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Platform Design and Participation Gaps in Collaborative Governance

A Theory Driven Comparative Case-Study of
Decidim Barcelona and Decide Madrid

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Abstract

Digital participation platforms promise to democratize policymaking yet may replicate offline inequalities. This thesis examines how concrete design choices widen or narrow participation gap, guided by collaborative-governance theory, digital-governance theory and digital-divide theory. It employs a comparative case study of Decide Madrid and Decidim Barcelona, with data being collected using a literature review, complemented by semi-structured expert interviews and the analysis of this data accomplished by utilizing a cross-case synthesis.

The analysis shows that platform design significantly affects participation: offline facilitation, institutional coordination, continuous incentives, dialogic transparency systematically shrink motivational and usage gaps, whereas rigid process pipelines that lack visible institutional follow-through tend to widen skills and usage gaps for already disadvantaged groups. Thus, the degree to which digital collaborative-governance tools reduce or reproduce inequalities depends less on the mere adoption of new technology than on how responsively that technology is embedded in existing civic and administrative practices.

The thesis offers a new theory-driven template for evaluating civic-tech platforms and identifies practical levers: hybrid outreach, adaptive thresholds, continuous transparency, through which municipalities can make digital collaboration more inclusive.

1. Introduction

Collaborative governance is by no means a new concept in the realm of public administration. Countless scientists have developed theories and conducted case studies on the matter. Scholarly consensus holds that by enabling citizens to participate in policy development, collaborative governance plays an important role in fostering inclusive decision-making (Ansell & Gash, 2008). While traditionally collaborative governance has been facilitated through physical deliberative spaces, such as town halls or citizen assemblies, its digital transformation has introduced new tools to facilitate and automate participation processes (Monterde & Barandiaran, 2018; Tang, 2020). Two of those tools are Decidim Barcelona and Decide Madrid, both open-source platforms that host agenda-setting, deliberation and participatory-budgeting processes for the two largest cities of Spain.

The literature in digital governance, the realm of public administration scholarship that examines the integration of technology in governance, describes a paradigm shift towards algorithmically mediated coordination (Dunleavy et al., 2005; Hanisch et al., 2023), suggesting that emerging technologies may promote accessibility and responsiveness in governance (Fountain, 2001; Noveck, 2009).

However, scholars in the field of digital divide theory argue that these new technologies risk reinforcing structural inequalities, excluding citizens that have limited digital literacy and access from a participatory democratic process that should be inclusive (Citron & Pasquale, 2014; Hildebrandt, 2020; van Dijk, 2005, 2020). Some empirical studies support those concerns. For instance, a 2022 evaluation of Decide Madrid revealed lack of engagement from various groups of society, including the youth, older people, women and girls, as well as among organized stakeholders (Noveck et al., 2022).

Although research on these platforms exists, most empirical studies were conducted more than five years ago, a long interval for projects in this new and evolving space of digital governance. Moreover, those studies tend to examine a single platform in isolation or offer mainly design-oriented, normative reflections. Comparative, outcome-focused work that integrates a clear theoretical lens is still scarce. Existing scholarship remains largely descriptive: single-platform case reports (e.g., Noveck 2022; Monterde & Barandiaran 2018) catalogue user numbers but rarely trace how specific design bundles alter motivational, physical, skills or usage gaps. Nor do they test design-mechanism theories across contexts. This thesis fills that void, thereby motivating the research question below, by comparing Decide Madrid and Decidim Barcelona through an integrated, theory-testing cross-case design.

The scope of this thesis is to fill that gap by comparing Madrid's and Barcelona's platforms through a theory-driven framework that combines the four governance mechanisms of digital-governance theory (control, coordination, incentives, trust) with the four access layers of digital-divide theory (motivational, physical, skills, usage). It will do so by conducting a structured cross-case synthesis (Yin 2018) that tracks how specific design choices widen or narrow participation gaps. The analysis shows

that Barcelona's hybrid offline–online workflow and “trace-everything” transparency narrow usage gaps, whereas Madrid's highly gamified but rigid pipeline widens them, especially for first-time participants.

Consequently, this thesis puts forward the following research question:

“How do design features of digital governance platforms influence participation gaps in collaborative-governance processes?”

To answer this question, the following sub-questions are posed:

1. Which platform design features shape how citizens can participate in Decidim Barcelona and Decide Madrid?
2. Where do those features converge and diverge between the two platforms?
3. Which divergent features correspond to changes in the four participation gaps (motivational, physical, skills, usage)?
4. Through what governance mechanisms (control, coordination, incentives, trust) do those features widen or narrow the participation gaps?

As such, this thesis is primarily explanatory, seeking to understand which mechanisms influence participation outcomes, drawing from interpretivist traditions in public administration (Given, 2008; Jupp, 2006).

The thesis will first lay out the theory used, starting with Collaborative Governance and then moving to Digital Governance and Digital Divide Theory, the former is utilized for the case selection and the latter for the operationalisation of the analysis. Afterwards the research design, most-similar case comparison, is introduced and explained, followed by a justification for the case selection and a consequent introduction thereof. Following, the method of data collection, a literature review and supplementing interviews is laid out, with it the data analysis method-cross case synthesis following Yin (2018). Next the two chosen cases, Decide Madrid and Decidim Barcelona are introduced in depth, starting with Decide Madrid. Subsequently, the analysis of the two will be conducted, based on the four dimensions of access as per van Dijk (2005) and the four mechanisms of governance as per Hanisch (2023). Ultimately, the findings of this individual case analysis will be synthesised, after a discussion of the indications and limitations of the thesis, it concludes that design features of digital governance platforms influence participation gaps in collaborative-governance processes significantly, dictating who can participate and how.

2. Theory

Theory plays a significant role in the context of this research, guiding case selection and the analytical scheme. The relevant theoretical frameworks were found to be digital governance theory, collaborative governance theory and digital divide theory.

This chapter weaves these three strands of scholarship into a single explanatory lens. Collaborative governance theory helps to clarify *why* public agencies invite citizens into policy creation and setting the eligibility criteria for the case selection, providing the institutional context in which digital-governance mechanisms and digital-divide gaps unfold. [Chapter 3](#) operationalises these criteria when choosing Barcelona and Madrid for the comparative analysis. Further, digital governance theory functions to examine *how* digital infrastructures steer behaviour, providing the study's independent variables platform-design features and four evaluative criteria for case comparison. Adding depth with another four criteria to the evaluation criteria, digital-divide theory reveals *for whom* those mechanisms widen or restrict opportunities and supplies the study's dependent variable participation gaps.

By combining the latter two theories, the chapter builds an eight-dimensional framework that structures both data collection and coding. Table 1 outlines the dimensions of the framework, while [Section 3.3](#) lays out how each dimension becomes an analytic variable. The following section will conduct a brief literature review of these theories, starting with collaborative governance.

Governance mechanism ↓ / Access stage →	Motivational	Physical	Skills	Usage
Control	Clear thresholds invite first participation	Simple rules reduce entry barriers	Guided steps teach platform navigation	Structured phases sustain continued use
Coordination	Published roadmap signals commitment	Single hub unifies access points	Sequential prompts build competence	Timely feedback shows progress
Incentives	Badges and points trigger sign-ups	Mobile credits offset hardware gaps	Tutorial rewards encourage learning	Impact scores keep users returning
Trust	Open code fosters initial trust	Secure login calms privacy fears	Peer forums share expertise	Public audit logs prove fairness

Table 1. The four access dimensions of digital divide theory in relation to the four digital governance mechanisms.

2.1 Collaborative Governance: The Democratic Purpose

While *collaborative governance* is a common term in Public Administration, much like any other concept in the field, there is no all-encompassing interpretation for it (Emerson et al., 2012; Lahat et al., 2021). One of the most prominent definitions comes from Ansell & Gash (2008, p. 544), who define collaborative governance as:

A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making- process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs.

Furthermore, they note six aspects of collaborative governance: (1) A public agency initiates the process; (2) non-governmental actors are included; (3) stakeholders do not merely act as consultants, but are directly involved in decision making; (4) the forum has a formal structure and comes together as a whole; (5) the aim is to reach a consensus decision, even if such consensus is ultimately not reached; and (6) the collaboration focuses on public policy or the public management.

In collaborative governance scholarship this definition serves a cornerstone that is usually expanded upon. In this vein, Emerson et al.'s (2012) explanation does share a focus on public policy decision making. However, it emphasises that such engagements should be constructive, involve members of the public, private and civic sphere and most importantly fulfil a public objective that would otherwise not be achievable. Similarly, Lahat et al. (2021) focus on the aspect of collaborative governance of bringing together stakeholders from different sectors, as well as note that the origin of the concept was to legitimize government action and built its capacity to govern, carry out policies and further inclusion.

Summarizing, these understandings of the concept place a strong emphasis on collective decision-making, transparency and responsibility through deliberative forums, unified in their requirements of non-governmental stakeholder participation.

Historically, physical gathering places such as town halls, public hearings and citizen conferences have been used to institutionalize these processes (Emerson et al., 2012). However, collaborative governance is not bound to only physical deliberation. Emerging technologies, such as AI and blockchain technology, are being used to expand such processes to the digital realm. Furthermore, “older technologies”, such as social media have found implementation in projects (Brynjolfsson & McAfee, 2017; Castells, 2009). These digital environments offer the potential for (asynchronous) mass deliberation and thus are seen to overcome traditional barriers, such as geographical, timely and bureaucratic limitations. Platforms such as Decidim in Barcelona and Pol.is in Taiwan are prominent examples of this new development; concrete cases will be discussed in section 3. Methods (Monterde & Barandiaran, 2018; Tang, 2020).

Synthesizing these definitions, this thesis will work with the definition of collaborative governance as understood by Ansell & Gash's (2008) six aspects of collaborative governance, adding Emerson et al.'s (2012) emphasis on a constructive engagement that fulfils an objective that would otherwise not be achievable and is not bound to a physical location.

This definition and theory will serve as framework for the case selection.

2.2 Digital Governance: Design Logic

This digital aspect of collaborative governance overlaps with another theory that will be used in the research: *digital governance*, which will be explored in the following section.

Digital governance scholars examine this integration of technologies in democratic processes, differing in their assessment whether this integration has positive or negative implications. While using the term “Digital-Era Governance” (DEG), digital governance theory has its origin in Dunleavy’s et al.’s (2005) “New Public Management Is Dead—Long Live Digital-Era Governance”.

In it, Dunleavy et al. highlight the strategic use of web-based services, digital records and algorithmic coordination, viewing digital infrastructure not just as a tool but a structuring force in governance. Moreover, they see citizen access, responsiveness and joined-up government as core governance goals. This emphasis on citizen access can arguably be seen as an overlap to collaborative governance.

While their work laid the basis for digital governance theory, their definition of digital governance itself is very broad, thus needing further clarification. Hanisch et al. (2023, p. 2) offer this by stating it [...] leverages algorithmic protocols to automate control, coordination, incentives, and trust.” Further, they describe digital governance as a distinct form of governance that enables and regulates digitally mediated exchange relationships. Moreover, they lay out four core mechanisms: 1) control; 2) coordination; 3) incentives; and 4) trust.

Here, it is relevant to point out the seeming contradiction between a) control and b) trust. Hanisch et al. (2023, p. 5) have a different interpretation of these concepts and explain them as complementary mechanisms that can be algorithmically coordinated, stating: “Trust in the system, rather than in the actors, is particularly crucial in digital exchange. And “Automated governance in the form of decentralized controls replaces vertical authority with autonomous algorithms that [...] structure[s] a checks-and-balances system.” Accordingly, control is not about coercion, but about systemic, predictable behaviour, while trust is placed in the reliability of the system, not in interpersonal relationships.

Additionally, Hanisch et al. point out a shift in governance, from actor-based trust to algorithmic trust systems, further arguing that digital governance goes beyond simply digitizing analogue processes and emphasizing the need to balance digital capabilities with analogue mechanisms, thus creating new forms of organizing, value creation and value capture.

However, while some literature claim that this shift and the new deliberation platforms it brings with significantly reduce participation gaps by lowering barriers to entry (Fountain, 2001; Noveck, 2009), critical perspectives caution against seemingly unreflective optimism regarding the inclusivity of this new governance, warning of a digital divide, which will be explored in the following section.

Taken together, the four mechanisms control, coordination, incentives, trust, describe the tools a platform can use to steer participation. However, whether those tools ensure participatory parity is the issue digital divide literature addresses. Consequently, in the following section digital divide theory will be laid out.

2.3 Digital Divide Theory: Inclusion

Generally, *digital divide theory* discusses the theoretical concerns regarding increasing participation gaps due to emerging technological means. Participation gap refers to the unequal capability or chance of individuals or groups to participate in the political and social sphere. This uneven opportunity is caused by structural constraints like socioeconomic position, education or access to technology (Jenkins et al., 2009).

