Digital Participatory Platforms for Urban Regeneration:
A Survey of Italian Case Studies

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ABSTRACT

Despite the increase in the globally connected population, there is still a high percentage of European citizens who do not have basic digital skills. In the era of smart cities, the Digital Divide affects the possibility for citizens to participate in public life through the use of ICT tools. To deal with this issue, the European Union promotes strategies to develop e-government tools, such as digital participatory platforms (DPPs), in order to connect citizens with the public administration. The research proposes a survey of Italian DPPs, investigated through a questionnaire, to bring out which strategies have been adopted in relation to participation, social inclusion and digital illiteracy, transparency of data, processes, and user-friendliness of the platform. With regard to these issues, certain elements of success of the DPPs presented are highlighted.

KEYWORDS

Civic Engagement, Co-Design, E-Planning, ICT, Smart Cities

INTRODUCTION

In Europe, 169 million people between 16 and 74 years (approximately 44%) do not have basic digital skills, although the percentage of Internet penetration (Internet use by region, comparing the number of Internet users to total population) in Europe is around 86%, and the demand for information and communications technology specialists is growing fast (European Commission, 2019). This fracture, defined as the Digital Divide, represents a barrier between people and the use of new technologies, considered as a vehicle for information and interaction between citizens and the Public Administration.

The study of the digital divide must take into account that the sharing of information, possible thanks to ICT, is not only linked to information law but also to the rights of active citizenship since, as Warschauer argues, the digital divide is like a stratification that becomes a continuum based on different degrees of access to information (Warschauer, 2001). This is why it is difficult to decode

the fragmentary causes of the digital divide and the use of ICT, both linked to the contexts in which individuals live and grow and to the social, political, economic, and cultural resources they have. Thus, the possibility of access, the place, the frequency, the type and number of activities carried out simultaneously, along with the technical/IT skills and the available resources (physical, cultural, communicative, and relational) become discriminating variables.

Faced with these considerations, Europe has identified the need to overcome the digital gap, and on May 19, 2010 it launched the *European Digital Agenda*. The Agenda is one of the seven flagship strategies of the Europe 2020 program proposed by the European Commission, which aims to grow the digital economy in the member states of the European Union – characterized by incompatible systems and irregular connectivity – and create a single European digital market. There is a common need for EU member states to strengthen the digital skills of European citizens so that they can fully participate in society, and benefit from the job opportunities that this sector of the economy can offer them in the coming years. It is estimated that by 2020 jobs requiring skills in the digital economy will increase to 16 million.

To activate the virtuous circle for which ICT can stimulate EU economic activity, the Agenda identifies seven priority action areas:

- Create a single digital market;
- Improve the context for interoperability between ICT products and services;
- Stimulate trust in the Internet and online security;
- Ensure the provision of much faster Internet access;
- Encourage investment in research and development;
- Improve literacy, skills, and inclusion in the digital world;
- Use ICT to face social issues such as climate change, increased healthcare spending, and an aging population.

Starting in 2014, every year the European Commission publishes the digital agenda evaluation framework, which measures the level of these parameters: the spread of high-speed broadband; the single digital market; digital inclusion and the public services or the digital interactions between Public Administration and citizens. Governments themselves are seeking for Internet-based participatory solutions to improve services delivery and citizen engagement, and increase their accountability, transparency and openness (Zhang, 2019). On the other side, advancements in geospatial technologies have contributed to these efforts through new methods of delivering public services, collecting feedback from citizens, widening and enhancing public participation and collaboration and fostering social innovation (Zhang, 2019; Degbeloetal, 2016; Sieber&Johnson, 2015).

This contribution focuses on the latter item—the new forms of government-citizen collaboration through Web 2.0 technologies—trying to keep in mind the new needs, and therefore the challenges, which both actors must meet. On one hand, in fact, the Public Administration (PA) aims at optimizing efficiency and effectiveness through increased administrative productivity as well as substantial cost reduction; on the other hand, in such system, the citizens are provided online, via the Internet.

The concept of e-government fits into this scenario, with the aim of satisfying the needs of the public administration and citizens through the possibility of access to the services of a more efficient PA, capable of tailoring its services to user needs.

EUROPEAN DIGITAL STRATEGIES SUPPORTING E-GOVERNMENT

An international literature is now established (Berntzen & Johannessen, 2016; Borga, 2014; Calista & Melitski, 2007; Cano, Hernandez & Ros, 2014; Cantador, Bellogín, Cortés-Cediel & Gil, 2017; D'Agostino, Schwester, Carrizales, & Melitski, 2011; Finger & Pécoud, 2003; Gil, Cortés-Cediel &

Cantador, 2019; Kumar, 2015; Linders, 2012; Lombardi, Giordano, Farouh, & Yousef, 2012; Madon, 2004; Mahou-Lago & Varela-Álvarez, 2016; Marche & McNiven, 2003; Meijer & Bolívar, 2016; Michel, 2005; Palvia & Sharma, 2007; Paskaleva, 2013; Patsakis, Laird, Clear, Bouroche & Solanas, 2015; Reddick, 2010; Vrabie & Tirziu, 2016), which specifies and details the values and contents of both e-government and e-governance processes, which represent the key concepts at the basis of the current interdisciplinary scientific debate. In fact, the comparison between different approaches (technological, IT, evaluation, social, political, urban planning, etc.) has given birth to conceptual and methodological developments of great importance, defining a road-map that leads to a definition universally shared by the scientific community of the meaning, contribution, and support of digital participatory platforms (DPPs) in digital strategies, in particular for urban contexts and urban re-generation policies. It seems useful to recall certain passages that have recently emerged in literature.

E-government means the use of information and communication technologies in public administrations, combined with organizational changes and the acquisition of new skills in order to improve public services and democratic processes, as well as strengthening support for public policies (Marche & McNiven, 2003). A more complete review of the different definitions has been addressed, for example, by Meijer and Bolívar (2016): the authors analyzed a corpus of 51 publications and mapped their variation. The analysis shows the following conceptual differences: "1) smart technology, smart people or smart collaboration as the defining features of smart cities; 2) transformative or incremental perspective on changes in urban governance; 3) better outcomes or a more open process as the legitimacy claim for smart city governance" (p. 392).

As for the cases in which the efficacy of DPPs in planning and public space care practices has been verified, Orlandini and others (2014) underline their importance if based on a co-design approach to carry out the needs analysis, for the design of physical and virtual fruition models, the identification of problems related to the public space and the creation of a repository of initiatives generated by bottom up approaches (environment, safety, culture, practices of active citizenship, etc.).

