



# How Digital Platforms Create Public Value through Government-Citizen Collaboration?

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## ABSTRACT

Digital platforms are becoming a popular means of multi-sided interactions between public institutions and their constituents. By enabling information sharing, consultation, and other forms of government-citizen collaboration, they facilitate co-decision-making and co-creation. Although digital platforms are not, the mechanism through which they can create public value, although important for government institutions and citizens alike, has not been systematically studied yet. This research aims at establishing a link between digital platform-based government-citizen engagement and how such engagement can generate public value. To this end, it employs the mixed method approach consisting of the systematic literature review and the analysis of 15 case studies of representative digital government platforms. The research delivers two main observations. First, digital government platforms produce three common public values: openness, government-citizen dialogue, and productivity gains. Second, unleashing the digital platforms' public value creation potential requires infrastructural foundations, inducements for governments to engage, and mutual benefits for citizens, businesses and the government itself.

## CCS CONCEPTS

• **Information systems** → Information systems applications; Collaborative and social computing systems and tools; • **Information systems** → Information systems applications; Computing platforms.

## KEYWORDS

digital government, digital platform, public value, participation, collaboration

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## 1 INTRODUCTION

Public administration is increasingly digitalized. One area is government using digital media to communicate and interact with its

constituents. According to [1] “digital technology, is tapping into assets, resources, and competencies that exist within government and across the society, organizing them into common development platforms and using them to orchestrate collective action and pursue collective goals”. In this process of continuous change triggered and enabled by the use of advanced technology, such platforms play a special role as online places of interaction, coordination, and exchange between participants. Among digital platforms, Digital Government Platforms (DGP) connect citizens with government, businesses, and each other to pursue collective goals and produce public value.

DGP help break down government “silos”, reduce duplications and administrative burden, and enable collaboration and coordination necessary for lean government initiatives [2][3]. DGP internalize the matching sides of the network externalities [4]. They enable value generation by reducing transaction costs or “economic friction” [5][6][7, p.11], distinguishing three types of platforms by their relevance to value delivery: 1) internal platforms mainly increase internal efficiency, 2) supply chain platforms enhance coordination, and 3) industry platforms enable service co-production.

As recipients of public services, citizens should decide what is valuable for them as a public commodity or service [8]. Platforms can be an effective mechanism for identifying what constitutes public value, “reconciling” conflicting values, and making decisions about trade-offs and actions necessary to create public value and prevent its loss [9]. Platforms can also contribute to combating abuses, bad practices, and corruption, ultimately improving the quality of democracy [10].

The “Government as a Platform” concept underlines the role of digital platforms for mediation and the provision of public services. Indeed, platforms enable groups of users to interact or transact [4][7], enabling collaboration across organizational boundaries and demonstrating performance improvements in technology-enabled internal operations [12]. Digitally-enabled government-citizen collaboration may take different forms. It can vary by direction (from one-way to multi-way), intensity (from information sharing to collaboration to co-production), the role attributed or allowed to citizens, etc. The latter can vary from passive service or information recipients, through active co-production of services and data, to participating in self-governance of services and information [13, p. 451].

Since governments began using various forms of digitally-facilitated collaboration, an analytical framework to identify appropriate designs and applications is increasingly important [14]. Platforms of government, citizens and businesses exchanging information, delivering services and engaging in other forms of collaboration remain “underexplored puzzles for theory and practice” [15]. Consensus is also missing on what type of engagement is



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appropriate and should be encouraged [12], and if digital platforms can align with public values [7]. According to [13, p.447], “the emerging phenomenon of service coproduction has not been systematically studied” and “the fundamental question facing society is: what public value must be created, and how can its production be assured most effectively, and efficiently” [13, p.452].

The discussion on the connection between the use of technology in general (and digital platforms in particular) and the value expected and created from such use is ongoing. Most literature focuses either on the functionalities and designs of digital platforms or refers to values (including public values) perceived in particular cases, although often missing the wider context including similarities and exceptions. There is a gap in understanding how the involvement of both government institutions and citizens in common decision-making and the creation of new services affect public value creation. To fill this gap, the paper pursues the question: **how DGP create public value through government-citizen collaboration?**

The paper is structured into four sections. Section 2 presents research methodology which includes systematic literature review and case study analysis. Section 3 presents research findings covering collaboration levels and public value typologies from the literature, followed by public value delivery by digital government platforms according to the case studies. Section 4 presents the main findings, section 5 conclusions and section 6 limitations and future opportunities of this research.