2.3.1 Theory of Digital Technology Access and Societal Impacts (DTASI)

Van Dijk's DTASI theory examines disparities in digital technology availability and use, asserting that structural (socio-economic) and individual characteristics lead to disparities in digital resources, causing unequal access and participation in society. Further, linking initial access barriers to ongoing societal exclusion, van Dijk (2005) argues that this creates a reinforcing cycle of exclusion, a distinct feature of his theory.

The strengths of his theory lay in its provision of a comprehensive framework, which integrates socio-economic, structural and personal factors, and its recognition of digital inequalities dynamic and cyclical nature. It highlights the role of resources as a link between individual characteristics to digital participation. The access to these resources is divided into four dimensions of access, motivational, physical, skills, and usage access. Moreover, it offers a basis to analyse systemic issues rather than isolated cases, making it suitable for examining structural barriers and participation gaps (Pick & Sarkar, 2016; van Dijk, 2005). The core of DTASI is visualized in Figure 1.

What is the Digital Divide?

Table 1.1. Definitions of the digital divide

Type	Definition
General	A division between people who have access to and use of digital media and those who do not
Specific	• WHO (individuals vs. organizations/communities vs. societies/countries/regions), • with WHICH characteristics (<i>individuals</i>: income, education, age, gender; <i>organizations</i>: public or private ownership, size, sector; <i>countries</i>: developed or developing, urban or rural) connects • HOW (access, skills, usage) • to WHAT type of technology (computer, Internet, phone, digital TV)? (Hilbert 2011a)
Process	Divisions in the access to and use of four phases in the adoption of digital media: motivation, physical access, digital skills and usage

Figure 1. Definitions of the digital divide (van Dijk, 2020, p.2)

2.4 Theoretical Expectations

Concluding, the chapter posits that participation gaps emerge at the intersection of access stages (van Dijk) and governance mechanisms (Hanisch et al.). Mapping those two axes yields four expectations for the results of the analysis:

E1: Platforms that couple control with clear offline handovers will boost motivational access.

E2: Transparent coordination routines reduce skills barriers by signalling next steps.

E3: Balanced incentives (gamification + feedback) shrink usage gaps over time.

E4: Algorithmic trust substitutes for interpersonal trust, sustaining physical engagement among first-time users.

Having introduced the theory used for the thesis and laid out the expectations that emerged from it, the thesis will now move on to explore the methods used to conduct an analysis of the two cases through the lens of these theories.

3. Methods

This chapter translates the integrated framework developed in [Chapter 2](#) into a concrete research strategy. The independent variables (IV) are the four platform-design mechanisms drawn from digital-

governance theory (control, coordination, incentives and trust). The dependent variables (DV) are the four participation gaps derived from digital-divide theory (motivational, physical, skills, and usage). The chosen research design, a most-similar systems design (MSSD), holds the wider socio-political context constant while isolating variation in platform design between Decidim Barcelona and Decide Madrid. Data is developed from a systematic literature review of primary and secondary sources, as well as three expert interviews. Finally, a cross-case synthesis (CCS) tests expectations E1–E4 by comparing how each design mechanism affects each participation gap.

3.1 Research Design

This thesis employs a comparative case study design to answer the research question at hand. This approach is selected for its suitability in exploring complex phenomena within their contexts, thus allowing the construction of a detailed analysis by setting it in relation to the theories mentioned in Section 2 (George & Bennett, 2005; Yin, 2018). Comparative case study research design is fitting for this research question as it enables the examination of how digital participatory platform design features (independent variable) influence citizen participation (dependent variable) in collaborative governance.

This comparative case study design applied will be based on the MSSD developed by Przeworski and Teune (1970). MSSD is characterized by selecting and comparing at least two cases which are comparable in their contextual features, like democratic political systems, levels of digital infrastructure, and civic engagement culture, while differing in respect to the independent variable (Przeworski & Teune, 1970; Seawright & Gerring, 2008). In this research, that variable is the design and integration of hybrid participatory digital participatory platform design features.

Moreover, MSSD enables the research to make stronger causal claims, as differences in participation gaps can be attributed to variations in the independent variable, rather than to broader systemic differences. Further, the thesis follows an interpretivist and theory-driven approach, seeking to understand how specific mechanisms of inclusion and exclusion operate, as opposed to establish universal laws. MSSD complements this by allowing for comparison within a controlled analytic frame (George & Bennett, 2005; Seawright & Gerring, 2008).

Accordingly, this research will select and compare two cases that share similar contextual features, such as democratic frameworks and use of technology-based participatory tools. The following section outlines the rationale for case selection.

3.1.1 Case Selection Criteria

As Seawright and Gerring (2008) argue, the success of a case study design depends on the selection of appropriate cases. Accordingly, criteria were developed to ensure the selection of suitable cases. These criteria are grounded in the scope of this thesis and are intended to enable systematic analysis

through the theoretical lenses outlined in Section 2. Therefore, selected cases must meet the following criteria:

- 1) Contain a significant use of ICTs
- 2) Represent a continuous, rather than one-time, model of participation
- 3) Qualify as a collaborative governance project

These three criteria align the cases with this study's explanatory frame: platforms must rely on ICTs so that the digital-governance mechanisms are empirically visible, moreover they must support continuous participation cycles so that the four access stages can be tracked over time, finally, they must meet the benchmark of collaborative governance so that citizen input can plausibly influence agenda-setting and co-decision, making any observed gaps substantively meaningful.

The literature review revealed an abundance of cases fulfilling the first criteria, such as *Uchaguzi* in Kenya, *Improve My City* in Thessaloniki and *E-Mongolia* in Mongolia (Bazerli et al., 2015; Kim & Ulziikhutag, 2011; Komninou et al., 2019). However, most of the [cases found failed to fulfill the second and/or the third criteria](#).

Finally, four cases that met all three criteria were identified: *Decidim Barcelona* and *Decide Madrid* in Spain, *VTaiwan* in Taiwan and *Decide Montevideo* in Uruguay.

Decidim Barcelona is an open-source, modular platform developed by the Barcelona City Council. While it is not purely an online project, it integrates a significant range of ICT tools, which include online consultations, participatory budgeting modules and deliberative forums, satisfying the first criterion. Further, participation is continuous, engagement for users is possible at multiple stages of policy processes, ranging from proposals and debates to amendment and voting. Moreover, this engagement is available across different policy cycles and domains, fulfilling criterion 2. Finally, *Decidim*'s mechanisms allow citizens not only to voice their preferences but to actively shape agenda-setting and co-decision-processes, thus meeting the third criterion for collaborative governance (Barandiaran et al., 2024).

Similarly, *Decide Madrid* is also an open-source platform, located in Madrid and developed to promote digital direct democracy and participatory governance. It also makes use of ICTs, enabling citizens to propose, support and vote on municipal initiatives, thus aligning with the first criterion. In addition, the platform allows for continuous participation through, among others, participatory budgeting and proposal tracking, addressing the second criterion. While due to changes to its design collaborative characteristics have been diminished since its foundational period, the platform still reflects core elements of collaborative governance today, as citizens have agenda-setting power and can influence formal policy responses, thus being in line with criterion 3 (Noveck et al., 2022).

The third suitable case study, VTaiwan, is a particularly innovative model of digital deliberation that also meets all three criteria (Tang, 2020). Contrary to Decidim Barcelona and Decide Madrid, VTaiwan was not initiated by a government agency, instead it originates from civic hackers and was later integrated into governmental processes. Of all cases, the platform employs the most advanced ICT tools. Hereby notably Pol.is, which utilizes AI-assisted deliberation, fulfilling the ICT criterion (Tang, 2020). Further, participation is designed as a repeating process, including citizens and policymakers across issue cycles, meeting criterion 2. VTaiwan also satisfies the third criterion, as citizens create proposals through deliberation, which the ministries are obligated to respond to, often leading to co-developed legislation (Ho, 2022).

Lastly, Decide Montevideo represents another global south platform. As its name suggests, it was built upon the Consul platform developed in Madrid. It satisfies criterion 1 by incorporating mobile and web-based applications to facilitate ongoing citizen input. Further, it meets the second criterion by supporting continuous participation in areas such as budget tracking, collaborative project design and public debates. These digital engagements have been integrated into formal administrative processes by the Montevideo City Council has integrated these digital engagements into formal administrative processes, embedding citizen input structurally within municipal planning cycles. This emphasized co-governance aligns with the third criterion (Aguerre & Bonina, 2024).

Having identified four cases suitable for a comparative case study design, given the scope of the thesis and following a MSSD, the thesis selects Decidim Barcelona and Decide Madrid for an in-depth analysis. The following section will lay out the rationale for this selection, an extensive introduction and context to the cases can be found in Section 4.

3.1.2 Case Selection Justification

Decidim Barcelona and Decide Madrid were selected for the case comparison as both platforms operate within comparable socio-political and institutional contexts.

While both platforms are digital tools that aim at fostering citizen engagement, they differ in regard to how they are structured, what tools and technologies are integrated and how seamlessly they merge online and offline participation mechanisms. For one, Decidim Barcelona emphasizes accountability features and asynchronous interaction opportunities, whereas Decide Madrid has integrated AI-supported classification and direct democratic mechanisms (Monterde & Barandiaran, 2018; Noveck et al., 2022). Additionally, the degree of their institutional responsiveness, the extent to which citizen inputs lead to tangible policy outcomes, differs. So does their follow up through feedback loops, tracking dashboards, or public communication (Fung, 2015; Noveck et al., 2022).

This selection therefore is more of a vote for the platforms in Madrid and Barcelona than it is against those in Montevideo and Taiwan, which are interesting projects of their own. But as they are operating

in vastly different socio-economic and institutional contexts, they inherently lack the necessary unambiguity in culturally influenced behaviors and thereby would add an additional variable.

Summarizing, using Decide Madrid and Decidim Barcelona as cases for the comparison provides a comparable and theoretically insightful foundation for examining how the design and technological integration of hybrid participatory platforms influences participation outcomes under similar structural circumstances.

3.2 Method of Data Collection

Data collection is conducted with an extensive literature review of primary and secondary sources, supplemented by two expert interviews.

3.2.1 Literature Review

Sneyder (2019) explains that a literature review is the systematic process of identifying, evaluating and synthesizing existing literature and research. In this case the review will lay the groundwork of the thesis, examining which design features were integrated and how they were integrated. Further, it will analyse how the platforms aim at addressing inclusivity and accessibility.

Guided by Snyder, the thesis searched Google Scholar, Scopus, SSRN, the OECD iLibrary and the official repositories of Decidim Barcelona and Decide Madrid between January 2015 and May 2025. Search strings combined platform names with governance and inclusion terms such as “collaborative governance”, “citizen participation”, “online deliberation”, “digital divide” and “accessibility”. This resulted in multiple data sources, peer-reviewed journal articles, books, policy reports, book chapters, conference papers and doctoral thesis.

3.2.2 (Semi-structured) Interviews

Supplementing this body of literature are three interviews. According to Jupp (2006) semi-structured interviews help guarantee case comparability while preserving adaptability to explore emerging topics throughout the interview process. Additionally, they help produce structured comparative data (Given, 2008; Jupp, 2006). The thesis conducts interviews with key stakeholders who have direct involvement or significant knowledge regarding platform-design features.

Interview candidates were identified using the official channels of both platforms. While Interviewee 2 was reached this way, Interviewee 1 was reached by contacting a leading academic scholar in the field, who constitutes Interviewee 3 and referred to Interviewee 1. Interviewee 1 was a worker involved in the realm of Decidim Barcelona, while Interviewee 2 was a worker involved in Decide Madrid, giving each case a direct insider perspective that the public literature alone cannot supply. All conversations were conducted in English, Interview 1 and 3 over Zoom and Interview 2 via E-mail, the

former were audio-recorded with verbal consent, then auto-transcribed with Word and manually cleaned for accuracy.

In alignment with ethical academic conduct all interviewees were anonymized and all identifying information were removed. The edited transcripts can be found in Appendix B.

3.3 Method of Data Analysis

The data obtained from semi-structured interviews and the literature review will be systematically analysed using analytical case comparison strategies.

3.3.1 Cross-Case Synthesis

The analytical case comparison strategy employed will be the cross-case synthesis (CCS) as proposed by Yin (2018). According to Yin, CCS can be used to identify patterns similarities and differences across two cases, aiding in comparing outcomes and explanatory factors. CSS involves analysing each case individually, guided by a structured analytical scheme in which the key theoretical concepts of the thesis are operationalized into observable dimensions.

Each platform is examined as a standalone case, with each data point being coded at the intersection of the four design mechanisms (IV) and the four participation gaps (DV); derived from the theories laid out in [Chapter 2](#). The coded excerpts are then pulled together in a comparative table (Table 1), which shows how specific design features widen or narrow access gaps through specific governance mechanisms. This structure also allows the Discussion chapter to directly test Expectations E1–E4.