Making our own reference of the statements by Gil, Cortés-Cediel, and Cantador (2019), a fundamental question to understand the evolution of DPPs is the relationship between e-governments: in fact "Many governments and firms do believe that technology can supplant governance and human responsibility" (p. 19).

As Finger and Pécoud (2003) argue, there are three prevailing conceptualizations of e-governance (see Figure 1): 1) e-governance as a tool for democracy; 2) e-governance as customer satisfaction and improvement in the provision of services; 3) e-governance as a dynamic process or as an improvement in the interactions between actors (citizens, consumers, administration, private sector, third sector). The factors to implement, again according to the aforementioned authors, are transactions between levels (local, regional, national, global) and between functions (operations, policy development, and regulation).

Furthermore, if the predominant concept in smart cities is the use of ICT in all aspects of city life, Vrabie and Tirziu (2016) analyze this relationship, highlighting how e-participation constitutes the key factor in developing Smart Cities: it is "a core element in the process of developing communities" ruled "by socially inclusive governance".

The transaction from e-government to Smart Cities as a fundamental step for the DPPs has been made over the last 10 years (Michel, 2005; Paskaleva, 2013; Meijer & Bolívar, 2016; Vrabie & Tirziu, 2016). The scientific debate also considers it fundamental to express the aforementioned concepts with new models of citizenship. In particular, Michel (2005) highlights the concept of Learning City in the "electronic administration" model: the fundamental step, also central to the development of DPPs, is that of improving citizens' satisfaction, and in these actions the role of the citizen is not passive and not only an obligation to fulfill a civic duty, but becomes an active agent of democracy and a source of ideas and initiatives. The citizen, therefore, co-designs with the PA and the local operators, and is at the same time an actor and a determinant of the rules. In this sense, Michel speaks of "the city of learning": "learning how to learn" to define a series of possible actions,
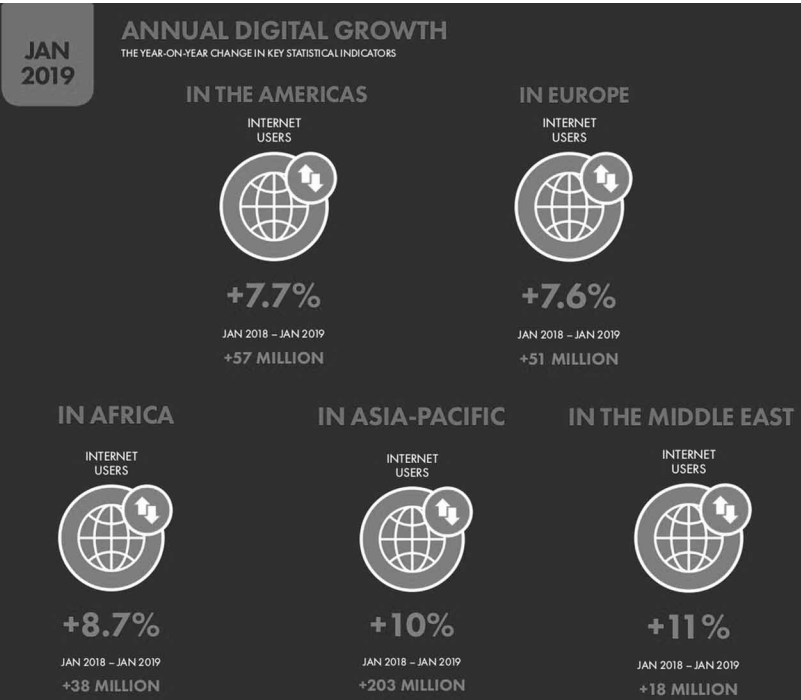
Figure 1. Global Annual Digital Growth 2019 (Source: https://wearesocial.com/global-digital-report-2019)

Figure 2. Internet use: Regional overview 2019 (Source: https://wearesocial.com/global-digital-report-2019)
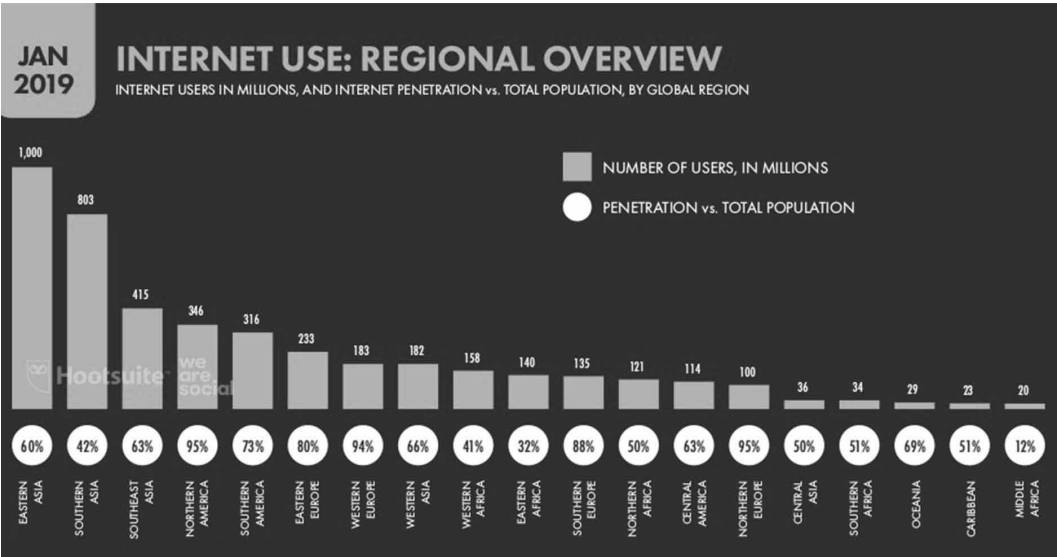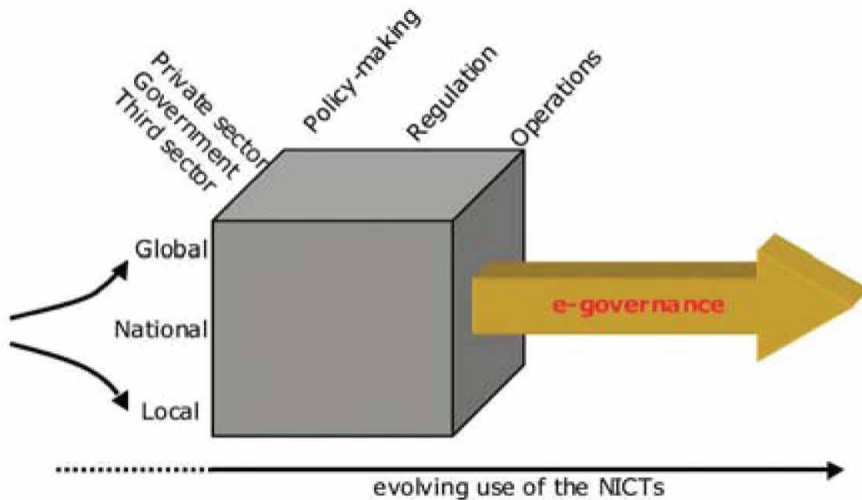
Figure 3. Model of e-governance (Source: Finger & Pécoud, 2003, p. 8)

