative procedures).

4. Registration. The user can create a personal account by entering an email address and choosing a password.
5. User profiling. The user profile is created asking the user three main elements: the places of interest (which are the places in the city that the single user frequent most); the areas of interest (which are the topics that the user is more interested in, e.g. architecture, theatre, cinema, etc.); the events proper of the life (which are the main events that can occur in the life of the individual in which the user is most interested, e.g. birth of a child, raising a child, studying, etc.). Completing the user profile with these data allows the user to automatically access to the information and features he/she is most interested in. The user can also modify the provided data of his/her profile.
6. Family profiling. The profile of the single user can be linked to the profiles of other users. This action allows to create a "shared" profile of all the members of the same family. The single user can send to the members of his/her family an invitation for the registration to the SPAC3 application, by entering their email address.
7. Adding a service to the "to do list". From the description of a selected service, the user logged into the system can book the service, by adding it to a "to do list". This action allows the user (or the member of his/her family) to recall him/her what he/she has to do. If a user has a profile linked with the other members of his/her family, the application asks him/her to indicate the person to whom it is addressed.
8. Suggestion of the services, the areas of interest, and the events of the life. On the basis of the user/family profile and on the services which they have already benefited, the system can automatically send him/her suggestions related to the services that could interest him/her, the areas of interest, and the events of the life.
9. Agenda cloud. This feature allows the user to book the selected service.
10. Evaluation of the service. The user can evaluate the service on a range from 1 to 5.

DISCUSSION

Beyond the contribution to the definition of the specific outcome of the public e-service described in the previous paragraph, the administered survey has also been useful to discuss some theoretical concepts related to the citizen engagement processes in designing public services.

In details, the authors have investigated about the hypothesis above presented:

1. Citizens could be not totally inclined to an active engagement in designing public solutions.
2. The citizen engagement in designing public solutions is possible if a progressive and structured process of approach between citizens and Institutions is established.

Both the hypothesis are considered true. In fact, the authors argue that an active citizen engagement in designing public solutions occurs only if a solid relationship with the Institution has been built.

In general, the citizen engagement process represents an important element for the Institutions, as it allows to implement solutions that the end users will actually use. A citizen-centric approach also increases the citizen satisfaction and reduce costs, as it allows the Public Administrations to translate into targeted, effective service-delivery improvements the needs gathered from their citizens (Dudley, Lin, Mancini, & Ng, 2015).

Moreover, it is important to involve the citizens in all the phases of work, from the identification of problems and needs on the territory to the ideation and prototyping of the solution that effectively meets the emerged issues. However, in order to do that, it is fundamental to improve the trust between the Institution and the citizens, and in this process the weight of the first is crucial. Indeed, the authors of this paper argue that an effective citizen engagement in the realization of the common good is actually possible, but that nowadays the Institutions are too

isolated from citizens, so that they should begin a progressive approach to them. This way could be articulated into the following main steps:

1. *Contact*. It consists in different kinds of activities that allow Institutions to understand who their citizens are, what their habits, their modes of interaction, etc. are. In order to achieve these goals it is fundamental to meet people in the places where they are, to use their language, to understand their real behaviours, and to respect their times. Indeed, it is crucial that the Institutions understand citizens, not that citizens adapt themselves to the administrative processes.

2. *Engagement*. It consists in the activities that allow Institutions to investigate the real citizen's needs and, on the basis of them, to realize the necessary services. These activities allow to "humanize" the services. The authors of this paper define this phase "engagement", since during this stage the Institutions require that citizens dedicate their time to the issues of the territory in which they live and to their community, according to their possibilities. Moreover, in this phase the Institutions build the people trust.
The purpose of these two phases is building a sense of belonging to the territory.

3. *Negotiation*. In this phase it is important to structure sustainable models, able to give concrete advantages both to Institutions and citizens, optimizing the available resources and outcomes.

4. *Agreement*. It is the most extended phase, since people take part in the common good through continue and persistent participation, which becomes the main attribute of the relationship with the Institutions. The agreement allows citizens to have a shared management of public affairs.
The purpose of these phases is building the sense of responsibility towards the territory.

Focusing on the specific purposes of the SPAC3 project, the authors affirm that the administered survey has started the described process in the Municipality of Bergamo. Indeed, it is part of the first and the second step. However, on this point there is still much to be done in order to really engage people and to ensure that they actually participate in designing and realizing solutions for the territory. Of course a survey, such as the one conducted in this paper, is only a starting point, even if needed, while the co-design process is a more vivid expression of the citizen engagement. Moreover, the data of the discussed survey prove that citizens of the Municipality of Bergamo currently use the channels that require a real citizen involvement in creating projects and proposals for the territory. This element seems to be a good starting point for activating a real participation on this territory.