In this thesis the analytical scheme does not score access gaps numerically. Instead, it treats a gap as present when platform features expected to support a given access stage (e.g., hybrid access, training or feedback) are missing, limited or found to be ineffective. Evidence is triangulated from the described data sources. These gaps are then coded across the four access stages and governance. Based on this scheme the data gathered from the literature review and the interviews will be analysed, assessing variation across these dimensions to determine how differing forms design integration shape participation outcomes in each case. Following, each theoretical concepts' operationalization is laid out. The operationalisation is anchored in the two prior laid out theories of digital divide and digital governance.

First, van Dijk's (2005) digital-divide model distinguishes four successive kinds of access, showcasing that inclusion depends not only on connectivity but progresses through a sequence from why to access a platform to what can be done once being on it. These stages map directly onto the participation gaps flagged in earlier evaluations of Decide Madrid and Decidim, allowing for a detailed analysis for which designs exclude and include citizens.

Second, Hanisch et al.'s (2023) digital-governance mechanisms capture how platform design steers behaviour. Together the two lenses link citizen capabilities (van Dijk) with the institutional levers that shape those capabilities (Hanisch), giving a theory-driven matrix that is empirically observable in documents, usage statistics and stakeholder interviews. This pairing therefore provides the system needed for a cross-case synthesis of participation outcomes, offering a structure for examining Expectations E1–E4.

Consequently, the operationalization of digital divide theory based on van Dijk (2005) four successive kinds of access¹ is as follows: 1) *motivational* access, 2) *physical* access, 3) *skills* access and 4) *usage* access, visualized in Table 2.

Operational Dimension	Observable Indicators Used in the Analysis
Motivational Access	First-time registration counts; registration drop-off rates; presence/absence of an offline "hand-over" event that builds initial trust
Physical Access	Number and frequency of offline entry points (neighbourhood assemblies, staffed help-desks) and their geographic coverage
Skills Access	Availability and regularity of face-to-face training workshops; existence of online tutorials / on-platform usability aids
Usage Access	Median contributions per active user per month (posts, votes, comments); proportion of users still active 30 days after registration

Table 2. Operationalization of digital divide.

Further, the operationalization of digital governance developed based on Hanisch et al.'s (2023) four mechanisms of governance is: 1) *control*, 2) *coordination*, 3) *incentives* and 4) *trust*.

Governance Mechanism	Operational Dimension	Observable Indicators
Control	Rule clarity and procedural thresholds	Presence of clearly published participation rules; defined entry thresholds; supportive mechanisms that guide first-time users through those rules
Coordination	Organisational brokerage	Dedicated structures that translate online input into administrative workflows; routine cross-departmental interaction; documented response timelines
Incentives	Continuity and feedback density	Ongoing reward structures that recognise participation; real-time or regular feedback on contribution impact; recurring opportunities for citizen-driven budget or project input
Trust	Comprehensive openness combined with outreach	Public access to platform code and decision logs; scheduled sessions or materials that explain how data are used and how decisions are made

Table 3. Operationalization of digital governance.

¹ Van Dijk defines four successive kinds of access: "1. Motivational access (motivation to use digital technology) 2. Material or physical access (possession of computers and Internet connections or permission to use them and their contents) 3. Skills access (possession of digital skills: operational, informational, and strategic) 4. Usage access (number and diversity of applications, usage time)" (van Dijk, 2005, p. 20-21).

4. Case Studies

4.1 Introduction and Context

Both Decide Madrid's and Decidim Barcelona's origins can be traced to the aftermath of the 15M/Indignados movement in Spain, which began on May 15, 2011 (Barandiaran et al., 2024; Peña-López, 2019; Tseng, 2020). This movement, which can be described as a networked social movement that connected digital and physical spaces and advocated for and experimented with alternative forms of democracy (Barandiaran et al., 2024; Peña-López, 2019; Pick & Sarkar, 2016; Royo et al., 2020). It heavily utilized digital networks, with the aim of increasing the depth of participation (Barandiaran et al., 2024). While not directly resulting in tangible change, in the long run the 15M-movement contributed to strengthening networks of citizens outside of the traditional institution, further generating technopolitical visions and alliances (Barandiaran et al., 2024; Peña-López, 2019).

The emergence of new political parties and municipal initiatives during this time, like Ahora Madrid and Barcelona en Comú, led to a new political cycle (Borge Bravo et al., 2019; Peña-López, 2019). Gaining momentum, many of these groups reached the institutional arena after electoral victories in 2015. Their main goals were to promote public, digital infrastructure for participatory democracy (Barandiaran et al., 2024; Peña-López, 2019).

The following launch of Decide Madrid by the Madrid City Council in September 2015 was the manifestation of the demands of the Spanish citizens for more participation and empowerment. In line with this, Decide Madrid was based on the open-source software Consul (Barandiaran et al., 2024; Peña-López, 2019; Royo et al., 2020).

Not long after, in February 2016, Madrid's municipal counterpart Barcelona, launched its own platform, decidim.barcelona, initially as a customized version of Consul, eventually evolving into its own modular framework from 2017 onwards (Barandiaran et al., 2024; García, 2021; Peña-López, 2019). Guided by a similar political vision, the two platforms aimed to translate the ethos of the 15M-movement into institutional practice (Barandiaran et al., 2024; Peña-López, 2019; Tseng, 2020).

Furthering their comparability is the presence of relatively high levels of digital infrastructure and ICT access, with Spain ranking 15th in the 2023 OECD Digital Government Index (DGI), which places Spain above the median OECD country (European Union, 2025; López, 2024; Organisation for Economic Co-operation and Development [OECD], 2024).

Furthermore, as illustrated by Figure 2 and Figure 3, Spain performs very well in regard to E-Governance Development (EGDI) and E-Participation (EPI) Indexes, especially when compared to its European counterparts. The chosen timestamps showcase the capacity of Spain's government to deliver digital public services (EGDI) and the extent to which governments use online tools to engage citizens

in decision-making processes (EPI) at the start of both platforms (2016) and today (the newest available data, 2024).

These factors demonstrate that both Decidim Barcelona and Decide Madrid are embedded in an environment that has the foundation for effective digital governance. This is an important selection criterion, given the thesis scope of collaborative online governance and mechanisms of in-and exclusion, ensuring that analysis results are not skewed due to a lacking infrastructure.

Concluding, regarding their socio-political and institutional contexts, the seed for the creation of both platforms lies in same movement. Additionally, both platforms were initiated by their respective municipal and operate under similar legal-administrative frameworks (Barandiaran et al., 2024; Noveck et al., 2022). For a more detailed exploration of each Platform refer to [Appendix B](#).

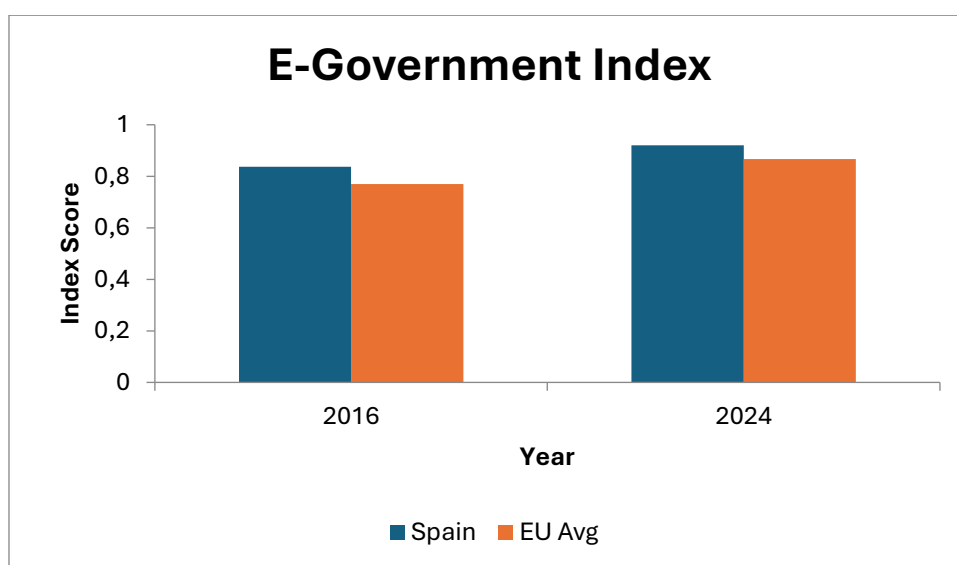


Figure 2. E-Government Index: Comparison of Spain and EU Average, 2016 and 2024 (United Nations Department of Economic and Social Affairs, n.d.)

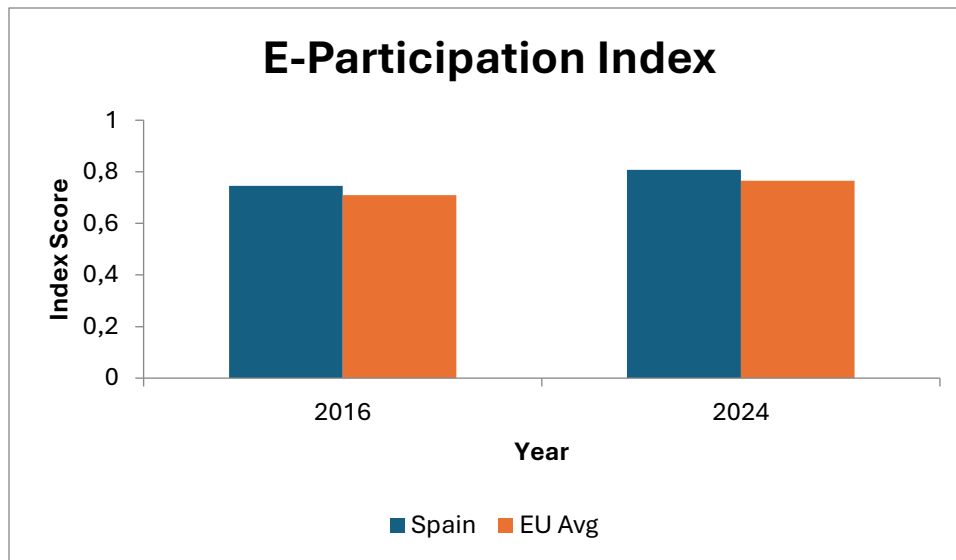


Figure 3. E-Participation Index: Comparison of Spain and EU Average, 2016 and 2024 (United Nations Department of Economic and Social Affairs, n.d.)

5. Analysis

Having laid out the theoretical framework and methodological approach, as well as having introduced the cases of Decide Madrid and Decidim Barcelona, this thesis will now turn to examining how platform-design features influence citizens participation. This analysis will be conducted based on the operational framework presented in [Section 3.3](#). Accordingly, both case studies will be assessed regarding their relationship with the four dimensions of access of Digital Divide Theory and four mechanisms of governance of Digital Governance Theory (Table 2 & Table 3) Drawn upon will be on data combined from platform metrics, secondary evaluations and one expert interview. Following, the analysis will examine both cases along the eight framework dimensions, starting with motivational access.

5.1 Motivational Access

Consequently, the analysis commences with the motivational access dimension, which can be observed through participation rates and citizen feedback on motivation. It finds that Barcelona sustains motivational access through participatory framing and bottom-up platform evolution, while Madrid loses early engagement due to rigid design and low responsiveness, confirming E1.

5.1.1 Decide Madrid

As indicated earlier, following the 15M-movement and the promise of direct democratic mechanisms, there was high motivation for participation from citizens. Royo et. al. (2020, p. 2) state that "high expectations of citizens explain the high levels of participation in the initial stages". The implied decline of participation is also reflected in the number of registered users over the years. While

the platform counted approximately 180,000 registered users in 2016 and saw an increase to over 460,000 users in 2020, in 2022 only 260,000 users were registered (Grasso, 2023).

Furthermore, this decline is noted and interpreted in multiple secondary sources. Noveck et al. (2022) attribute declining citizen motivation to the perceived inefficiency of the platform, as only two proposals reached the voting phase in the first years of Decide Madrid, reducing sustained participation. Similarly, González Ruiz and Suso Araico (2023, Section "Problem") remark in their report that motivation was negatively affected by poor response times and lack of impact of proposals, stating that "enormous volume of information and contributions [...] are not always responded to quickly and systematically, to the frustration of the public".

These aspects were also noted by Interviewee 2 (personal communication, 2025), stating that "people felt excluded [...] when they didn't see follow-up on their contributions". They further explained that citizen feedback mirrored these observations, emphasizing inclusion as a motivational access point.

5.1.2 Decidim Barcelona

Similarly, initial motivational access of Decidim Barcelona was also fostered by the momentum of the 15 movement, which the platform carried on more effectively than her Madrid counterpart: as Peña-López (2017, p. 6) states the purpose of the platform was to "promote a culture of active participation, collective construction of city government, and citizen democracy". This framing of the platform served as motivation for the citizens that had grown unhappy with traditional representative institutions, resulting in high initial engagement.

During the 2016–2017 Municipal Action Plan (PAM) process more than 40,000 citizens participated. In total, they submitted over 11,800 proposals, notably, over 70% of these were ultimately adopted into policy (Barandiaran et al., 2017, p. 144).