choosing the decision corresponding to the criteria considered essential for success. What is thus the role of public and IT actors?

Answers are provided by the complete digitalization of Public Administration processes, targeted towards defining the concept of Open Administration (E-Gov, open Gov), which includes the use of open data, attention to accountability, data interoperability, etc. This is a first level of information, which is paving the way to achieve the goal of collaboration, facilitated by ICT, between citizens and Public Administrations; a necessary paradigm shift that sustainable development has imposed on our cities, to be able to continue to grow in a resilient, sustainable, and smart way (Linders, 2012).

Ever since the creation of the European Digital Agenda (2010), the strategic guidelines and operational plans have been defined, differing from country to country, with the aim of digitizing the Public Administration sector through a simpler and faster use of citizen services. The aim is, on the one hand, to empower citizens and make them increasingly independent, aware, and informed, providing them with the tools to become active participants in city policies; on the other hand, to drastically reduce the costs of managing public services that today are struggling to be provided by the State. Across Europe, the crisis in the public sector has encouraged new forms of collaboration, provision of services, and management of public goods – from e-Government to we-Government – giving citizens the chance to cooperate with public and private sectors, and become key actors in the transformative processes of cities.

Some authors emphasize this changing role of citizens providing reports, data and creating maps through digital platforms, for example: from being the objects of geographical research, to being the creators of the agenda as well as decision-makers within their communities (Pánek, 2016).

The main concept concerns the adoption and implementation of a new governance model, both at central and local level, able to make the most of the potential of new information technologies, as well as reconfiguring the relationship between institutions and citizens (Reale, 2016). The primary objective is to overcome the level of unilateral information, in a perspective of co-production by Public Authorities and citizens. We shall make a shift from the concept of "e-Government", in which the citizen was the final consumer, to that of "we-Government" (Linders, 2012) in which he/she becomes a partner in the production of public services. In other words, the society takes on more responsibility to be able to participate more actively in the decision-making process (Agrifoglio, Zardini, & Bullini Orlandi, 2018).

Strictly connected to the topic of the use of ICT and e-Government is that of the Smart City: in the last decade, the European Union (EU) has invested 200 million euros for the "Smart cities and communities" initiative within the Horizon 2014-2020 program, in order to accelerate and disseminate social, cultural, economic, and environmental innovation projects. Many of the smart city objectives are common to those of the European Digital Agenda, as both initiatives aim to help citizens find their way in the digital infrastructure by encouraging the use and knowledge of digital tools to improve lifestyles (security, health, governance, environmental sustainability, public services, etc.) and accelerating the digitization of the European population.

This is the setting of Kumar's contribution (2015), which focuses on the risk that e-governance is dominated by computer scientists and IT specialists (technical problems, big data management, etc.), while a strategic factor is the contribution of specialists in urban development, urban planning, climate change, carbon accounting, water resource governance, energy governance, the public realm, etc. Kumar also illustrates and identifies the evolution of e-governance and e-government in the five known phases: Phase 1 (1996-1999): basic web presence; Phase 2 (1997-2000): Interactive Web; Phase 3 (1998-2003): Transaction Web; Phase 4 (2000-2005): Integrative Web and Transformation; Phase 5 (2005+): Smart City Web Governance. This evolutionary framework is a key and support tool for the analysis of the Italian context and of the 10 case studies.

The digital participatory platforms (DPPs) fall within the above framework, as contexts aiming to involve citizens in the dynamics of governance, where users/citizens do not only play the role as beneficiaries (consumers) of these services, but become actual actors/partners of transformations in their territories (Linders, 2012). The effectiveness of the use of a DPP in planning processes can be influenced by a multiplicity of factors including: the digital literacy of citizens; the possibilities of the tool; the resources of the Public Administration; the setting and its social, political, and economic conditions (Afzalan, 2015).

Focus on the Italian Context

In the framework of "My Smart Quartier", a project funded within the ERASMUS+ 2017 Program, in which the Authors are involved, a comprehensive study about Europe's and Italy's digital performance has been carried out, with the aim of setting up and testing strategies and actions to reduce digital illiteracy and increase citizen participation.

Relevant inputs to the research have been provided upon publication of Europe's Digital Progress Report by the European Commission (EDPR, 2017), based in particular upon the analysis of the Digital Economy and Society Index (DESI). The DESI report assesses the level of digitization of the country based on 5 indicators: connectivity, human capital, use of Internet services, integration of digital technology, and digital public services.

In 2018, Italy ranks 25th out of 28 member states, below the European average and recording low performance and difficulties in adopting ICTs (see Figure 4, DESI, 2019).

The cause of this situation seems to be the gap of digital skills among the population that has not yet been filled, despite the measures adopted by the government in this regard. The consequences are penalizing, especially in terms of aspects relating to the use of online services, the spread of broadband, online sales, and the number of e-Government users.