## 2 RESEARCH METHODOLOGY

This study applies two research methods. First, a systematic literature review (SLR) to provide a holistic view of the state of research on government-citizen collaboration through DGP [17]. Second, an explanatory case study [18][19] to extend the insights from the literature. As digital platforms and their use for public value creation is a topic rarely undertaken in scientific literature, the exploratory case study approach is most appropriate. Both methods are explained in this section.

### 2.1 Literature selection and collection

The aim of the literature review was to collect models and case studies of government-citizens participation and public value creation using digital platforms. In line with the research question, the search applied the term (“digital platform” OR “ICT platform”) AND (“govern\*”) AND (“public value” OR “value creation”). The search was limited to: articles, conference papers, book chapters, and books published or accepted for publication until January 2024; to five areas: business, management and accounting, computer science, social science, and decision sciences; and to the articles containing the keywords: digital platform(s), value co-creation, governance, or e-government. Performed on 10.12.2023 on the Scopus database, the search produced 667 publications.

Next, the author read the abstracts of these publications to determine their relevance to the research question and if they provide empirical evidence. As a result, 83 publications were selected for full-text reading, 5 articles were deducted due to their unavailability in full text and 38 due to lacking relevance to the researched topic. Based on references in relevant publications, up to 28 articles

have been added. In a result, the literature analysis was based on a sample of 68 articles. The articles came mainly from Government Information Quarterly (11), Information Systems Journal (5), and Policy & Politics (4) journals. Most articles (51) were published in the years 2019-2023.

Finally, the results were categorized into three streams, although some covered more than one: 1) models of government-citizen participation, 2) public value typologies, and 3) exemplary case studies. The results – the relationship between digital platform participation and public values – are presented in Section 3.

### 2.2 Case studies description

During the literature review, 15 cases of digital government platforms were identified, serving as secondary data for case study analysis. Some, i.e. UK GaaP or Italy GaaP, were described by more than one research paper. The list is presented in Table 1. In the case of e-Estonia, the main platform (X-Road) was analysed separately from the two other examples that were built on it, due to differences in the level of participation and public value results achieved. Since the observations coming from various papers were consistent, conclusions coming from several papers were summarized.

## 3 FINDINGS

### 3.1 Literature review on participation levels

The literature review revealed different ways of defining the level of cooperation between public organizations and citizens, characterized by the increasing role of citizen participation.

According to [34], government-citizen participation is a “ladder” consisting of three groups: 1) non-participation where the goal is not to cooperate but to persuade the participants, 2) token participation in which citizens are given a voice but cannot influence the outcome of the process thus becoming tokens or alibis for decision-making, further split into informing, consultation, and placation, and 3) full participation where the power and finally the full control is moved to citizens, split into partnership, delegated power, and citizen control.

The model [35] defines three levels of participation: 1) information, as the simplest, one-way relationship where the government disseminates information and citizens can access it on demand or through policy, 2) consultation, representing a two-way relationship when the government asks for and receives citizens’ feedback on policy-making but the decision power remains with it, and 3) active participation as a two-way relationship based on the principle of partnership where citizens actively engage in decision-making and policy-making and share in the final decision. Based on the model [35], [36] identifies the “eEnabling” stage with government providing information, “eEngaging” stage serving as a substitute for consultation, and the “eEmpowering” stage when citizens are given a high degree of incidence in decision making.

According to [13], government-citizen interactions are divided into four levels: 1) “citizen sourcing” where citizens share opinions enabling the government to improve; 2) “government as a platform” where knowledge is transferred from government to citizens, 3) “do it yourself” government where citizens self-organize in developing services, and 4) “collaborative planning and groupware” where workshops and training sessions are performed for joint