What sets Barcelona's approach more apart from Madrid's is the continuation of this spirit of bottom-up deliberation to platform management. Users are able to directly affect the design and future growth of the system through the MetaDecidim community and participatory code development on GitHub, which keeps the motivational access high (Barandiaran et al., 2024).

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Participation trend	Peaks at $\approx$ 460 k registered users (2020) $\rightarrow$ falls to $\approx$ 260 k (2022)	40 k citizens joined 2016-17 PAM; activity remains high	Barcelona sustains motivation; Madrid loses momentum
Proposals adopted	Only 2 initiatives reached city-wide vote in first cycles	11 800 proposals $\rightarrow$ 70 % adopted into policy	Barcelona shows visible pay-off, reinforcing motivation
Citizen voice in platform design	Limited; updates driven by city IT	Ongoing MetaDecidim co-development on GitHub	Bottom-up governance further boosts Barcelona's motivation

Table 4. Summary of the Motivational Access Dimension.

Decidim Barcelona sustains citizen motivation through a continuous offline-online loop and visible policy impact, whereas Decide Madrid shows declining engagement linked to weak follow-up and limited user influence on platform design.

5.2 Physical Access

The analysis now moves on to the physical access dimension, which looks at the accessibility of the platforms, as well as their offline integration, where further differences between the platforms can be noted. Barcelona's offline infrastructure reduces material barriers to access, whereas Madrid's sporadic outreach fails to bridge the digital divide, contradicting Expectation 4, which anticipated similar levels of physical accessibility in both cities.

5.2.1 Decide Madrid

Reports about Decide Madrid raise concerns with the physical accessibility of the platform, stating that its offline access is limited to key events and generally not integrated with platform updates. While offline events like public consultations, workshops and hearings do occur, they are underrepresented digitally. Specifically, the results of such events were often not mirrored in the digital system, as well as lacking in feedback loops between digital input and physical events. (González Ruiz & Suso Araico, 2023; Padilla García & Malo de Molina, 2018; Royo et al., 2020).

Notable is the attempt to bridge this gap through local forums, which were created by the Ahora Madrid City Council as a parallel participation mechanism to Decide Madrid, acting as hybrid spaces between the municipal institutional system and the social space. These local forums provide physical access and have the capacity of submitting a maximum of three proposals to each district plenary session, thus having a direct insertion in the main forum of representative politics at district level.

However, they are not sufficiently integrated to the platform itself and do not entail feedback loops, with forum actors criticizing the lack of recognition or institutional linkage beyond proposal submission, leading to a feeling of being sidelined by more digitally active users (Padilla García & Malo de Molina, 2018). Along those lines they fought for greater recognition within Decide Madrid, arguing that their face-to-face nature gives them greater proximity to the "people on the ground" and to the reality of the districts, as well as greater capacity for collective and reflective deliberation based on local needs" (Padilla García & Malo de Molina, 2018, p. 18).

These findings indicate significant deficiencies in physical accessibility, especially regarding representativeness and continuity. However, recent institutional data suggests that initiatives to rectify this gap are in progress. An examination of the Suggestions and Complaints Annual Report (SaC), which examines through which channels citizens submit proposals, complaints and suggestions to the city administration, suggest positive development.

The 2020 report showcases a high digital channel usage (72%) and a low in-person usage (5%), highlighting limited offline integration (Sánchez et al., 2021). Although in 2023 the usage of digital channels stayed nearly the same (74%), in-person feedback rose significantly (21%) (Comunidad de Madrid, 2023). While the SaC does not specifically examine feedback about Decide Madrid, the broader trend it reveals is still significant.

This trend can be attributed to Madrid's 2022-2023 Open Government Action Plan which committed to "bringing participation closer to all citizens" and enhancing accessibility through social innovation and collaboration (González Ruiz & Suso Araico, 2023, Section "Action") Concretely, it resulted in the creation and continued promotion of the two initiatives laid out in Figure 4.

While it is too early to draw conclusions from THIVIC's recent engagement efforts, given its earlier pilot projects as well as from the Participatory Group Community of Practice's activities, which only commenced in late 2022, the trends that could be identified from the SaC data suggest that at least the feedback channels have been brought closer to the citizens physically, suggesting a recent improvement in physical access dimension

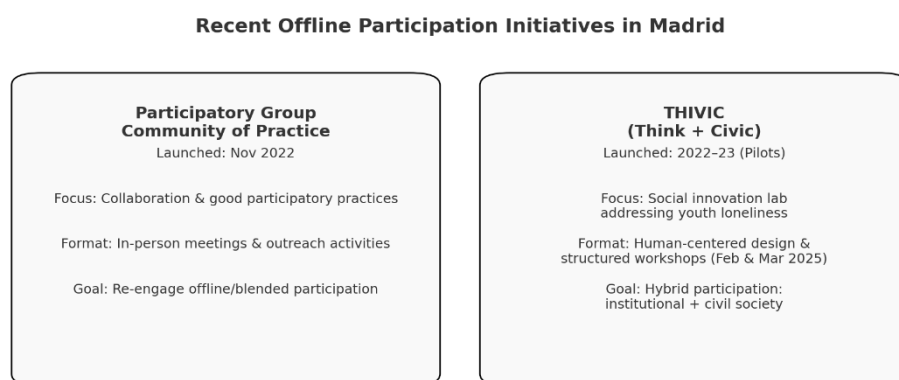


Figure 4. Two recent offline participation initiatives in Madrid.

Note. Author-created graphic based on Open Government Partnership (2023) and Decide Madrid (2025).

5.2.2 Decidim Barcelona

Similar to Decide Madrid, Decidim Barcelona's hybrid design is the key factor influencing physical access creation. The platform facilitates this by combining online capabilities with in-person tools to surpass material hurdles to participation, aiming at offsetting differences in infrastructure (Barandiaran et al., 2024). The aforementioned Municipal Action Plan (PAM) approached institutionalized offline engagement by holding over 250 offline events, such as district-level assemblies and neighbourhood seminars. Notes from these sessions were digitalized and fed back to the online platform, creating the feedback loop missing in Madrid (Barandiaran et al., 2024; Peña-López, 2017, 2019). According to

Interviewee 1 (personal communication, 2025), this approach was essential and successful: “people are already thinking that this is [...] the very [basis] for participation in the city and maybe the hybrid approach [...] and the digital layer [...] is like the main dashboard that you have online to see what is going on in the city”.

However, despite Decidim's focus on deliberation and inclusion, young people, migrants and people with less education were nevertheless found to be underrepresented in the platform's involvement processes (Borge Bravo et al., 2023).

To tackle these issues, similarly to Decide Madrid, the city recently initiated new offline participation possibilities. The Canòdrom, the Centre for Digital and Democratic Innovation, a public place, serves as both a digital co-working and educational space, providing internet connection and an infrastructure for participatory experimentation, as well as training in digital skills, increasing citizens digital capabilities and thus strengthening physical access (City of Barcelona, 2022).

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Offline integration	Occasional town halls; minutes seldom uploaded	250 + assemblies and workshops; minutes auto-uploaded	Barcelona's hybrid model embeds offline feedback
Share of offline submissions (2023)	In-person channel up to 21 % of SaC inputs	≈ 18 % of PAM 2023 proposals on paper forms	Both improve offline reach; Barcelona keeps pace
Permanent participation hub	THIVIC social-innovation lab (pilot 2025)	Canòdrom centre operating since 2022	Barcelona already offers a standing hub; Madrid still piloting

Table 5. Summary of the Physical Access Dimension.

The hybrid offline–online model embedded in Barcelona (workshops, Canòdrom hub) delivers continuous physical access, while Madrid’s recent THIVIC pilots improve reach but overall integration of in-person channels remains sporadic.

5.3 Skills Access

Transitioning to the skill access dimension, the analysis explores digital literacy initiatives and user support tools, finding shortcomings in addressing this dimension from both platforms. Generally, digital literacy skill gaps concern especially the elderly population (Mubarak & Suomi, 2022). Decidim Barcelona offers structured training and user-friendly entry points, while Decide Madrid relies on ad-hoc guidance and technical upgrades that fail to address persistent digital literacy gaps, partially confirming Expectation 2, which predicted that supportive design mechanisms would lower skill thresholds.

5.3.1 Decide Madrid

In Madrid, the 65 + share of ballot voters fell from 16 % (2016) to 8 % (2017), even though seniors comprise 23 % of the city’s population (Figure 5 and Figure 6).

As discussed in the prior section, a way to include digital illiterate groups is to offer offline participation methods. However, another approach is to build capacities for digital literacy, done through workshops and in person events (Padilla García & Malo de Molina, 2018). However, according to Interviewee 2 (personal communication, 2025) “outreach campaigns, digital literacy workshops and mobile-friendly features helped attract younger users” and not the elderly. They state that “community support and in-person facilitation were key to engaging older adults. Still, the digital divide and institutional distrust remain barriers for some groups.”

As for an explanation for this phenomenon, Noveck et al. (2022, p. 22) note that

Civil servants who participated in the training workshops pointed to a number of reasons why older people are not more engaged, including “digital divide” [...], a lack of motivation to partake in participatory processes, lack of opportunities to participate in face-to-face participation spaces that are designed for older people, and a lack a usability in the portal’s design.

Interviewee 2 (personal communication, 2025) picks up on the latter point, stating that “people felt excluded when the process was too technical [...]”, expressing that “inclusion improved when community facilitators were involved”.

Especially the lack of usability of the portal itself is an aspect Decide Madrid addressed in the last years. The platform has had a number of technical upgrades that aim at simplifying usability and lowering the capacity needed to navigate it. One of these improvements is the addition of machine learning technologies like DecideML and adding a virtual assistant to be available on all parts of the website (González Ruiz & Suso Araico, 2023). Red2Red Consultores (n.d.) explain that DecideML classifies proposals and routes them to the appropriate government departments. These automated solutions not only help with internal coordination but also help users in using the platform by making interactions with it more efficient. Further, González Ruiz & Suso Araico, (2023, Section 1.1) mention other, unspecified “improvements to usability”.

However, there are still structural problems. Padilla García and Malo de Molina (2018, p.28) point out that competition among proposal supporters may make inequities worse, stating “a more digitally literate neighbourhood can concentrate all the district’s proposals, and nothing is done in the rest of the neighbourhoods” This means that when the burden of outreach falls entirely on individual users, communities that don’t have digital skills or networks are at a disadvantage.

PARTICIPACIÓN POR GRUPOS DE EDAD

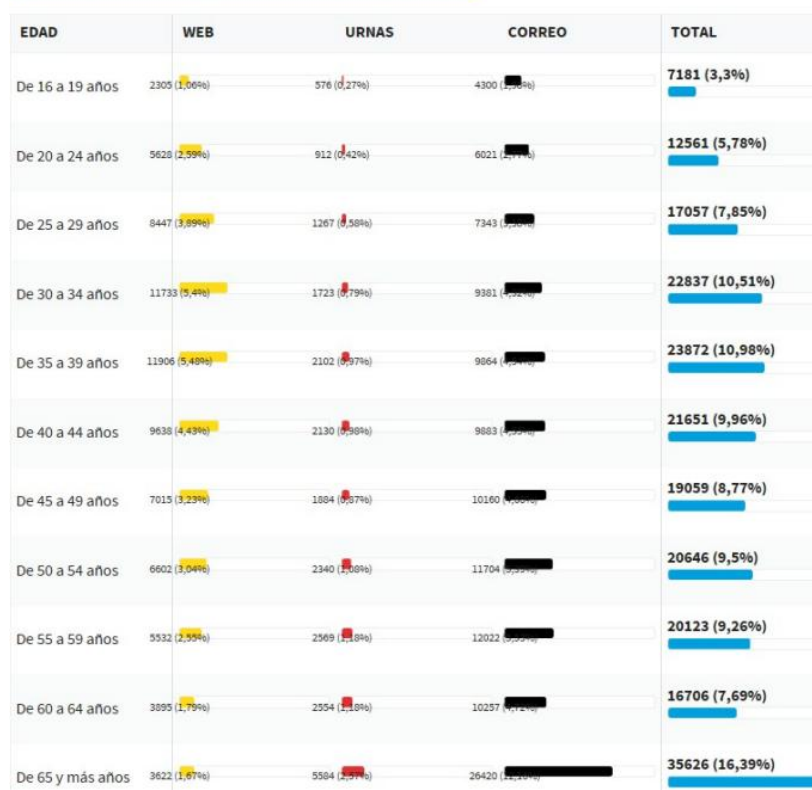


Figure 5. Participation in the 2016 ballot by age group (Decide Madrid, 2017, p.11).



Figure 6. Participation in the 2017 participatory budgeting ballot by age group (Decide Madrid, 2017, p.33).

5.3.2 Decidim Barcelona

Decidim Barcelona differs notably from Decide Madrid through its efforts in the capacity building of their citizens, achieved through teaching how to utilize Decidim technology and offering access to skills-based resources (Peña-López, 2019). As an example, the Canòdrom offers a program that entails

free modular training to enable proactive relations with the platform, which, according to Barandiaran et al. (2024), contains a feminist perspective and a dedication to free software.