Furthermore, in this process of engagement, the information is a very important element. According to the report of the OECD (Organization for Economic Co-operation and Development), the active participation of citizens is a complementary activity to the information. In fact it shapes the relationship between Institutions and citizens, by allowing openness and transparency. Following this approach people feel comforted and protected, that are the first steps for creating trust. So, the authors argue that the Institutions should first of all invest in an efficient, personalized, and fast information, in order to really activate the trust by citizens. The collected data show that citizens of the Municipality of Bergamo ask interventions in reducing the ineffective of the provided information. In fact, in the described survey the three main perceived citizen's needs concerning this kind of services are the clearness of the provided contents, the personalization of information and services (over the time), and the aggregation of all the related information.

From this point of view it is also important noting that people do not focus on the modalities to reach this information. Indeed, it would seem that the aim to have an efficient and fast information is more important than the technology at its basis. This is a crucial aspect because it means that it is not enough to implement a technological service for citizens to make it more efficient, but that it is important to study the characteristics of the service with the citizens.

Moreover, always starting from the assumption that the information is a central heritage in the relationship between Institutions and citizens, the data from the conducted survey show that the touch points made available by the Municipality of Bergamo are currently used mainly to access for information rather than for more advanced and interactive services. It means that the most important feature for citizens is to obtain the contents they need.

Consistently with the centrality of information, the data show that the website of the Municipality of Bergamo, that is the main source of information related to the family services, is also the channel that people use most. On the contrary, the digital channel that citizens use less is the discussion forums, a kind of channel that not only requires a more interaction, but also a direct relationship with other citizens. So, it is important investigate why people do not use digital channels that would allow to talk with people who are in their same situation in order to receive feedbacks, to suggest to friend or family initiatives or events, to send invitations, etc. Indeed, on the one side the word of mouth is the first channel through which people learn more about the services, but on the other side they rarely use digital tools that allow the possibility to interact with other citizens. This element represents an important weak point, since the citizens could really be a key element for the other people, not only as a source of necessary information, but also as source of the transformation of the territory. Indeed, the collaboration among people represents the starting point of the active participation discussed above. So, beside the continuously improvement of online solutions for services, the Institution should also intervene in this sphere, in order to activate effective collaborative processes among citizens, beyond the relationship with the Institution.

CONCLUSION

The results of this work have to be seen in the light of some limitations. First of all, since the available demographic statistical data concern only the inhabitants of the Municipality of Bergamo (and not the whole people using the Municipality of Bergamo family services that instead are also extended to non-resident people), the authors have not been allowed to identify an effectively representative sample of the total population potentially affected by the SPAC3 project. Secondly, the authors have used the questionnaire as the main tool for the identification of the user needs. It could be a restricted tool, since it has not allowed identifying the entire citizen needs and wants.

Despite these limitations, the authors consider the SPAC3 project as an important and valid starting point, useful to put in contact the citizens and the Municipality of Bergamo, involving people in the design and development of the solutions provided by the Institution.

Moreover, it has represented an occasion to let emerge the importance of involving people in designing public services in order to improve their experience with them. In fact, it is important that the Institutions build an engagement path to progressively get close to citizens. The relationship between citizens and the Institutions should be gradually built. In this process, the quality of the information provided to the user is an important starting point to build a trusting relationship. The tools to realize this process cannot be chosen *a priori*, but they depends on the specific situations. The ICT represent an important tool for the relation between citizens and Institutions, but their mere presence does not ensure more effective services or a more involving relationship.

Lastly, the SPAC3 project has represented an occasion to enable a profitable relationship among the different entities of the territory. About that, the Open Innovation platform of the Lombardy Region (available at: www.openinnovation.regione.lombardia.it), beyond the national and regional actions concerning the technological clusters that allow the creation of synergies and collaborations, is born with the aim to put into contact all the subjects interested in finding innovative solutions for the entire territory. In detail, this platform allows: to discuss different topics of interest and to create some real research and application projects; to create the

possibility for different kinds of businesses, research centers, stakeholders, and active citizens to become known; to conduct surveys and co-creative sessions to collect data; to make known events of common interest and public calls to take part. Concerning this research, the Open Innovation community could discuss and define new modes and solutions for the citizen engagement.

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