As for digital public services, Finland has the highest score, followed by Estonia, the Netherlands, and Spain. As the DESI again confirms, Italy is at the top of the ranking in terms of quantitative supply but has low percentages of use by the population, while it has improved its position in the use of open data by exceeding the European average. The worst result is referred, as anticipated, to the number of e-Government users, which is the second lowest in Europe (27th place out of 28 member states). According to the EDPR – in terms of the analysis of DESI indicators (see Figure 5) – it is noted that the causes of the Italian delay lie mainly in the lack of a systemic and integrated approach, or the inability to coordinate the digital skills of governance. In Italy, the availability of online public

Figure 4. Digital economy and society index (DESI) 2019. Source: DESI2019-ITALY_ENG.pdf
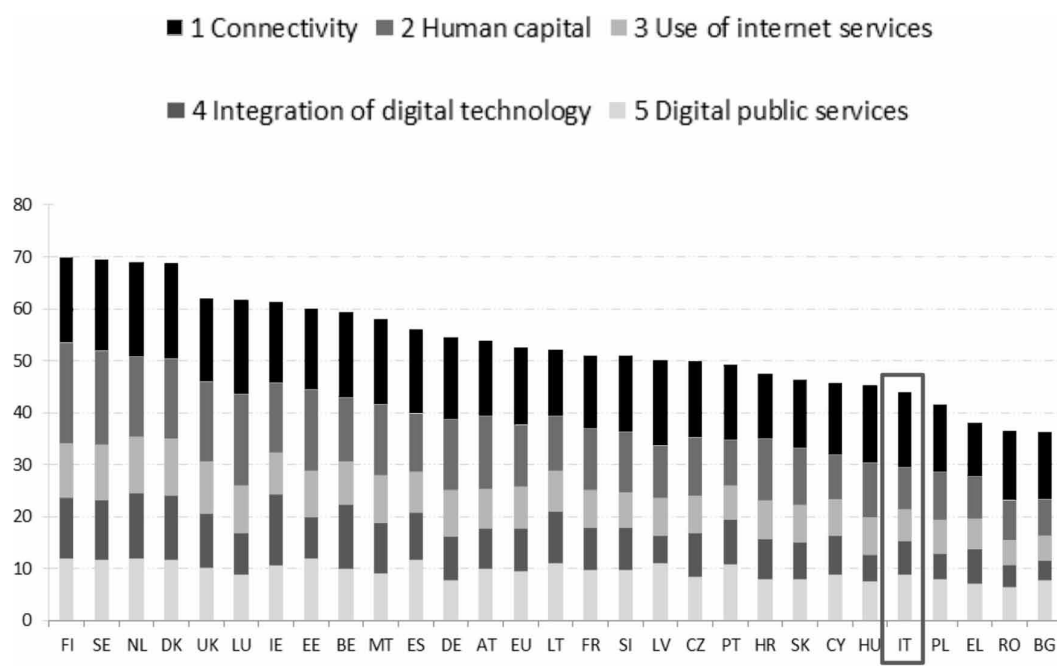

Figure 5. Digital public services. Source: Country report, Italy 2019

Digital Economy and Society Index 2019, Country Report Italy

	Italy				EU
	DESI 2017 value	DESI 2018 value	DESI 2019 value	rank	DESI 2019 value
5a1 e-Government users	NA	30%	37%	*27*	64%
% internet users needing to submit forms	2016	2017	2018		2018
5a2 Pre-filled forms	33	33	48	*19*	58
Score (0 to 100)	2016	2017	2018		2018
5a3 Online service completion	84	89	91	*12*	87
Score (0 to 100)	2016	2017	2018		2018
5a4 Digital public services for businesses	81	81	85	*17*	85
Score (0 to 100) - including domestic and cross-border	2016	2017	2018		2018
5a5 Open data	NA	NA	80%	*4*	64%
% of maximum score			2018		2018
5b1 e-Health services	NA	24%	24%	*8*	18%
% individuals		2017	2017		2017
5b2 Medical data exchange	NA	NA	30%	*13*	43%
% of general practitioners			2018		2018
5b3 e-Prescription	NA	NA	32%	*20*	50%
% of general practitioners			2018		2018

services is above the EU average, but it has not aligned with the improvement of e-Government services in other countries (European Commission, 2017).

The low level of digital skills of the population has led to mediocre results in the spread of broadband, in the number of Internet users, in participation to online activities, in access to services offered by public administrations, and in general a lack of confidence and difficulty in using IT tools that are not intuitive or easy to use.

In the light of the framework outlined, it is necessary to underline that since 2014, the AgID (Digital Agency for Italy) is responsible for implementing the objectives of the Italian Digital Agenda, and to monitor the results through the implementation of the 2014-2020 Digital Growth Strategy (AgID, Consiglio dei Ministri, 2014). The strategy recognizes digital tools as a lever of economic and social transformation of the country, and identifies three objectives to be achieved:

- The progressive switch-off of the analogue option for the use of public services;
- An economic and social growth, through the development of skills in companies and the spread of digital culture among citizens, which generates new ideas capable of competing in global markets;
- Planning and public investments in digital innovation and ICT.

The strategy has therefore granted acceleration programs to ensure the implementation of digital tools and their socio-economic repercussions. The programs are:

- Italia Login, to increase the use of online services offered by the Public Administration, and to innovate the relationship between the Public Administration and citizens who can access different services through a single profile;
- "Digital skills", which deals with improving digital skills through training for the Public Administration and for citizens of all age groups;
- "Smart Cities and Communities", with the aim to build a large technological and immaterial infrastructure fostering dialogue between people and objects, producing inclusion, and improving the life of citizens, also through actions to promote social innovation.

Further progress was made in May 2017, when the Italian government approved the Piano Triennale per l'informatica nella Pubblica Amministrazione (Three-year Plan for IT in the Public Administration), which aims to accelerate the implementation of important e-government initiatives currently lagging behind those of other European countries. In order to coordinate the PA digitization initiatives, the Digital Transformation Team was appointed in 2016, which introduced modern and efficient management methods, and contributed to a faster implementation of various large-scale projects (DESI, 2019).

Italy has a particular need for strategic initiatives concerning digital skills aimed at the sections of population that are weaker and more subject to the digital divide. In addition, there is a need, for both companies and citizens, to simplify relations with the PA and the use of online services. For this reason, the 4th Piano d'Azione Nazionale per l'Open Government (National Action Plan for an Open Government, Italian Ministry of Public Administration, 2019) is being drafted, and is necessary to structure digital-oriented strategies, activating a synergic system of actions on the topic of digital skills, addressed to both citizens and public employees. These actions involve at least four different areas of expertise:

1. Basic digital skills, necessary for all citizens to interact with the digital world;
2. Specialized competences, focused on a more effective management of public services and – in case of the PA – focused on technological solutions and processes governed by clear rules;
3. E-leadership digital skills, essential for promoting and guiding change;

4. The awareness of digital citizenship rights, which should lead, through the request of digital services, to the promotion of tools and initiatives for the dissemination of digital citizenship and participatory democracy.