**Table 1: Digital Platforms Case studies**

| Case No. | Case description   | Country        | References             |
|----------|--|----------------|------------------------|
| 1        | Sixteen websites of local governments                          | Turkey         | [20]                   |
| 2        | Social media platforms   | Turkey         | [21]                   |
| 3        | Dutch ‘9292’ project and public transport database ‘NDOV’      | Netherland     | [16]                   |
| 4        | UNHCR’s identification platform at Bidibidi Refugee Settlement | Uganda         | [22]                   |
| 5        | Diia platform  | Ukraine        | [23]                   |
| 6        | Information and Consultation Platform (COVID-19 services)      | Zimbabwe       | [24]                   |
| 7        | UK GaaP  | United Kingdom | [25], [26], [27], [23] |
| 8        | Italy GaaP   | Italy          | [25], [7], [27], [23]  |
| 9        | E-Estonia (X-Road; e-ID; and public services infrastructure)   | Estonia        | [27], [23]             |
| 10       | New value-added tax (VAT) filing rules                         | Estonia        | [28]                   |
| 11       | E-residency program  | Estonia        | [28]                   |
| 12       | Aadhaar platform and Digital India                             | India          | [15],[29], [30], [23]  |
| 13       | Por Mi Barrio / Montevideo                                     | Uruguay        | [31]                   |
| 14       | Operação Serenata de Amor [Love Serenade Operation]            | Brasil         | [32]                   |
| 15       | Platform Zillow.com  | USA            | [33]                   |

discussion and planning. The model [37] also defines four levels of participation starting from one-way information sharing but distinguishing informing from consulting. Both models understand consultation as a one-way communication, contrary to other models, explained by consultation’s limited impact on the final decision. Two-way communication occurs with interaction being a “dialog” between representatives, next “co-production” where citizens and government work together to ensure better outcomes, and finally “self-organization” where citizens share a responsibility for value creation split into “public matters” when citizens co-create for the benefit of the public and “private matters” when citizens create services based on public resources but for private beneficiaries. A similar model proposed in [38] consists of four stages – eConsulting, eDiscussion, eParticipation and eEmpowerment.

The model introduced in [39] conceptualizes e-participation into “e-informing”, “e-consulting”, and “e-collaboration”, where “e-consulting” contains consultation, involvement and discussion, while “e-collaboration” contains e-empowerment. Also [21] follows three levels of participation: “information dissemination”, “consultation”, and “co-creation”.

The most extensive model by [40], following [41], proposes five participation stages: 1) eInforming, 2) eConsulting, 3) eInvolving, 4) eCollaborating, 5) eEmpowerment. In [41], stages 3 and 4 are Collaborate and Engage respectively.

Comparing different participation models leads to four conclusions. First, the six-level model is best to distinguish the intensity and scope of participation. Second, in addition to different naming standards, there are also differences in the understanding of similar terms, e.g. while most authors [35][41][40] suggest “informing” as the first level of participation, [34] starts from “non-participation” while [37] begins with “consulting”. Third, the most differentiated level is the third one. It contains “collaboration” [40][41], “co-production” [37], “active participation” [35], “partnership” [34],

“eEngaging” [36], or “collaborative planning and groupware” [13]. Four, the highest level of collaboration which gives the leading role to citizens, is recognized by few authors and named differently: “empower” [41][36][40][38], “citizen control” [34], “do it yourself government” [13] and “self-organization” for public or private matters [37].

The remainder of this paper recognizes six levels of participation: 0) non-participation, 1) informing, 2) consulting, 3) co-production, 4) co-creation, and 5) citizen empowerment. At level 0, no participation between the government and the public are recognized or, as in [34], communication is a pressure from government on citizens. Level 1 represents one-way communication, usually information sharing from government to citizens with no or limited feedback. Level 2 is two-way communication between government and citizens, allowing feedback on the information provided. Common practices at this level include consultation and dialogue, but the government ultimately decides how much to rely on public advice. Thus citizens do not have a direct or bounded influence on the final decisions. Stage 3 begins with significant citizen influence on government decisions through two-way communication. Level 4 represents multi-sided communication on the design of services and data with relevant impact, and equal role between citizens and government in decision-making. Finally, level 5 represents citizens being in control of the decisions for public or private matters. The government is not the initiator of the platform, and its role is limited to participation, establishing rules and practices, and enforcing compliance. Table 2 presents participation levels found during the literature review.