When asked about who is in practice reached by these capability training possibilities and face to face meetings, Interviewee 1 (personal communication, 2025) acknowledged that attendance is generally skewed toward organized civic groups and not the broader public.

Similarly, sources state that despite the ongoing development of skill capabilities, they remain inadequate for a broad spectrum of users who either lack awareness or the necessary resources for access (Barandiaran et al., 2024; Peña-López, 2019).

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Digital-literacy programme	Ad-hoc workshops + DecideML guidance	Free modular courses at Canòdrom	Barcelona provides continuous training
Support modality emphasised	Automated interface upgrades	Human-centred coaching and workshops	Madrid automates; Barcelona educates
Representation gap in reports	Seniors: 17 % users vs 23 % pop.	Youth, migrants, less-educated under-represented	Both miss key groups; Barcelona more proactive

Table 6. Summary of Physical Access Dimension.

Madrid relies on automated guidance to assist digitally fluent users, while Barcelona offers permanent, human-centred training; both platforms still exclude key demographics, showing that capacity-building must broaden beyond current initiatives.

5.4 Usage Access

Proceeding to the usage access dimension the actual use of digital media and applications for various activities will be explored in terms of frequency, variety, and sophistication. In the case of Decide Madrid, data indicate significant disparities in how citizens engage with the platform across this dimension, while Decidim Barcelona's multi-phase participatory approach facilitates better performance in this dimension. Barcelona's layered incentives and real-time feedback sustain active usage over time, while in Madrid, participation drops sharply after early engagement phases. This provides evidence in support of Expectation 3, which associates usage continuity with the presence of reinforcing design features.

5.4.1 Decide Madrid

Frequency of use of Decide Madrid declined significantly over time, especially in the open-ended participation formats. The platform hosted 25,418 proposals between 2015 and 2018, however only two made it to the final vote phase, illustrating disparity between the initial engagement and the final influence (Decide Madrid, 2017; Noveck et al., 2022).

Activity regarding the debate section also fell sharply. While in 2015 users initiated an average of 37.8 discussions and made 151.5 comments per day, by 2018, that number had dropped to 0.7 debates and 6.5 comments per day (Decide Madrid, 2017; Noveck et al., 2022). Although the introduction of localized "Lazoteas", digital debate spaces, led to an increase in debate activity, participation did not reach its early levels again (Noveck et al., 2022).

Similarly, voting activity in city-wide participatory processes also saw a decline from 214,076 votes in the first cycle in 2017 to only 9,854 in 2018 (Royo et al., 2020). Interestingly, during that timeframe the number of registered users rose, indicating that registration alone does not serve as a reliable indicator of usage access.

Regarding the variety of usage, users preferred tools perceived to be simpler and more impactful (Interviewee 2, personal communication, 2025). Noveck et al. (2022) noted that the processes section, which features initiatives by the City Council (consequently more likely to lead to policy outcomes) attracted significantly more attention than the user driven proposals section. While the debates section by nature was also less connected to institutional outcomes, its low threshold and immediacy lead it to be popular among users (Noveck et al., 2022). This preference pattern can also be seen across demographic groups. For instance, older users were more likely to use organized consultations and less inclined to use open debate (Padilla García & Malo de Molina, 2018). In the same vein, only 12.2% of proposals were brought in from people over 65, even though making up more than 23% of Madrid's population (Noveck et al., 2022). Furthermore, while women made up the majority of registered users, in the debate section only 31% of users identified as women. Similarly, around 42% of users in processes identified as women (Noveck et al., 2022).

What did not differ among active users were race and education, Padilla García & Malo de Molina's (2018) report found that all of 33 people who were interviewed for their study, all of them were white Spanish citizens and 76% of them held a college degree, highlighting a usage access skew toward socially and digitally privileged citizens.

5.4.2 Decidim Barcelona

Decidim Barcelona's usage access is primarily characterized by the same issues that plague its Madrid counterparts, be it with a higher number of users. Over 42,000 people took part during the 2016 PAM process, submitting more than 10,000 proposals. Furthermore, the platform recorded 165,087 proposal supports, 18,191 comments and a total of 220,000 interactions, both online and in person (Peña-López, 2017). This significant activity suggests a pronounced usage access of the platform.

Despite this active usage, it is unevenly distributed. According to Barandiaran et. al. (2024) groups that are generally underrepresented, like youths, migrants and less-educated citizens, are less likely to use more sophisticated features like deliberation tools or counter-proposals. Furthermore, Borge Bravo et al. (2023) add that less-connected groups may lack the contextual support to fully engage.

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Annual interactions (latest data)	≈ 11 000 posts/comments/votes in 2018	≈ 220 000 interactions in PAM 2016	Barcelona sustains far higher activity
Proposal-to-adoption ratio	≈ 0.01 % (2 / 18 000)	≈ 70 % (11 800 → adopted)	Madrid funnel stalls; Barcelona delivers
Participation bias identified	31 % women; highly educated majority	Youth, migrants, less-educated under-represented	Usage divides persist; Barcelona mitigates better

Table 7. Summary of Usage Access Dimension.

Barcelona sustains high and diverse interaction volumes; Madrid’s open formats collapse after 2017. Persistent participation bias in each case confirms that genuine usage access depends on inclusive design beyond simple registration.

5.5 Control Mechanisms

Continuing the analysis, the thesis addresses the first Digital Governance mechanism as per Hanisch et al. (2023), the control mechanism, which can be observed by clear thresholds and systemic predictability. While the former refers to rule-based control mechanisms, where procedural clarity and defined benchmarks guide participation and decision-making, the latter reflects processual routinization and stability, which is another key aspect of control in digital governance (Hanisch et al., 2023).

While Decide Madrid is shown to emphasize highly regulated participation, introducing procedural barriers, Decidim Barcelona is characterized by a more flexible and broad approach. Findings confirm Expectation 1, showing that legitimacy depends on perceived fairness and accessibility of control structures.

5.5.1 Decide Madrid

One control mechanism of the platform is the binding support threshold for proposals, requiring 1% of the support of the registered population of Madrid over 16 years of age for a proposal to reach the second phase of the cycle (Decide Madrid, 2017). This defined threshold ensures a systemic degree of rule-based predictability; however, the natural fluctuation of a city population means this threshold is not always (as) clear in practice.

Moreover, the proposal and voting process’s structure entails a validity of 12 months for each proposal, during which support for the threshold can be gathered. Following, proposals enter a second phase lasting between 90 and 150 days, during which the city government and relevant departments conducted a competency review and public deliberation process. This involved the publication of a municipal report assessing whether the proposal falls within the legal and administrative competencies of the City Council and outlining possible implementation pathways. Finally, following this deliberative stage, proposals move into a final public voting period of seven calendar days (Decide Madrid, 2017).

As Interviewee 2 (personal communication, 2025) explained, this structured pipeline was intended to safeguard legitimacy and build trust, showcasing good performance regarding control mechanisms.

However, while these mechanisms provided structure and predictability, they also introduced what can be described as speed bumps, acting as structural and procedural barriers that impair participation. Even though more than 18,000 proposals were submitted between 2015 and 2017, only 2 proposals reached the threshold needed to trigger a public vote (Madrid City Council, 2017).

5.5.2 Decidim Barcelona

Decidim Barcelona’s structure also entails clear procedural predictability. Every participatory process is configured as a sequence of predefined phases, starting with idea generation, then following deliberation, voting, implementation and public monitoring. Additionally, administrators can activate each component as needed, so the same workflow recurs across policy domains (Barandiaran et al., 2024).

Similarly to Madrid, a clear control mechanism of the platform is proposal thresholds. For citizens to elevate petitions to the City Council they must gather 1% of the eligible electorate (de Camargo Penteado & de Souza, 2019; Interviewee 1, personal communication, 2025). Again, it is necessary to point out that the natural fluctuation of a city population can lead to this threshold not always being as clear in practice.

Furthermore, control mechanisms are established through simple cyclical regularity. To add to the single processes, the city schedules a full participatory-budget cycle every two years under identical rules, a rhythm communicated in public campaigns. As Interviewee 1 (personal communication, 2025) puts it plainly: “people just go and vote every two years and that’s it”.

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Proposal support threshold	1 % electorate; few proposals advanced	1 % electorate or 15 000 signatures; many advanced	Barcelona threshold yields results
Process design	Fixed 3-stage pipeline	Configurable 5-phase workflow	Barcelona more adaptable
Cycle regularity	Irregular: 2017, 2021 budgets only	Biennial cycles (2016–18, 18–20, 20–22...)	Regular cycles enhance predictability in Barcelona

Table 8. Summary of Control Mechanisms.

Barcelona’s configurable five-phase workflow and regular biennial cycles balance clarity with flexibility, whereas Madrid’s rigid thresholds and irregular cycles hinder proposal advancement, illustrating over-institutionalization of control.

5.6 Coordination Mechanisms

Proceeding, the next Digital Governance mechanism is coordination, which can be observed through examining cross-departmental collaboration and efficiency in implementation. Findings

indicate that while Decidim Barcelona incorporates flexible and scalable coordination mechanisms, linking city actors, departments, and citizens in real time, Decide Madrid's structures are not as pronounced and exhibit deficiencies. This dynamic partially confirms Expectation 2, where coordination affects users' ability to navigate and contribute meaningfully.

5.6.1 Decide Madrid

According to Royo et al., (2020), in the early stages of the platform effective inter-departmental coordination was achieved. However, succeeding stages indicated bureaucratic inefficiencies, especially in the implementation of agreed recommendation, which users frequently cited as an annoyance (Padilla García & Malo de Molina, 2018). Such delays indicate issues with internal coordination and capacity.

Interview 2 reinforces this duality, stating that "people felt excluded [...] when they didn't see follow-up on their contributions. Inclusion improved when [...] proposals were visibly taken into account". This statement represents the functional logic of coordination, specifically through visible reaction to citizen input.

Coordination potential was nonetheless hurt by the platform's failure to encourage meaningful community building. As Padilla García and Malo de Molina (2018, p.29) observed, "Participation in Decide Madrid is individual, because the creation of communities and the involvement of users are not encouraged". This suggests that the prior noted lack of integration between digital tools and offline collective spaces lead to fragmentation rather than synergy.

Furthermore, the same authors also noted how overlapping suggestions resulted in confusion, stating that "there are too many proposals and projects [...] There is a need for functionalities that make it possible to reach a consensus and unify proposals in order to avoid the disintegration of support and votes" (Padilla García & Malo de Molina, 2018, p. 28).

5.6.2 Decidim Barcelona

Coordination mechanisms in Decidim Barcelona are facilitated through a layered system of multi-actor bodies, digital-physical linkages and performance monitoring that together foster cross-departmental collaboration and implementation efficiency.

At the community layer, multi-actor governance bodies are represented by "the Coordination Committee, the Team and the Community Stewardship Thematic Committee, [who] are responsible for managing the convening [and] roles should be rotated" (Meta Decidim, 2023, p. 5).

At city level on the other hand, a permanent Product Team, comprising of the Barcelona City Hall, the municipal IT consortium Localret and the Decidim Association, meets regularly and "evaluates and coordinates the roadmap with the community" (Barandiaran et al., 2024, p. 93). This division of coordination on the community level and on the city level indicates a clear systematic approach, which

suggests good coordination mechanisms. Responsible for day-to-day contact with the individual departments is a Technical Office, that reports to a volunteer Coordination Committee, a coordination mechanism that connects municipal entities with civic actors (Barandiaran et al., 2024).

Another important coordination of the platform is its vertical–horizontal coupling. Offline neighbourhood assemblies are fed into the same digital pipeline used by the city departments, allowing proposals to flow upward and implementation data to flow back down in real time (Barandiaran & Calleja-López, 2018; Interviewee 1, personal communication, 2025).

Further, in a white paper Barandiaran & Calleja-López (2018) explain that assemblies act as nested spaces in which each tier can accept inputs from the level below and deliver outputs to the level above. This creates a sort of vertical handshake across organizational scales. Moreover, assemblies may also be linked “autonomously by giving administration permissions only to their members, [allowing] the creation of relationships between assemblies [...] by creating a horizontal relationship between them”. This control mechanism enables horizontal coordination between district councils and thematic committees (Barandiaran et al., 2024, p. 87).

Lastly, Decidim Barcelona’s process in institutionalizing proposals leads to efficient implementation. During the first municipal mandate 11 873 citizen proposals were submitted and more than 70 % have been adopted since. By June 2023 the tally had risen to 14 425 proposals, consolidated into 5 688 projects (Barandiaran et al., 2024).

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Cross-department alignment	Teams formed 2016, later lapsed	Permanent Product Team + Technical Office	Barcelona sustains institutional links
Community governance body	Ad-hoc local forums	Rotating Coordination Committee	Civic–municipal coordination stronger in Barcelona
Proposals adopted (%)	2 of 18 000	70 % of PAM proposals	Barcelona converts input into outcomes more effectively

Table 9. Summary of Coordination Mechanisms.