DIGITAL PARTICIPATORY PLATFORMS IN ITALY: CASE STUDY ANALYSIS

In Italy, in recent years, there has been a proliferation of adoption of Digital Participatory Platforms by the Public Administration, which makes it necessary to analyse their effectiveness and usefulness as well as their supporting role in the cooperation between parties (Azfalan, Sanchez, & Evans-Cowley, 2017; Haltofová, 2019; Grabkowska, Pancewicz & Sagan, 2013). Indeed, the great potential that the DPPs have in the involvement of a huge number of citizens may disappear when the necessary premises to make their use effective do not exist (Brabham, 2009).

Despite the broad spectrum of DPPs, in Italy it is possible to identify certain themes, strengths, and weaknesses in common in the platforms analysed. The aim of this analysis is to formulate an hypothesis about which kind of parameters can assess the effective use of DPPs, verifying their success and how much boundary conditions can affect their results.

The review of Italian DPPs proposed hereinafter presents certain platforms currently active, or recently terminated, in some of the main Italian cities. The research of the case studies taken into consideration in this analysis was carried out online, evaluating a selection of existing cases in each Italian region with the help of a questionnaire. The direct involvement of the Public Administration within the platform was the factor that determined the choice of platforms to be taken into consideration. Indeed, local Administrations that adopt a platform as a tool to undertake a relationship of collaboration/co-production with the citizens, and consider their inputs as a surplus value (Falco, Kleinhans, 2018) give the latter the opportunity to be integrated into local governance processes, and thus influence public choices.

The survey was therefore conducted on 10 projects identified across the Italian territory and briefly presented below:

- **Decidi Torino (Turin):** A platform based on the Spanish model *Decide Madrid* (*Consul* open source platform). On it, it is possible to make proposals, vote on projects proposed by the Public Administration and – in the "debates" section – discuss various topics indicated by the users. The platform has been active since 2017 and is managed by the e-Government department of the City of Turin;
- **Dime Venezia (Venice):** This is a recent project, activated in 2018 with the aim of putting citizens in direct communication with the Public Administration, allowing them to report on the

Table 1. Levels of citizen-government relationship (Source: Falco, Kleinhans, 2018)

Levels	Sublevels
Information sharing	Informing: One-way communication ('broadcasting') from governments to citizens. Consulting: One-way communication from citizens to governments.
Interaction	Two-way communication with dialogue and feedback between citizens and government representatives.
Co-production	The public sector and citizens making better use of each other's assets and resources to achieve better outcomes and improved efficiency.
Self-organization	Public matters: Citizens create solutions independently; the solutions are to be recognised, facilitated or adopted by governments, and require some government action. Private matters: Citizens share information and self-organize for matters of private interest that may develop into public demands requiring some government action.

urban decor, maintenance and care of the city's public spaces. The platform is managed by the Municipality of Venice with the support of Venis S.p.A. (about 30 employees in total), aided by EU funding;

- *Cittadinanza Attiva Bologna* (**Bologna**)**:** The platform, born in 2014, aims to foster collaboration between citizens and the Public Administration for the care and regeneration of urban common goods. Through the platform, users can make a proposal to establish a pact of collaboration with the City, or request funding through the participatory budget tool, to make possible the realization of their ideas for the city. The platform is managed by staff of the New Citizens, Social Inclusion, and Neighbourhoods department and the Third Sector and Active Citizenship department of the Municipality of Bologna;

- *Io Partecipo RC* (**Reggio Calabria**)**:** A platform created in 2017 with the aim of sharing ideas and projects between citizens and the Public Administration. Through the platform, the local Administration provides citizens with news on public assemblies, and dedicated initiatives. The platform is managed by the communication office of the Municipality and by the in-house company Hermes S.r.l;

- *Milano Partecipa* (**Milan**)**:** A platform dedicated to participatory budgeting, active since 2017. It started as an EMPATIA research project of the University of Milan (UNIMI), supported by Horizon 2020 EU funds dedicated to digital platforms for participation practices. It has involved the Municipality in the experimentation of a participatory budget based on a web platform that supports all the phases of the process. The project is currently managed by the Municipality of Milan and the RCM Foundation, linked to UNIMI. Every year, citizens are invited to participate online, through the platform, proposing actions across the municipal territory. The Municipality coordinates the process and puts effort into funding and carrying out the actions;

- *Partecip@ttivi* (**Palermo**)**:** A participatory democracy project, active from October 2017 to April 2018, promoted by the Municipality of Palermo and carried out in collaboration with FPA, Next - Nuove Energie X il Territorio, Clac, Lattanzio Communication and Centro Studi Opera Don Calabria. The project was developed through moments of offline and online participation: online thematic forums concerning culture, solidarity, and liveability referred to the city of Palermo, participatory gaming in the city, workshops, and neighbourhood walks;

- *Piano Urbanistico Generale del Comune di Bari* (**Bari**)**:** The Municipality of Bari asked the citizens to collaborate in drafting the new General Urban Plan, proposing their idea on three themes related to the urban context of the city: public space, landscape, and mobility. The project was active from May to November 2016, combining traditional participation methods (walks, meetings) with an online discussion area;

- *Piano Regionale Mobilità Regionale Trasporti Logistica (PRMTL)* (**Rome - Lazio**)**:** The project, extended from Rome to other Municipalities in the Lazio Region, was born in 2003 and ended in 2017. The creator of the project was the Lazio Region but the project was managed by the Research Centre for Transport and Logistics (CTL) of the Sapienza University of Rome. Citizens had the opportunity to contribute to the definition of the Regional Mobility Plan, proposing their ideas through the online platform;

- *Segnalazioni al Comune di Cagliari* (**Cagliari**)**:** A section of the website of the Municipality of Cagliari dedicated to citizens' reports. Citizen may report on the maintenance and care of the city. Through the platform, users can also view the status of their report: whether it is accepted, under evaluation, or closed;

- *SensorCivico Bolzano* (**Bolzano**)**:** The platform, managed by the Communication area of the Municipality of Bolzano, aims to improve communication between the Public Administration and citizens by responding to reports, suggestions, and complaints made by citizens in a more rapid, traceable, and transparent way. Active since 2015, the SensorCivico platform was adopted by the Consortium of Trentino Municipalities.