### 3.2 Literature review on public values typologies

Initially, public value was strongly connected and dependent on the services and goods delivered by public administration and its

**Table 2: Comparison between participation models found in the literature**

| Type/Means   | Levels                       |   |                                   |                                 |                                       |                                | Source                           |
|--|------------------------------|---|-----------------------------------|---------------------------------|---------------------------------------|--------------------------------|----------------------------------|
|  | Level 0<br>Non-participation | Level 1<br>Informing                          | Level 2<br>Consulting, dialog     | Level 3<br>Co-production        | Level 4<br>Co-creation                | Level 5<br>Citizen empowerment |                                  |
| Participation/<br>General government practices               | Non-participation            | Degree of tokenism                            |                                   | Degree of citizens' power       |                                       |                                | [34]                             |
|  | Therapy, Manipulation        | Informing                                     | Consultation Placation            | Partnership                     | Delegated power                       | Citizen control                |                                  |
| Participation/<br>General practices                          |                              | Informa-tion                                  | Consultation                      | Active participation            |                                       |                                | [35]                             |
| Participation/<br>General practices                          |                              | Inform  | Consult                           | Collabo-rate                    | Engagement                            | Empower                        | [41]                             |
| e-Participation/<br>e-Government                             |                              | eEnabling                                     | eEngaging                         |                                 | eEmpowering                           |                                | [36]                             |
| e-Participation/<br>Digital media                            |                              | eInform-ing                                   | eConsulting                       | eInvolving                      | eCollaborating                        | eEmpower-ment                  | [40]                             |
| Digital media participation/<br>Social media platforms       |                              |   |                                   | Citizen Sourcing                | Collabora-tive planning and groupware | Govern-ment as a platform      | "Do It Yourself" government [13] |
| e-Participation/<br>General practices for community building |                              |   | eConsulting                       | eDiscus-sion                    | eParticipa-tion                       | eEmpower-ment                  | [38]                             |
| Digital participation platforms/<br>Participatory platforms  |                              | Informa-tion sharing (Informing, Consult-ing) | Interaction (dialog and feedback) |                                 | Co-production                         | Self-organization              | [37]                             |
| Digital and e-government participation/<br>e-Government      |                              | Open Data platform                            |                                   | Participation and collaboration |                                       |                                | [42]                             |
| e-Participation/<br>e-Participation framework (ePfw)         |                              | eInform-ing                                   | eConsulting                       |                                 | e-Collaborating                       |                                | [39]                             |
| Social media platforms/<br>Social media platforms            |                              | Informa-tion Dissemina-tion                   | Consultation                      |                                 | Co-creation                           |                                | [21]                             |

officers to citizens [43, p.22], part of maximizing the government's utility to the society through the provision of services aimed at the public good [44]. Public value creation as "neither in the subject valuing something, nor in the object which is being valued" [45, p.355] but "situated in relationships between the individual and society" [8, p.212]. The multidirectional nature of public value means that it may not only answer citizen needs but also become obligations on citizens and their designated representatives to take certain actions [46][21, p.3].

There is no consensus on the definition of the public value and the debate on its definition and content is ongoing. This makes it difficult to clearly define what should be a public value and how to create it. For instance, the New Public Management approach, also known as "government that works better and costs less" [47] or as lean government [2], brings the business and market orientation to the public sector in order to defend bureaucracy and deliver public services efficiently and effectively [48][49][20]. Three groups of "core administrative values": economy and parsimony, honesty and

fairness, and security and resilience is introduced in [53]. A list of commonly agreed public values is presented in [47].

According to [47], government technology usage should go beyond the criteria of efficiency, effectiveness, and cost reduction. The focus on efficiency may jeopardize explicitly or, more importantly, implicitly public value [50, p. 17]. Over focusing on the service and outcome targets might result in distrust and, in effect, loss of public value [8, p. 214].

Usually, researchers propose extensive sets of values, e.g. [51] proposes seven principles governing public life namely: 1) selflessness; 2) integrity; 3) objectivity; 4) accountability; 5) openness; 6) honesty; and 7) leadership, while [52] suggests 32 public values split into four groups: 1) ethical – integrity, fairness, accountability, loyalty, excellence, respect, honesty, and probity; 2) democratic – rule of law, neutrality, accountability, loyalty, openness, responsiveness, representativeness and legality; 3) professional – effectiveness, efficiency, service, leadership, excellence, innovation, quality, creativity; and 4) people – caring, fairness, tolerance, decency, compassion, courage, benevolence, and humanity.