A layered governance architecture (Product Team, Technical Office, rotating committees) enables Barcelona to translate citizen collaboration into policy outcomes; Madrid’s ad-hoc coordination infrastructure leaves most proposals idle.

5.7 Incentives Mechanisms

This leads to the incentive mechanism, which can be observed by examining tangible outcomes, participation continuity, recognition and visibility that sustain or discourage participation. While the mechanism is closely aligned conceptually to motivational access, it focuses more specifically on how platform design actively encourages or inhibits continued engagement over time. While Decidim Barcelona motivates continued engagement through visible implementation, tiered roles, and offline

reinforcement; Decide Madrid's features lack continuity or broader appeal. This confirms Expectation 3, which links sustained usage to clear, meaningful incentives.

5.7.1 Decide Madrid

One of the most effective incentives of the platform was the participatory budgeting process, as it led to real financial results. In 2021, €50 million were allocated for projects in the city and in specific districts. This made participatory budgeting the most widely adopted and perceived to be the most successful tool on the platform (Noveck et al., 2022; Royo et al., 2020). These material consequences were evidently driving factors in getting citizens involved.

The discussed gap between proposals submitted and the ones reaching the voting phase led to many users to regard the platform as ineffectual (Decide Madrid, 2017; Royo et al., 2020). In this regard, Noveck et al. (2022) argue that this low rate of implementation made users much less engaged and less likely to keep using the platform.

Several sources agree that visibility of impact and institutional responsiveness are pivotal for upkeeping citizen motivation (González Ruiz & Suso Araico, 2023; Interviewee 2, personal communication, 2025; Madrid City Council, 2018; Noveck et al., 2022). One report notes that "all citizens interviewed agree that their most important motivation is the possibility of seeing their contributions implemented or taken into account" (Royo et al., 2024, p. 15). Similarly, the platform's failure to deliver continuous feedback loops has been noted as a key demotivator, with citizens viewing the experience as "a waste of time" when follow-up was absent (Royo et al., 2020, p. 15). Furthermore, González Ruiz and Suso Araico (2023, Section "Problem") also stress that the "huge amount of information and contributions [...] are not always responded to quickly and systematically, to the frustration of the public".

These findings were echoed by Interviewee 2 (personal communication, 2025), who concluded that "the biggest takeaway is that meaningful participation requires much more than digital access - it needs trust, institutional responsiveness, and inclusion".

5.7.2 Decidim Barcelona

The first layer of incentive mechanisms of Decidim Barcelona is the tangible feedback loop built into its accountability component. Once a proposal is accepted, administrators can break it into projects, assign implementation statuses and let residents comment on the progress, which can be done all from the same interface (Barandiaran et al., 2024). Barandiaran & Calleja-López (2018, p. 57) explain the importance of this process, stating that "decisions that are not executed have no value; a participatory process that doesn't lead to any action has no democratic meaning".

Another evident incentive mechanism is offline cues that reinforce digital trace. Interviewee 1 (personal communication, 2025) explains that in prior participatory budgeting process that included

projects which were improvements to the public space, civil servants put up physical banners in the city. These informed the public about what proposals were approved in Decidim and passed the final vote, as well as indicating the start of the implementation process.

Moreover, over time the platform recognized the engagement behaviours of their users. While initially aiming for regular participants, after realizing that a significant part of the userbase just wanted lot of people “just want to go and vote”, Decidim Barcelona intentionally supported these two participation itineraries by simplifying entry points while preserving advanced tools for more frequent users (Interviewee 1, personal communication, 2025). This way, incentive mechanisms for a broader population were implemented.

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Participatory-budget size	€50 m allocated 2021	€30 m per cycle	Madrid pot larger; both substantive
Progress visibility	Sporadic updates on portal	Dashboards and street banners	Feedback clearer in Barcelona
Engagement ladder	Basic gamified badges only	Visitor → Verified tier system	Barcelona offers multi-level incentives

Table 10. Summary of Coordination Mechanisms.

Despite a larger participatory-budget pot, Madrid’s limited progress visibility undermines user motivation; Barcelona’s tiered roles and real-time dashboards convert effort into tangible impact, sustaining longer-term engagement.

5.8 Trust Mechanisms

Finally, the analysis arrives at the last governance mechanism-trust. The trust mechanism can be examined by examining transparency and reliability of the system. Decide Madrid’s trust mechanisms appear insufficient due to limited institutional responsiveness and poor communication, Decidim Barcelona on the other hand exhibits a comprehensive architecture of trust mechanisms. This mechanism contradicts Expectation 4, which had anticipated similar levels of procedural transparency and first-time trust in both cities.

5.8.1 Decide Madrid

To embed transparency in the platform, Decide Madrid took numerous steps, such as using open-source software, making the progress of proposals public and providing moderation logs easy (Interviewee 2, personal communication, 2025; Royo et al., 2020). These mechanisms made it possible to trace and hold people accountable, which in turn helped create procedural trust in the platform. This was done intentionally, as “publishing all data openly and making sure that voting systems are safe and

can be checked has been very important in building trust," as explained by Interviewee 2 (personal communication, 2025).

However, while committing to trust building through transparency, there are complaints that communication and responsiveness within the institution were often lacking. Padilla García and Malo de Molina (2018, p.26) criticized the lack of transparency or dialogue in the execution of projects, stating that "there are very long periods of blank time when you don't know what is happening. As there is no dialogue, sometimes the final result has nothing to do with what was requested.", consequently eroding trust in the platform.

The project itself recognizes this interaction, stating that "people are more likely to come back when they see that their input is taken seriously, when the process is open, and when decisions and limits are clearly communicated" (Interviewee 2, personal communication, 2025). Furthermore, when asked how they ensure that people who submit proposals or vote can see what happens with their input, they explained:

We do this by providing regular updates, visual tracking of progress, and public reports at each stage of a proposal. We also send personalized notifications to those who submitted or supported proposals. Transparent municipal responses, even in cases where proposals are rejected, are key to maintaining engagement.

5.8.2 Decidim Barcelona

Arguably, trust and with-it transparency and accountability, are the most emphasized mechanism of Decidim Barcelona, mentioned in nearly all the reports and secondary data, as well as in the interviews (Barandiaran et al., 2024; Barandiaran & Calleja-López, 2018; Decidim Barcelona, n.d.; Interviewee 1, personal communication, 2025; Interviewee 2, personal communication, 2025; Interviewee 3, personal communication, 2025; Meta Decidim, 2023; Peña-López, 2017, 2019). The platform builds trust by making every decisive step in policy creation inspectable in real time and auditable, its design fuses radical transparency with technical reliability (Barandiaran et al., 2024).

The platform entails this radical transparency by default. Interviewee 1 (personal communication, 2025) explains that all user-generated content appears instantly on the site, stating that "contributions go public from the very beginning. They don't have previous moderation on [...] They usually also have comments enabled, so we can foster the collective conversation".

This is also picked up by Barandiaran and Calleja-López (2018), stating prior censorship is forbidden, and if moderation is later requested the action is logged and the list of hidden items stays visible, preventing silent takedowns.

Another big aspect of Decidim’s transparency is its open-source and open-data auditability nature. Its code, datasets, as well as its texts, images and other content is released under open licenses (Barandiaran et al., 2024). This shared governance aspect is further strengthened through MetaDecidim. In the association any user can propose platform changes, approved ideas are then mirrored to GitHub issues, where more than 11 000 items are traceable from debate to merged code (Barandiaran et al., 2024, Interviewee 3, personal communication, 2025).

Key indicator	Decide Madrid	Decidim Barcelona	Take-away
Open-source code and data	Code on GitHub; limited data versioning	Code and data on GitHub with full version history	Both open source; Barcelona offers richer audit data
Response time to proposals	Average 4–8 weeks; many pending	Standard ≤ 15 days; auto-updated status	Faster responses reinforce trust in Barcelona
Moderation transparency	Weekly removal log published	Instant posting; every edit traceable	Radical, real-time audit trail builds stronger trust

Table 11. Summary of Trust Mechanisms.

Both platforms are open source, yet Barcelona couples full data versioning, prompt proposal responses and a traceable moderation ledger, creating a stronger trust architecture than Madrid’s slower and less comprehensive feedback loop.

5.9 Cross-Case Comparison

Having examined both Decide Madrid and Decidim Barcelona individually, the following section will, in accordance with Yin’s (2018) CCS, compare the results of this analysis, identifying pattern similarities and differences across the two cases. Table 12 below brings the key design features together in one single schematic. For every feature the table (i) specifies how it is realized in each platform, (ii) notes whether the two implementations converge or diverge, (iii) identifies which of the four participation gaps the divergence effects and (iv) indicates the governance mechanism through which that effect operates.

Design feature shaping participation (SQ1)	Decide Madrid – key evidence	Decidim Barcelona – key evidence	Where they converge or diverge (SQ2)	Which participation gap(s) are affected and how (SQ3)	Governance mechanism through which the change occurs (SQ4)	Net effect on the gap
Offline to online integration	Sporadic town halls; minutes rarely uploaded; THIVIC pilot launched 2025	250+ neighbourhood assemblies; minutes auto-uploaded; permanent Canòdrom hub	Divergent – Barcelona institutionalises face-to-face feedback; Madrid remains event-based	Physical gap; continuous hybrid loop lowers access barriers in Barcelona; gap stays wide in Madrid	Coordination – layered civic committees and Technical Office keep offline inputs flowing into the digital pipeline	Barcelona narrows the physical gap; Madrid's remains wide
Proposal feedback and progress visibility	Only 2 initiatives ever cleared 1% threshold; sporadic progress reports	11,800 proposals, 70% adopted; real-time dashboards and street banners	Divergent – Barcelona provides real-time, tangible pay-offs; Madrid provides little follow-up	Motivational and usage gaps: visible impact maintains engagement in Barcelona; lack of feedback erodes it in Madrid	Incentives and control – adaptive workflow and multi-layer dashboards make outcomes legible	Barcelona narrows both gaps; Madrid widens them
Digital literacy support	Ad-hoc workshops; DecideML chatbot improves navigation but targets digitally fluent users; seniors under-represented	Free modular training at Canòdrom; feminist and open-source tracks; youth and migrants still under-served	Mixed – both offer support, but Barcelona's is broader, continuous, and more structurally embedded	Skills gap narrows more in Barcelona; remains wider in Madrid. Usage gap higher where literacy support is stronger	Incentives and coordination – training hub incentivises learning and is co-run with civic actors	Barcelona narrows skills and usage gaps; Madrid narrows them only for tech-savvy groups
Process configuration	Fixed three-stage pipeline; 1% support threshold rarely met; participatory budgets only in 2017 and 2021	Configurable five-phase workflow; threshold met every biennial cycle (2016, 2018, 2020, 2022)	Divergent – Madrid's rigid rules vs Barcelona's adaptable, regular cycle	Motivational gap: rigid steps discourage repeat participation in Madrid	Control – procedural adaptability versus rigidity	Barcelona narrows gap; Madrid widens it
Incentive structure	€50 million budget (2021) but single-level gamified badges; progress visibility low	€30 million every two years; tiered visitor-to-verified roles; real-time progress dashboards	Divergent – Madrid offers more money; Barcelona offers clearer, multi-layer rewards	Motivational gap (money vs visibility) and usage gap (depth of engagement)	Incentives – multi-layer reward staircase in Barcelona; one-off financial lure in Madrid	Barcelona narrows both gaps; Madrid's impact limited
Transparency and response time	Code open source; weekly moderation log; municipal responses in 4–8 weeks	Code and data fully versioned; every edit traceable; auto-updated status within 15 days	Mixed – both value transparency; Barcelona adds real-time audit trail and faster response cycle	Motivational and usage gaps (trust dimension): rapid feedback sustains participation in Barcelona; slow replies undermine Madrid	Trust – radical, real-time transparency versus delayed feedback	Barcelona narrows gaps by reinforcing trust; Madrid widens them

Table 12. Comparative Assessment of Platform Design Features, Participation Gaps, and Governance Mechanisms.

This synthesis allows for answering the sub-questions (Table 13). Design features that shape participation in both platforms are the hybrid hand-over, multilevel coordination bureaux, continuous incentive loops and real-time transparency dashboards (SQ1). Additionally, convergence occurs in baseline functions (open-source code and proposal thresholds) while divergence centres on hand-over depth, incentive continuity and the presence of a participation broker (SQ2). Divergent features track onto the four participation gaps: hybrid hand-over reduces motivational and physical gaps, while participation brokers shrink skills gaps and continuous incentives narrow usage gaps (SQ3). Finally, the widening or narrowing of each gap operates through matching governance mechanisms: rule-bound control affects motivation, coordination brokers affect skills, rolling incentives affect usage and comprehensive openness affects physical reach (SQ4).