Investigation Method

A theoretical-methodological taxonomy that has represented an important reference is the one reported by Michel (2005), which emphasizes the aspect of citizen engagement, their relationship with ICT and local actors and the administrative process (see Table 2).

Table 2. Four types of citizen relationship management using ICTs (Source: Michel, 2005)

	E-Administration	E-Government	E-Governance	The Learning City
French Republican principle	Government for the people	Government of the people	Government by the people	Government according to the people
Citizenship's component	Rights	Duties	Participation	Moral values
Role given to the citizen	Consumer	"Passive" agent	Actor "Active" agent	Defining the rules to follow
Underlying logic	Delivering services, improving satisfaction of citizens, presenting local government policy	Improving the chance of a policy's success	Encouraging deliberation, participation and development of local democracy	Learn how to learn. Deciding according to mutually determined criteria
Role of local elected	Regulating, improving administration performance	Understand the opinion of the citizens using consultation. Improving acceptance of a policy by citizens.	Protecting free expression, regulating infrastructures	To be created

The analysis of the literature (Afzalan, Sanchez, & Evans-Cowley, 2017; Falco & Kleinhans, 2018) provided a support for the identification of the elements useful in developing a more in-depth study of the chosen Italian participatory platforms: the sector of interest, the actors involved, the role of citizens, the number of users, the engagement tools, the level of engagement, the funding received, the number of actions carried out. These elements were merged in the elaboration of a questionnaire that was sent via e-mail to the contact persons of the ten projects identified.

The survey was designed by the Authors both to collect updated data on the case studies and to analyse their effectiveness and scalability. It should be noted that some data are available online, while other ones are not fully accessible or open. For this reason, the survey aimed to clarify the characteristics of the participatory platforms identified, acquiring more detailed information than that available online. The questions asked to the interviewees – the persons of reference for the projects – concerned quantitative (numerical data) and qualitative (motivations, objectives, personal opinions, etc.) characteristics that contribute to the description of the project. The questionnaire was divided into six sections, and in each of them a theme was developed and investigated through a series of multiple choice or open-ended questions:

1. **General information:** The territorial area affected by its experimentation, the year of beginning and end, the sector or sectors of interest and which are the main objectives of the platform. The information collected in this section provides a description of the main features of each project;

2. **Actors involved:** The roles within the platform: who designed it; who manages it; how many people are employed and how many of them are public employees; if the project receives funding, what role do the citizens and the Public Administration have respectively within the platform. A more in-depth analysis of the dynamics between public and private actors that gravitate around a platform clarifies their capacity for action. Specifying the role of the users and that of the Public Administration highlights the relationship between the two parties, whether more or less joint;

3. **Social inclusion:** This is a fundamental aspect for participatory platforms. The questions submitted to the interviewees were related to: the engagement tools used in the project; which online or offline participation methods are used; the degree of interaction developed between citizens and the local Administration;

4. **Operational and management aspects:** An in-depth analysis of the more technical aspects related to the platform: what kind of actions can citizens and Public Administrations perform through the platform; how are the inputs coming from citizens managed in terms of timing and method; which kind of channels are used for advertising;

5. **Data processing:** Questions regarding the protection of user privacy. This is required if citizens access the platform using personal data and if they are protected by a privacy regulation, therefore if the Public Administration makes correct and transparent use of the obtained citizen data. Finally, it is required if it is possible to download the data related to the projects of the platforms (reports, presentations, etc.);

6. **Impact of the project:** The last section deals with considerations relating to the way in which the project was received by users, in quantitative and qualitative terms, and what the perceptions of the Public Administration are in terms of the results obtained. The interviewees were required to indicate: the number of reports/proposals collected; the number of citizens and organizations involved; the number of proposals carried out; whether the project has contributed to the creation of other similar initiatives; whether the strategies used to involve citizens have been adequate to fight the issue of digital divide and, finally, what are the advantages and the issues still to be overcome.

Analysis of Results

Answers from 7 out of 10 platforms were recorded, in that the questionnaire did not receive a response from Partecip@ttivi (Palermo), Segnalazioni al Comune di Cagliari (Cagliari), and Piano Urbanistico Generale del Comune di Bari (Bari). As for the data obtained, considerations have been developed in relation to the topics covered by the 6 sections of the questionnaire. In particular, the results of the survey show the strategies used by local Administrations to:

1. Stimulate participation, social inclusion and reduce the digital divide;
2. Create and manage a platform that is easy to use, transparent and immediate.

Through the lens of these two macro-categories, the responses given by the interviewees were analysed, in an attempt to answer and identify common strategic lines.

Participation, Social Inclusion and Reduction of Digital Divide

The comments to this first point are referred to sections 3 and 6 of the questionnaire, respectively, relating to "social inclusion" and "impact of the project".

4 out of 7 respondents answered that their project involves the use of both online and offline tools: Io partecipo RC, Cittadinanza Attiva Bologna, PRMTL Rome-Lazio, Milano Partecipa. In particular, the contact person for Cittadinanza Attiva Bologna highlights that – when online – citizens can use the platform on the Municipality of Bologna website, while – when offline – they can participate in neighbourhood laboratories and special meetings to support citizens in proposals

for participatory budgeting and help them with co-design. In the same way, the Milano Partecipa response was exhaustive: the platform on which the process is centred is used as an online tool, and several offline meetings involve citizens in the various districts of the city of Milan to encourage the creation of proposals and co-planning between proponents and administration. Both cases gave an affirmative answer to the question that asked them if the project had helped to reduce the digital divide phenomenon. Cittadinanza Attiva Bologna has specified that there are currently certain collaboration agreements that provide free courses for the teaching of basic computer science notions, targeted in particular to the weakest part of the population (foreigners, elders, etc.), while in the case of Milano Partecipa it was specified that the participatory process is supported by physical meetings for the collection of proposals, and that there are collection and support centres across the territory at libraries and local markets.

The SensorCivico Bolzano project also involves territory-wide offline support, through cooperation with the Public Relations Offices and the civic centres of the Municipality of Bolzano for the collection of reports and proposals. It was also reported through the questionnaire that the Bolzano SensorCivico project will be implemented with Dimmi – a platform for discussion between citizens and administrations on issues involving the community. It was also reported that Io Partecipo RC will be able to implement the platform on the theme of digital citizenship thanks to PON Metro (national operation plan for metropolitan areas) funds. In addition, the contact for Io Partecipo RC emphasizes how important the participatory assemblies organized offline, then continued online on the platform, were useful to amplify the effects. There is therefore a push towards the implementation of such tools, which compared to others are less up to date, but fulfil their request for support on the digital theme.