There are also public value models designed particularly for digital services i.e. [20] proposes three categories of website performance metrics: content, usability, and quality, and six categories of public values: accessibility, citizen engagement, transparency, responsiveness, dialog, and balancing of interests. According to [55], six public value dimensions specific to e-government are: 1) improved public services, 2) improved administration, 3) open government capabilities, 4) improved ethical behaviour and professionalism, 5) improved social value and well-being, and 6) improved trust and confidence in government. As presented, public value models referring to digital services do not differ much from more general ones presented earlier, except for the website performance metrics [20].

Probably the most comprehensive catalogue of public values is proposed by [45]. It is composed of 72 public values divided into seven groups or “constellations”, namely: 1) public’s contribution to society, 2) transformation of interests to decisions, 3) relationship between public administrators and politicians, 4) relationship between public administrators, 5) inter-organizational aspect of public administration, 6) behaviour of public sector employees, and 7) relationship between public administration and citizens. A full list of values included in constellations is provided in Appendix 1, Table 3.

Interestingly, core public values that dominate in all presented models are efficiency and effectiveness, transparency and privacy, citizen participation and engagement, and trust and confidence building.

### 3.3 Digital platforms and public values – Case study analysis

The digital platforms identified as case studies during the literature review were examined by their attribution to the participation levels and the public value delivered. The former follows the 5-level participation model in Section 3.1. The latter takes into account the creation of public value in each case study, using the public value catalogue [45]. The catalogue is comprehensive, ordered, and

descriptive. Appendix 1 presents the results, ordered by the increasing participation levels. The analysis of the results focused on the similarities in the public value created at different participation levels.

At the lowest level (level 1), digital platforms typically take the form of a website with simple communication functionality, serving mainly a one-way informational role. The research revealed a surprisingly wide range of public values created at this level. Considering the catalogue of public values [45], Case No. 1 promotes the “common good”, fosters “openness”, and increases “productivity” through government-citizen cooperation.

Case No. 2 discusses the social media platforms that help citizens provide instant feedback to the public administration on their opinions. The authors identify two goals: information sharing and consulting at levels 1 and 2 respectively. The commonly created public values were found to be similar to those at level 1, including “common good” delivery and “openness”, and additionally “responsiveness” and “user democracy” value from the “dialogue” group.

Cases No. 3 to 6 represent the participation level 3, i.e. “co-production”. The dominant values in these cases were “openness”, particularly “listening to public opinion”, and “productivity”, i.e. gains in effectiveness. Some values related to “equity”, including “fairness” and “professionalism”, were seen in some other cases. At level 3, “dialog” is not commonly represented, although it already occurred at level 2. This could be explained by the fact that the represented cases mainly refer to the preparation of the platform’s infrastructure as a building block for future collaboration.

Level 4, “co-creation”, is represented by 6 cases from Case No. 7 until 12. In all of them, similar values such as “openness” and “productivity” could be identified as at the previous levels. However, the distinguishing value at this level is “dialogue” with connected values of “citizen involvement” and “user democracy”. This is attributed to the platforms enabling two or more sides to interact, work together, and have an equal influence on the solutions, i.e. participate actively in the creation of services and data. Finally, the frequently represented “innovation” value expresses the willingness of the public administration to enable citizens to influence the delivery of services and goods as well as co-create them.

Level 5, represented by Cases No. 13, 14 and 15, presents citizen empowerment to self-determination and bottom-up practices. This level gives a dominant role to citizens to create public values, sometimes supported by private values. This might explain the most distinguishing public values found at this level, i.e. “common good” “user democracy”, “local governance”, and “citizen involvement”, explaining citizens’ personal involvement and risk-taking for public good. Similar to level 4, “openness” and “dialog” have a special meaning in connection with “citizen self-development”. An interesting example is Case No. 15 where citizen engagement and self-creation are for the benefit of both public and private interests.

## 4 FINDINGS

Digital technology has a significant impact on public values creation, both as an enabler – allowing certain actions or activities, and an embedder – enabling the integration of values into systems [56]. Digital Government Platforms (DGP) enhance public value delivery by intensifying direct participatory practices. In particular,

they facilitate the involvement of all parties in common undertakings by arranging connections in a highly convenient way, saving time and effort in taking action. Therefore, if supported by government, they can positively impact the efficiency and accuracy of decision-making.