Furthermore, read horizontally, the table shows a consistent pattern: hybrid offline-online integration, adaptive procedural design, multi-layer incentives and radical transparency in Barcelona systematically narrow the motivational, physical, skills and usage gaps. Where Madrid relies on sporadic outreach, rigid thresholds or delayed feedback, those same gaps widen or remain unresolved. These cross-case findings confirm that it is not the presence of any single feature but the alignment of features with supportive governance mechanisms that determines participatory breadth and depth, a point elaborated in the followings chapter's discussion section.

Subquestion	
SQ1	Which platform design features shape how citizens can participate in Decidim Barcelona and Decide Madrid?
SQ2	Where do those features converge and diverge between the two platforms?
SQ3	Which divergent features correspond to changes in the four participation gaps (motivational, physical, skills, usage)?
SQ4	Through what governance mechanisms (control, coordination, incentives, trust) do those features widen or narrow the participation gaps?

Table 14. Sub-questions 1-4

Expectation	Theoretical Link	Empirical Finding	Status
E1	Procedural clarity and user control foster motivational access	Barcelona supports motivation via responsive, predictable design; Madrid deters newcomers with rigid rules	Confirmed
E2	Effective coordination reduces skill-based barriers	Barcelona's coordination helps navigation; Madrid's silos cause drop-off, but some skill gaps persist	Partially Confirmed
E3	Strong incentives sustain usage over time	Barcelona's layered rewards maintain engagement; Madrid's incentives fade quickly	Confirmed
E4	Transparency builds trust and improves physical access	Barcelona builds trust with real-time audits; Madrid's opacity deters early engagement	Contradicted

Table 15. Expectations and their result after the analysis.

6. Discussion and Limitations

This thesis asked whether and under what conditions, specific design mechanisms in digital-participatory platforms widen or narrow citizen-participation gaps. The evidence indicates that gaps consistently narrow only when control, coordination and incentive mechanisms are effectively integrated and are mediated by face-to-face touch-points; trust-building mechanisms. Standing alone, they are insufficient and may even increase exclusion where offline access is weak.

6.1 Key Empirical Insights

The comparative synthesis reveals four distinct contrasts.

1) Offline facilitation differs, while Decidim Barcelona combines clear online rules with face-to-face help through neighbourhood assemblies and other offline facilities, consequently keeping abandonment low, Madrid's focus on digital gateway leaves users to navigate the platform mostly unaided and participation fades.

2) Coordination also diverges, whereas Decide Madrid inner departmental organization leads to proposals not being properly implemented, Decidim Barcelona's permanent Technical Office facilities organisation more successful, aiding proposal implementation.

3) Incentives follow the same pattern, Decidim Barcelona's feedback loops and its six-monthly budget cycles make impact continuously visible and sustain engagement, while Madrid's lack of feedback loops and reliance on participatory budgeting stunts regular participation.

4) Finally, its radical transparency commitment narrows participation gaps in Barcelona, open data and interpretive forums turn information into shared understanding and trust, whereas Decide Madrid releases data without mediation, leaving participants unsure of project progress and eroding confidence.

6.3 Cross-Framework Implications: Access Stages, Design Mechanisms and Collaborative Governance

These results align three strands of scholarship into a single argument. For one, van Dijk's access-stage model continues to be a valid or crucial explanatory framework in light of the findings, motivational, physical, skills and usage gaps itself and their interdependence and interplay can be observed. Further, Hanisch et al.'s design-mechanism framework is refined, control, coordination and incentives only function effectively when implemented in combination and mediated by trust creating mechanisms. Applied in isolation, these levers risk reinforcing exclusion rather than reducing it. Moreover, the findings resonate with collaborative-governance theory, effective online platforms mirror successful traditional collaborative governance settings by combining inclusive participation, empowered facilitation and transparent, iterative feedback.

Taken together, these literatures imply that digital-participatory platforms will narrow participation gaps only when design mechanisms are combined across access stages and embedded in a collaborative governance architecture that institutionalizes facilitation and mutual accountability. Focusing only on governance mechanism or digital access, risks overstating their individual power and underestimating the human infrastructure required for effective outcomes.

6.4 Scientific contribution and future research

Earlier work in the field by scholars such as Barandiaran et al. Noveck et al., Peña-López and others offers rich descriptions of Decide Madrid's and Decidim Barcelona's engagement patterns, yet it stops short of explaining how platform design alters participation dynamics; this thesis closes that gap by showing how specific combinations of design mechanisms cause participation gaps to widen or narrow, something earlier descriptive studies have not systematically explained. It also advances beyond the single-platform focus many studies by comparing two structurally similar municipalities, thereby supplying a recent mid-range analysis missing around these platforms. Additionally, by crossing van Dijk's four access stages with Hanisch's four design mechanisms and applying a cross-case synthesis, it applies a systematic theoretical lens that is absent in the field so far.

Future research should, for one test the offline-facilitation proposition in lower-infrastructure contexts, where facilitation may encounter different social logics. Further, more on-side data collection is needed, especially from participants, rather than workers, experts and reports. Finally, observation of

long-term participation changes is needed to examine the effects of different design mechanisms over time.

6.5 Policy and design implications

For government officials and platform designers, the findings lead to three key, connected actions they should take. 1) Participation requirements must be introduced together with in person guidance, a staffed desk, neighborhood assembly or mobile kiosk can ensure that rules become navigable and user-friendly. 2) Further, incentive structures should be continuous and carefully tailored, recurring and regular features like weekly progress badges or budget cycles reinforce a growing sense of impact that ad-hoc systems fail to sustain. 3) Finally, cross-department coordination and dialogic transparency must be formalized, municipalities that budget solely for software, without provision for these human infrastructures, are likely to reproduce rather than reduce participation inequalities.

6.6 Limitations

Reflecting on the different steps of conducting this thesis highlights some limitations of the study. For one, language barriers regarding primary and secondary data meant a reliance of machine translated content and a reliance on the accuracy thereof. The physical distance to the cases examined and the sensitive topic of participation, constrained the extent of data creation and led to a dependence on existing secondary sources. Lastly, the theoretical scope of the thesis prohibited a more in-depth analysis of each of the developed dimensions and mechanisms and reduced space for richer discussion of socio-economic and discriminatory gaps. Future work could examine those gaps with more extensive demographic data.

7. Conclusion

This comparative case study set out to examine how design features and governance mechanisms shape participation in Decidim Barcelona and Decide Madrid, and how they widen or narrow the four participation gaps.

Within the otherwise comparable Spanish municipalities, design determines whether digital platforms mitigate or reproduce participation inequalities. Decidim Barcelona's integration of hybrid facilitation, cross-department coordination and continuous incentives closed motivational, material, skills and usage gaps, while under the same national conditions Decide Madrid's partial adoption allowed gaps to re-open. Digital-governance theory must therefore conceptualize design mechanisms not as standalone levers, but as interdependent components whose effectiveness depends on context-specific implementation. Initiatives should prioritize building the human infrastructure and establishing trust creating mechanisms, which can be facilitated by extensive transparency.

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8. Appendix

A: Declaration of AI use

During the preparation of this work, I used ChatGPT for structuring and research purposes, as well as language/grammar checks. For the latter reason Grammarly was used as well. DeepL Pro and Google Translate were used to translate documents from Spanish to English. After using these tools, I thoroughly reviewed and edited the content as needed, taking full responsibility for the final outcome.

B: Extensive Case Study Context

B1: Example Cases not fulfilling selection criteria

Uchaguzi is an ICT-based platform that includes the utilization of SMS and social media, thereby fulfilling criterion 1. It also involves the collaboration between government and public-private non-governmental actors, aligning with the third criterion. However, it operates only during election periods, making it an event-specific tool, failing criterion 2 for continuous participation (Bazerli et al., 2015).

Similarly, Improve My City is an open-source platform, operating on web and mobile devices, meeting the first criterion. It also enables an ongoing interaction between citizens and the municipality by offering continuous reporting and feedback possibilities, satisfying criterion 2 (Komninos et al., 2019). However, its function is limited to these feedback opportunities and offers no share in actual decision-making power, falling short of the third criterion, classifying as a participatory project, not a collaborative one (Ansell & Gash, 2008; Emerson et al., 2012; Lahat et al., 2021). Likewise, E-Mongolia and the vast majority of projects and initiatives found that meet criteria 1 and 2, primarily function as service delivery or participatory platforms, rather than being a tool for collaborative governance (Kim & Ulziikhutag, 2011; Manazir, 2024; Zulfiqar et al., 2014).

B2: Decide Madrid

Platform Structure

The structure of Decide Madrid can be described as organized around five different participatory tools or sections: *Debates*, *Proposals*, *Polls/Voting*, *Processes* and *Participatory Budgeting* (Tseng, 2020). While Debates offer room for discussion, Proposals allow citizens to submit purposively ideas. In that vein, Polls are utilized to facilitate voting on such proposals or council issues. On the other hand, Processes are initiated by the city council and act as structured consultations and are consequently the only direct top-down tool on the platform. Participatory Budgeting is utilized for proposition and voting on municipal budget allocation and to empower residents (Noveck et al., 2022; Royo et al., 2020, 2024).

Key Design Features

Notably, the platform encompasses a “gamified interface”, which features elements such as thumbs up and thumbs down, visual aids, banners and competition rules (Royo et al., 2024, p.8; Tseng, 2023). Furthermore, asynchronous participation, immediate content visibility and tree-like comment structures are built into its design, which aims at fostering deliberation (Barandiaran et al., 2024; Borge Bravo et al., 2019).

A clear emphasis is placed on transparency, traceability and accountability. This is achieved by making processes traceable, registering moderation activities, and providing means to assess the execution of decisions (Barandiaran et al., 2024; Peña-López, 2019). Moreover, it conforms to W3C standards and is AENOR certified², guaranteeing accessibility to people with disabilities (Barandiaran et al., 2024).

Participation Outcomes and Decision Pipeline

Initially, citizen expectations for the platform were high, resulting in substantial participation. However, after the initial surge, maintaining engagement has been a challenge. This can be seen in particular for the Proposals section, which has been a source of frustration and declining engagement in the early years of the platform. This is due to proposals needing a high threshold of support³ to proceed to a vote, which only two proposals reached in its formative stage (Barandiaran et al., 2024; Noveck et al., 2022; Royo et al., 2020; Tseng, 2023). Additionally, Tseng (2023) points out that the section also suffered from a flood of low-quality and duplicate proposals. This showcased a lack of moderation and guidance, further contributing to user demotivation and disengagement (Tseng, 2023).

Further, while the city council committed to implementing winning proposals and participatory budget projects and translating citizen input into real political impact and significant budget allocation, proposals that receive a majority vote are not automatically implemented, as binding referendums are not allowed under the Spanish Constitution. This commitment is limited to reviewing and evaluating such proposals within 30 days; the results of this evaluation are published in an open report. If the report is positive, an action plan is created and published to implement the proposal. However, if the report is negative, the City Council may propose an alternative action to publish reasons for not executing the proposal (Noveck et al., 2022; Peña-López, 2019).

Interface Friction and Unequal Advantages

While intended to increase motivation, (Tseng, 2023) identified three types of friction that resulted from the gamified design for citizens, *emotional friction*, *tactical friction*, and *positive friction*. Emotional friction arose for users from a convoluted interface and uncertainty on how to perform actions

² World Wide Web Consortium (W3C) offers international guidelines, the Spanish Association for Standardization and Certification (AENOR) provides certifications confirming that organizations, products or services comply with specific standards. Both are focused on usability for people with disabilities (AENOR, n.d.; Spina, 2019).

³ The threshold was 1% of registered residents, which amounted to around 31,655 citizens in 2016 (Instituto Nacional de Estadística, n.d.; Noveck et al., 2022).

like creating proposals or differentiating sections, which were attributed to difficult terminology and unclear guidance. Tactical friction emerged from disparities in technical knowledge. Citizens with more technical knowledge or who were embedded in collectives could leverage their understanding of platform use or external networks to gain more visibility or support for their proposals. Additionally, Decide Madrid's algorithm and its design effect particularly reward such citizens, as feedback loops in the design provide more visibility to early and well-networked proposals.

However, (Tseng, 2023) points out that this friction is not inherently negative, it can also promote positive friction. According to them, positive friction describes when groups leverage Madrid's activist history to advocate for marginalized populations within the platform's framework.

Hybrid Participation Model/ Offline–online integration

As mentioned previously, the platform has its origins in the 15M movement which blended digital and physical engagement. Consequently, Decide Madrid reflects this legacy by facilitating hybrid modes of participation that combine digital and face-to-face participation. While the platform is mainly in the digital space, citizens can access a range of tools offline as well. This includes registration and verification processes, as well as voting for participatory budgeting in citizen attention offices. Furthermore, physical workshops, consultation and other support services are offered to bridge the digital divide (Noveck et al., 2022; Royo et al., 2020).