On the other hand, the representative for the PRMTL Rome project, which is concluded and has no ongoing implementations, states that the initiative has not developed an offline strategy for the participation of the weaker sections of population or for overcoming the issue of the digital divide, given the platform was only active online. The Decidi Torino project also operates solely online and does not provide strategies to involve citizens offline. Dime Venezia states, instead, that it operates offline in the form of a focus group, but currently cannot assess how this strategy was influential for participation and social inclusion, since the project is still in the testing phase. The Venetian platform, however, provides a dedicated call centre which therefore also allows less digitized citizens to directly contact the Public Administration.

Regarding the level of interaction between citizens and Public Administrations declared by the project representatives, there is a distinction in two groups: Cittadinanza Attiva Bologna, PRMTL Rome, Milano Partecipa, and Decidi Torino responded that their level of interaction with the citizen is "level 3", according to which co-production processes are activated between Public Administrations and citizens (citizens and Public Administrations working together to create a collective good); SensorCivico Bolzano, Io Partecipo RC, and Dime Venezia have instead indicated a "level 2" level of interaction, where there is an exchange and a two-way communication between PA and citizens (feedback is provided on reports filed). In the projects included in the first group, a co-production process is currently active due to the presence of collaboration agreements: in the case of Bologna, for the design of a shared strategic plan; in the case of Rome, for the decision to involve the citizens in the choice of projects for the city; in the case of Milan, through the participatory budget tool; in the case of Turin and Reggio Calabria, through the co-design of proposals presented by the citizens. As for the group of platforms that responded that they belong to level 2 of interaction – Dime Venezia and SensorCivico Bolzano – both projects provide responses to citizens following a report and, in the case of Venice, a request to the PA to provide documents.

The last open-ended questions proposed in the questionnaire aimed to investigate the perception that the respective persons of reference have on their project: qualitative data useful for verifying the results obtained from the point of view of the interviewee. All the interviewees state that their respective projects have received positive feedback from the various actors involved. In two cases, however – Io

Partecipo RC and Decidi Torino – the respondents specified that the interaction between the public administration and citizen actors needed improvement, due to issues related to the performance of the instrument – which still required too many steps by the citizen (Io Partecipo RC) – or matters related to lack of feedback from the PA (Decidi Torino). Among the advantages that the interviewees find in the platforms, a common point identified by several interviewees is a greater interaction and collaboration between Public Administration and citizens, thanks to more streamlined, flowing, and traceable processes, and the possibility for the citizens to propose their ideas in a structured way, unlike what happens on social networks (Io Partecipo RC). Thanks to these experimentations it was verified that many of the ideas proposed by the citizens fall under the plan and the guidelines of the Public Administration, and the platform has allowed a simpler meeting of demands (Io Partecipo RC). Moreover, involving citizens in the procedures of the administration has reduced the distance between the parties and has made the complex bureaucratic procedures necessary for the realization of public works more transparent and clear (Milano Partecipa). The importance of these participatory processes in giving more autonomy to the citizens who take part in them also emerged (Cittadinanza Attiva Bologna), along with the power the latter have in awakening the remarkable civic energies of the city for planning of interventions that respond to the needs directly highlighted in the various districts (Milano Partecipa).

With regard to the problematic aspects encountered by the project representatives, a reluctance and/or lack of preparation by the Public Administration staff in adopting new technologies emerges in almost all cases: initial doubts soon overcome due to the convenience of the instrument (SensorCivico Bolzano); difficulty in performing a structured implementation of the citizens' ideas (Io Partecipo RC); difficulties in the relationship with the offices within the administration (Cittadinanza Attiva Bologna); the need for a greater involvement of the internal actors within the Administration (Decidi Torino). Among the problematic aspects encountered in the feedback provided by the Milano Partecipa representative, it is pointed out that there is an issue of digital divide, linked to social exclusion due to various reasons (level of education, social class, gender, etc.), and causing lack of engagement in online and offline participatory processes. The representative claims that the projects proposed by citizens with a high level of education, often already included in solid networks of organizations and other active subjects, go further in the participatory budget process; moreover, the representative states that not many results concerning the involvement of the weaker sections of society were recorded. Despite the high number of people involved in the Milano Partecipa project – 27,000 citizens – compared to the others analysed, and the related online and offline strategies adopted, the issue of involvement in the participatory processes of the weakest is yet to be explored and difficult to assess.

Management, Transparency, Traceability, User-Friendliness of the Platform

The DPPs analysed in this paper differ in the ways in which the interactions between actors and the data generated by them are managed. Citizens can make proposals on all the online platforms except for Dime Venezia, where it is instead possible to file a report and request or access documents. Two platforms give the possibility of commenting the proposals of other citizens or the responses of the Public Administration: SensorCivico Bolzano (under the proposal presented), and Milano Partecipa (in a dedicated area on the website). On Io Partecipo RC, Cittadinanza Attiva Bologna, Milano Partecipa, and Decidi Torino platforms, there is also the possibility of voting for the proposals of other citizens or the Public Administration itself in order to assess their actual relevance for the majority of participants. In certain cases, the votes are useful to bring a proposal to the attention of the Public Administration (Decidi Torino), or to make sure that a proposal, already considered valid by the Public Administration, receives a part of the budget allocated by the Municipality (Milano Partecipa). The latter option allows citizens to evaluate the possibility of voting a proposal that they share, rather than repeat a similar project, which avoids duplicates.

All the platforms except Io Partecipo RC responded that in their respective projects the Public Administration must provide feedback to the report/proposal. Response times differ: 15 days for

SensorCivico Bolzano and Cittadinanza Attiva Bologna, 10 days for PRTML Rome, a few hours/days for Milano Partecipa, 48 hours for Dime Venice. In the case of Decidi Torino, no feedback is provided unless the proposal has reached a minimum of votes. Response times are thus short, as mentioned in the rules of participation, and this contributes as a factor to strengthen the relationship of trust between citizens and Public Administration. In all the projects, the Public Administration has the task of monitoring the proposals/reports presented by the citizens and accept them if consistent, based on their feasibility, or reject them if they are off topic.