This paper was set to answer the research question: how can DGP support public values delivery through government-citizen collaboration? Part of the answer is that DGP most frequently deliver values such as: “openness”, “productivity”, and “dialog”, and in the second order: “innovation”, “equity”, “user democracy” and “common good”.

Taking into account all levels of participation, the common public values delivered by DGP are “openness” with the connected value of “listening to the public” although the main goal of DGP is cooperation and transparency. Also “productivity” is essentially supported by DGP, presenting an opportunity for governments to increase their efficiency with the use of digital platforms. Another frequently present value is “dialog” with connected values of “responsibility”, “user democracy”, and “citizen involvement”, occurring mainly at levels 4 and 5, and justified by the higher activity of users (enabled by government) but also by their perception of influencing services and decisions.

“Innovation” including relative values of “enthusiasm and “risk readiness” is the dominant value at levels 4 and 5, where citizens, effectively encouraged by government, co-create or self-deliver services and decisions. Similarly, “equity” (reasonability, fairness, and professionalism) occurs commonly across all levels with the exception of level 5, where equality is implicitly realized by the bottom-up citizen initiatives, and level 1, where one-way communication makes it difficult to capture the occurrence and impact of this value. “User democracy” including relative values of “local governance”, “citizen involvement” and “citizen self-development” is dominant at level 5, which is a natural consequence of citizens being involved in bottom-up initiatives. Through significant involvement in the creation of new services and participation in decision-making processes, citizens often support and partially replace the government in their roles.

## 5 CONCLUSIONS

The results of this research are consistent with the literature findings. According to [56], values such as “transparency”, “consultation”, “social inclusion”, and “self-governance” are strongly supported by technology and characterized by high levels of transformative impact. As confirmed by this research, DGP enable participants to co-work for the common good. Also, successful public value delivery “was constrained by the limited ability of government to effectively coordinate citizen actions and the difficulty of ordinary citizens to self-organize” [13, p.446]. Digital platforms ease the coordination of certain actions and therefore support participants in co-production, co-creation, and self-development of services. Characterized by “network power” derived from the interaction among participants, digital platforms enable the growth and lead toward self-development of communities. This potential is framed as a new “network state”, characterized by the liberation of boundaries and the emergence of shared sovereignty [13, p.451][54].

Another observation refers to bottom-up collaboration, characterizing level 5 participation, i.e. citizen empowerment. The ability of citizens to interact and use digital platforms requires certain up-front conditions like: 1) infrastructural building blocks – platform establishment, 2) government incentives and inducements, and 3) the existence of mutual benefits among citizens, businesses and government. Those conditions could be exhibited separately or in groups. We can observe the first and second conditions in Cases No. 13 and 14 as both solutions are based on access to open public data and encouragement from government. All three conditions occur for Case No. 15 where a private entity, by using public data, delivers a service for the benefit of itself, private entities, but also the public sector and citizens.

The study delivers theoretical and practical implications. The theoretical implication entails the use of the participation framework for further analysis of the DGP that realize different levels of participation connected with different public value streams. The practical implication entails selecting platform designs to achieve desired outcomes i.e. productivity and effectiveness are more associated with co-production and co-creation rather than with informing and consulting.

## 6 LIMITATIONS AND FURTHER RESEARCH OPPORTUNITIES

Notwithstanding the careful adherence to applied research methods, this work may be biased due to its reliance on secondary data coming from the limited number of cases and the author’s subjective analysis of public values. Therefore, this work could serve as a general framework for further investigation and analysis. Additionally, the literature research for levels 1 and 2 [20][21] provided single cases only. Though allowed when no other cases are available for replication [18], the conclusions should be approached with caution, particularly since they relate to the same country.

The analysis of the core values in some case studies considers the platform’s position on the ladder of participation only, without taking into account other factors such as variations in the level of democratization among the countries hosting the cases, as well as cultural and social traditions of the shared decision-making. Therefore, conducting additional case studies would be an interesting continuation of the presented research. In particular, deeper research on bottom-up and self-governing initiatives would strengthen the conclusions regarding the effectiveness of such initiatives.

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## A APPENDICES

**Table 3: Digital platforms with indicated public values**

| Case No. | Ref.                   | Level of participation                                | 1. Contribution to society |     |     |     | 2. Transformation of interests to decision |     |     | 3. Relationship between public admin. and politicians | 4. Relationship between public administration and their environment |     |     | 5. Intra-organisational aspects of public administration |     |     | 6. Behaviour of public-sector employees | 7. Relationship between public administration and the citizens |   |     |     |
|----------|------------------------|---|----------------------------|-----|-----|-----|--|-----|-----|---|---|-----|-----|--|-----|-----|---|--|---|-----|-----|
|          |                        |   | 1.1                        | 1.2 | 1.3 | 1.4 | 2.1  | 2.2 | 2.3 |   | 3   | 4.1 | 4.2 | 4.3  | 5.1 | 5.2 |   | 5.3  | 6 | 7.1 | 7.2 |
| 1        | [20]                   | 1.Informing   | X                          |     |     |     |  |     |     |   | X   |     |     |  | X   |     |   |  |   |     |     |
| 2        | [21]                   | 1.Informing & 2.Consulting                            | X                          |     |     |     |  |     |     |   | X   |     |     |  |     |     |   |  |   | X   |     |
| 3        | [16]                   | 3.Co-production                                       | X                          |     | X   |     |  |     |     |   | X   | X   |     |  | X   |     |   |  |   |     |     |
| 4        | [22]                   | 3. Co-production                                      |                            |     |     |     |  |     |     |   | X   |     |     |  | X   |     | X                                       | X  | X |     |     |
| 5        | [23]                   | 3. Co-production                                      |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 6        | [24]                   | 3. Co-production                                      |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 7        | [25], [26], [27], [23] | 4. Co-creation  |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 8        | [25], [7], [27], [23]  | 4. Co-creation  |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 9        | [27], [23]             | 4. Co-creation  |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  |   | X   |     |
| 10       | [28]                   | 4. Co-creation  |                            |     |     |     |  |     |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 11       | [28]                   | 4. Co-creation  |                            |     |     |     |  | X   |     |   | X   |     |     | X  | X   |     |   |  |   | X   |     |
| 12       | [15], [29], [30], [23] | 4. Co-creation  |                            |     |     |     |  | X   |     |   | X   |     |     | X  | X   |     |   |  | X | X   |     |
| 13       | [31]                   | 5. Citizen empowerment for public matters             | X                          |     |     |     |  | X   |     |   | X   |     |     | X  |     |     |   |  |   | X   |     |
| 14       | [32]                   | 5. Citizen empowerment for public matters             | X                          |     |     |     |  | X   |     |   | X   |     |     | X  |     |     |   |  |   | X   |     |
| 15       | [33]                   | 5. Citizen empowerment for public and private matters | X                          |     |     |     |  | X   |     |   | X   | X   | X   | X  |     |     |   |  |   | X   |     |

Legend: description of values. In brackets connected values. 1) Public's contribution to society (with connected values: 1.1.Common good (Public good, Social cohesion), 1.2.Altruism (human dignity), 1.3.Sustainability (Voice of the future), 1.4.Regime dignity (Regime stability); 2) Transformation of interests to decisions (with connected values: 2.1.Majority rule (Democracy, Will of the people, Collective choice), 2.2.User democracy (Local governance, Citizen involvement), 2.3.Protection of minorities (Protection of individual rights), 3) Relationship between public administrators and politicians; (with values: Political royalty (Accountability, Responsiveness); 4) Relationship between public administrators and their environment values: 4.1.Openness-Secrecy (Responsiveness, Listening to the public opinion), 4.2.Advocacy – neutrality (Compromise, Balancing of interests); 4.3.Competitiveness-cooperativeness (stakeholder or shareholder value); 5) Interorganizational aspect of public administration with values: 5.1. Robustness (Adaptability, Stability, Reliability, Timeliness), 5.2.Innovation (Enthusiasm, Risk readiness), 5.3.Productivity (Effectiveness, Parsimony, Business-like approach); 5.4. Self-development of employees (good working environment); 6) Behavior of public sector employees with values: Accountability (Professionalism, Honesty, Moral standards, Ethical consciousness, Integrity); 7) Relationship between public administration and the citizens (with values: 7.1.Legality (Protection of rights of the individual, Equal treatment, Rule of law, Justice), 7.2.Equity (Reasonableness, Fairness, Professionalism, 7.3.Dialog (Responsiveness, User democracy, Citizen involvement, Citizens self-development), 7.4.User orientation (Timeliness, Friendliness).