The platforms choose how to promote and communicate their projects in different manners. The SensorCivico Bolzano and Milano Partecipa platforms claim to use traditional offline communication tools such as press releases, press conferences (SensorCivico Bolzano), printed material, posters, radio announcements, public transport advertising (Milano Partecipa) combined with online tools such as social media (Facebook, Twitter, YouTube, Google Ads). The platforms Io Partecipo RC, Cittadinanza Attiva Bologna, and Decidi Torino have promoted their initiatives through the institutional sites and the official social networks of the Municipality. The PRMTL Rome platform has instead promoted its projects on offline channels such as newspapers and posters on public transport, since public transport was the theme of the platform for which citizens' cooperation was required. The Dime Venezia platform, still in an initial test phase, intends to proceed with a Below The Line campaign (BTL).

As regards the processing of data entered by citizens within the platform, all projects behave in a broadly uniform manner. In all platforms, with the exception of SensorCivico Bolzano and PRMTL Rome, it is necessary to log in using your personal data, but in every project there is a regulation to protect the privacy of data entered by the citizen, which ensures their correct use. In fact, all the representatives of the respective projects affirm that the use of the data held by the Public Administration takes place transparently.

DISCUSSION AND CONCLUSION

Following the investigation carried out, and in the light of the general framework previously presented, it is possible to make certain considerations. The results of the survey confirm that the EU strategic programs for the development of we-government practices in Smart Cities (Collective Awareness Platforms for Sustainability and Social Innovation) are funding two of the analysed Italian initiatives: Milano Partecipa and Dime Venezia. Financing the research in ICT at the service of new urban governance systems is a direct commitment to linking EU strategies adopted to a real involvement. At the Italian level, the strategies promoted by the Italian Digital Agenda (AgID) for the acceleration of e-Government initiatives (Three-year Plan for Information Technology in the Public Administration, issued in 2017) omit the issues related to citizen participation, focusing exclusively on the digitization of Public Administrations. In this way the AgID is, however, indirectly influencing the birth and the development of new technological tools linked with the issue of ICT in Public Administration. Although it is not possible to find a proportional relationship between the strategies adopted by the AgID and the emergence of new DPPs in Italy, we can affirm that these strategies contribute to the creation of fertile ground, which will allow the Public Administration to adopt and promote greater popularity of DPPs. Providing the Public Administration staff with the digital skills needed to use the new technologies is a fundamental first step to achieve the expected results of a DPP (Falco & Kleinhans, 2018).

These strategies, together with the availability of funding, of trained human resources in Public Administration, and a general availability to experiment citizen participation in urban governance, make it possible to achieve the proliferation of DPPs and to take a step forward towards we-Government. It is these essential characteristics that the birth of a new tool—along with, of equal importance, the possibility that an already existent platform may continue to live and develop itself—depends on.

In the light of this premise, it appears that the success strategies adopted by the DPPs analysed and emerging from the related responses, compared to the two macro themes previously introduced, are:

1. To foster participation, social inclusion, and digital literacy through:
   a. The use of offline tools to support the online platform, such as traditional participation tools including focus groups, neighbourhood walks, and neighbourhood meetings or meetings on specific topics (Cittadinanza Attiva Bologna, Milano Partecipa, Io Partecipo RC);
   b. The activation of specific digital literacy courses with the aim of reaching the weakest sections of the population (Cittadinanza Attiva Bologna);
   c. The realization of an effective relationship of collaboration with the citizens (Cittadinanza Attiva Bologna, Milano Partecipa, Io Partecipo RC, Decidi Torino), which is a step beyond the interaction between parties, and gives citizens the possibility to take part in the governance process;
   d. The creation of a unique and direct communication channel between citizens and the Public Administration (Dime Venezia);
2. To ensure transparency, intuitiveness, and develop a user-friendly instrument thanks to:
   a. Quick feedback from the Public Administration to the proposals or reports submitted by citizens (Milano Partecipa, Dime Venezia);
   b. Clarity on the processing of citizen data, and their correct use by the Public Administration (SensorCivico Bolzano);
   c. Presence of open data related to the contents of the platform, available for consultation by all citizens (Cittadinanza Attiva Bologna, Milano Partecipa, and SensorCivico Bolzano).

For a comparative summary, which may lead to a conclusive framework and some recommendations for future research developments, reference can be made to Table 3.

Table 3. The data survey: Comparison between the case studies (Source: elaboration of the Authors)

	Sector	Levels of Citizen-Government Relationship	Time for Feedback	Citizens Involved	Reports / Proposals	Action Completed	Transparency in the Process
Cittadinanza Attiva Bologna (Bologna)	All sectors of municipal jurisdiction	Level 3 (co-production)	The proposal stays published online 15 days, after which a response on its feasibility is given to the citizen	10000	720	530	yes
Io Partecipo RC (Reggio Calabria)	All sectors of municipal jurisdiction	Level 2 (interaction)	The citizen will receive feedback from the platform manager after completing the online form that guides him to structure his idea	350	/	8	yes
Milano Partecipa (Milano)	All sectors of municipal jurisdiction	Level 3 (co-production)	Within a few hours or days	27000	242	/	yes
PRMTL (Roma - Lazio)	Mobility	Level 3 (co-production)	Within 10 days	40000	A few thousand	10	yes
SensorCivico Bolzano (Bolzano)	All sectors of municipal jurisdiction	Level 2 (interaction)	Within 15 giorni	1000	5700	/	yes
Dime Venezia (Venezia)	Urban maintenance	Level 2 (interaction)	Within 48 hours	/	/	/	yes
Decidi Torino (Torino)	All sectors of municipal jurisdiction	Level 3 (co-production)	Only proposals reaching 5000 subscriptions (or the first 3 with at least 1000) are evaluated	2930	128	/	yes

Based on the analysis of the case studies, it is possible to underline the need for the presence of some factors for the success of DPPs:

- The direct involvement of the PA in order to guarantee the continuity of the project;
- A relationship between citizens and PA that provides for real interaction or co-production;
- The use of both online and offline tools to involve the largest number of citizens, including those least competent from a digital point of view;
- The transparency of the process, which includes the possibility of accessing open data, the methods of data processing and the timing of giving feedback to citizens.

Finally, what emerges from the ten cases studies are the perspective of a "social contract" between the actors, which brings the dimension of civic responsibility in the co-production process.

The present work represents an important contribution to the state of the art of Digital Participatory Platforms (DPPs), providing an overview of the platforms currently active in Italy, and identifying certain elements of success that lay the foundations for an evaluation, although partial, of such instruments.

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