Nonetheless, Noveck et al. (2022) highlight shortcomings in the integration of these offline participation, pointing out it is not always being well-integrated into the online system, especially criticizing the lack of syncing between offline and online data.

Institutional Responsiveness and Administrative Barriers

Over time, the institutional challenges have led to a decline of the platform. One of these challenges was an administrative challenge. Royo et al. (2020) states that city officials often did not know how to address successful proposals or integrate them into policy workflows. This limited the effectiveness of the platform in translating participation in action. They further note that while the platform is open to various entities for registration, the crucial tools of voting and proposal support/creation are generally limited to verified individual residents, which poses a barrier for Civil society organizations and NGOs. This barrier led to ongoing discussions on how to better engage traditional associations (Royo et al., 2020).

Debates	E-forum where users can post topics, comment or state agreement or disagreement. The city council can also create debates.
Proposals	Users make a request which can be complemented by audio-visual materials and/or supporting documents. Verified users can support the proposals and those proposals with the support of 1% of the people over 16 registered as residents in Madrid (27,662 inhabitants at 2018) are voted on.
Polls	Polls are carried out when a proposal receives 1% support or when the city council wants citizens to decide on an issue. Polls can be open to all citizens or to the citizens of one district.
Processes	This tool is used by the city council to seek different types of input (e.g., to develop or modify regulations, to request proposals for an activity). The way in which the processes are carried out depends on the information that the city council needs (e.g., debates, provision of documents in text format so that citizens can propose changes).
Participatory budgeting	Annually, citizens can decide directly on how a part of the next year's budget will be spent. The projects can be for the whole city or for specific districts and they may affect current expenditures, subsidies or public investments. Citizens can vote on projects for the whole city and/or projects for only one district of their choice.

Table 16. Types of Participation (Royo et al., 2020, p.8).

B3: Decidim Barcelona

Decidim Barcelona functions as tool used a variety of policy areas, including participatory budgeting, city planning, co-creation of regulations and the internal governance of organizations, supporting both institutional and grassroots-led participatory processes (Barandiaran et al., 2024; Peña-López, 2017).

Platform Structure and Core Modules

Similarly to Decide Madrid, the platform's structure can be best described as being organized around a range of participatory tools: these include *Processes*, *Proposals*, *Assemblies*, *Consultations*, *Meetings*, and *Surveys* (Barandiaran et al., 2024; Borge Bravo et al., 2023; Peña-López, 2017). Being built upon the same software, these tools also serve similar functions [to the ones of Decide Madrid](#), however there are some noteworthy differences.

For one, Proposals acts as a combination of Decide Madrid's Debates and Proposals, allowing citizens to submit, debate and support proposals for policies or regulations in one tool. Moreover, contrary to Decide Madrid, these proposals can also be initiated by institutions (Barandiaran et al., 2024; Peña-López, 2017). Processes, on the other hand, are used to define the overarching participatory framework, for example as a strategic plan or regulation. Further, they structure how and when the other tools are activated (Barandiaran et al., 2024).

Similar to Polls/Voting, Consultations are used by the city council to collect opinions from citizens on specific questions, often at key decision points. For this voting or surveys are utilized (Borge Bravo et al., 2023; Peña-López, 2017). While surveys are used in Consultations, the tool Surveys serves another purpose. It is used to collect more detailed or exploratory input to complement deliberative or diagnostic phases, often in questionnaire format. Surveys can include open-ended, Likert-scale or multi-part questions (Barandiaran et al., 2024).

No “Decide Madrid equivalent” have the tools Assemblies and Meetings. Assemblies are specifically utilized to represent the organized bodies, such as district councils, citizen panels or working groups. Notably, they have their own membership, permissions and decision-making capacity (Barandiaran et al., 2024; Borge Bravo et al., 2023). Meanwhile, Meetings are used to announce, manage and document face-to-face events. Additionally, meeting minutes and outcomes can be published and linked to other participatory content (Barandiaran et al., 2024; Peña-López, 2017).

It is important to note the modularity of these components, meaning they can be enabled, configured or disabled for each participatory process. Each module can be configured with case-specific settings, these include opening and closing dates, participant access levels (public, restricted) and setting the input format (open text, multiple choice). Furthermore, all tools can be combined into workflows, meaning a single Process can include Meetings, Proposals and Surveys all working together (Barandiaran et al., 2024; Peña-López, 2017).

Key Design Features

As mentioned Decidim Barcelona, guided by a technopolitical vision, places a strong emphasis on modularity, moreover, it periodizes traceability and transparency (Barandiaran et al., 2024). This emphasis is committed to by its internal governance framework, the binding social contract. It binds developers, public institutions and users to uphold core democratic values and mandates that all source code remains free and open source. Additionally, it requires that participation processes are transparent, accessible and traceable and encourages inclusive design so that different user groups can access and influence decision-making (Barandiaran et al., 2024).

Platform development itself is managed by the *MetaDecidim* community, which democratically coordinates proposals for new features and facilitates public deliberation. Furthermore, it enables issue tracking via GitHub and fosters the allocation of funding (Barandiaran et al., 2024).

Consequently, the platforms interface is designed to support deliberation over raw proposal competition, meaning that it is intentionally structured to promote collective discussion, reflection and negotiation, rather than simply encouraging users to compete for the most popular or visible proposal (Aragón et al., 2017; Barandiaran et al., 2024; Peña-López, 2017). Decidim Barcelona fosters such deliberative practices via a few distinct mechanisms. For one, it enables commenting and counterproposals, furthermore, it displays the proposal evolution and the responses from institutions, as well as integrating meetings and participatory processes alongside proposals (Barandiaran et al., 2024; Peña-López, 2017). To provide transparency, Discussion threads, real-time proposal tracking, and participatory meeting logs are built into the platform (Peña-López, 2017).

Participation Outcomes and Decision Pipeline

Given its design to institutionalize the democratic innovation rooted in the Barcelona en Comú movement, enabling participation and empowerment is the nonnegotiable aim of the platform (Barandiaran et al., 2024; Peña-López, 2019). Peña-López (2017) showcases how this commitment translates into something tangible with the example of the city action plan (PAM). In 2016 over 40,000 people participated in this process, submitting more than 10,000 proposals. As opposed to Decide Madrid's debate-oriented model, Decidim Barcelona attempts to institutionalize proposals via three-phase logic: proposal, feedback and binding plan (Barandiaran et al., 2017; Peña-López, 2017).

Consequently, these proposals were processed in three phases, first was an institutional draft, succeeded by citizen input and ultimately synthesis and evaluation took place. This phased structure did not just allow for input, but importantly also for deliberation, as proposals were publicly discussed and refined before synthesis and evaluation (Peña-López, 2017).

Significant in this process was the integration of both online and offline channels as well as the effects on the participation: the final municipal action plan included a significant portion of citizen-submitted proposals, showing institutional commitment to the inclusion of citizen input (Barandiaran et al., 2017; Peña-López, 2017). The hybrid approach of PAM is further explored in [Section 4.3.5](#).

Accessibility Limitations and Representational Gaps

Although the platform has made efforts in emphasizing inclusiveness objectives, underrepresented demographics still include those with inadequate access to digital technology. Furthermore, because of the platform's institutional language and complexity, marginalized groups might find it difficult to utilize it (Borge Bravo et al., 2023).

This point is echoed by Barandiaran et al. (2024), stating while Decidim Barcelona attempts to reduce visibility bias by emphasizing deliberation and structuring decision phases, the platform still struggles with underrepresentation of youth, migrants and less educated groups.

Hybrid Participation Model

In its core Decidim Barcelona is designed as an online platform to complement and integrate face-to-face participation (Barandiaran et al., 2024; Peña-López, 2017). In the aforementioned PAM process, over 250 offline meetings were held, those included neighborhood workshops, district-level assemblies and paper forms. The outcomes of these meetings were digitalized and then fed back into the platform (Peña-López, 2017).

But also, generally such augmented events are part of the platform, digital tools amplify and document physical meetings. Consequently, printed materials, community assemblies and staff-facilitated in-person events are integrated into digital records (Barandiaran et al., 2024; Interviewee 1 personal communication, 2025). This creates a layered participation flow.

Institutional Challenges and Governance Complexity

Similar to Decide Madrid, initially Decidim Barcelona received strong political support after its launch however later cycles raised concerns about institutional continuity (Barandiaran et al., 2024). This is, among others, due to some processes remaining non-binding and the full integration into traditional policy cycles remaining ongoing (Barandiaran et al., 2024; Borge Bravo et al., 2023).

Moreover, the platform expanded into civil society via a federated model, which introduces complexity in governance and coordination (Barandiaran et al., 2024). One such issue is the conflict with higher-level legal institutions. While not directly conducted on the Decidim Platform, a 2018 Barcelonian referendum can serve as an illustration. This referendum on water re-municipalization passed the legal threshold on votes and was accepted by the City Council, to ultimately be blocked by the central government due to Spanish law and corporate pushback (Barandiaran et al., 2024; Berge et al., 2023; March et al., 2019).

Open Code Governance and Developer Community

One important aspect of Decidim Barcelona is its governance, which extends beyond user interaction. As mentioned before, platform development is co-governed via GitHub, through code, and MetaDecidim, as a deliberation space (Barandiaran et al., 2024). This way any user can submit feature proposals, feedback is then gathered and prioritized based on usage, technical feasibility and alignment with the social contract. This democratic governance blurs boundaries between platform use and platform building, consequently aligning software governance with political governance ideals (Barandiaran et al., 2024).

C: Interview Transcripts

C1: Interview 1 (Decidim Barcelona)

Author

OK, so you got a chance to read through the documents and the consent form and you read it.

Interviewee 1

I did and I gave my consent.

Author

OK. Thank you. Perfect. Right, just a short introduction, can you just tell me what you're working on currently, what research you have done around Decidim Barcelona?

Interviewee 1

OK. So maybe yeah, a quick background about me, I work in fact for a local consortium of municipalities here in Catalonia and I joined the Decidim project from the beginning. I am one of the Co-founders. So maybe we can talk later about the differences, about decidim.org and Decidim in Barcelona, because they are quite having different paths right now, but for the project I am pretty much

involved in the decidim.org side of the project. And currently I have [redacted for privacy], so my main job is coordinate the different features and developments between the development team and the more political stakeholders or organizations that are using Decidim.

Author

All right. It's very interesting. Yeah, as you, you mentioned that there's a difference between Decidim and Decidim Barcelona. But focusing for now on Decidim Barcelona. It was really interesting to read about the scale and the ambition, how it all started from, from the from the movement, and what the ideas behind the whole project were. Can you tell me what in your opinion, do you think is the most important innovation that the platform has brought to the space so far.

Interviewee 1

The most important innovation for the city of Barcelona, you mean?

Author

Yeah.

Interviewee 1

Interesting question. I mean from 8 years now I would say, I mean Barcelona has had a participation culture in general, like Catalonia has a pretty important culture for participation and you know, a lot of entities and associations; already had this kind of culture for taking public matters into their hands.

So previous to the Decidim, there were already some platforms for the city because in Barcelona the municipal chart [Charta] says that whenever a new government enters the City Council, they need to discuss the whole mandate strategic plan for the city with all citizens. So, they had already a platform, but I would say that Decidim brought like a more, first of all accountable way of deploying these public policies because they [...], I mean we saw the differences, maybe before you just had like a survey [...] in some consultation that they asked for your opinion, but you never saw the return of this consultations. And I would say that transparency and accountability are very big for now and people are not willing to, I mean, people are already thinking that this is like the very basic for participation in the city and maybe the hybrid approach about having always offline face to face meetings and the digital layer which is the like the main dashboard that you have online to see what is going on in the city.

Author

Right. I was also going to ask you about the offline and online combination that Decidim does, which I find very interesting, but could you first maybe, explain how the platform works from the eyes of a citizen. If I'm a somebody who moves to Barcelona now and I want to participate and I hear about the platform, how does it look for me?

Interviewee 1

Yeah. I mean, if you just if you just arrive to Barcelona first, you're probably gonna hear about this in Barcelona when there is like a big campaign, for example, right now they are running the participatory budgeting process which is which takes every two years, I think, yeah, no, three- two years. They have like a big process to do that. So you will, you will see in the streets in the underground, this big banners about hey, let's go the site a part of the budget for the city. So when you go into the city in Barcelona you usually see like the main process being highlighted there. So the idea is that I mean our hypothesis when we designed the platform was that we wanted to have participant regular coming periodically to the city in Barcelona because not only the big processes, but you also have, like citizen petitions that you can elevate to the City Council if you just want to propose to do something particular. This is specified in a regulation of the city. But you know, there are a lot of spaces published in the platform. In our hypothesis is like, OK, you go into Decidim Barcelona, you create an account and then you can just start having this interaction with the different spaces. But then we realised that a lot of people just want to go and vote. For example, for a specific time of the year, which is the case for participatory budgeting. So yeah, we've been changing the platform a little bit and the logical behind it

to adapt to this kind of two profiles of participants in in the scene, the ones that are regular and maybe they belong to, I don't know, to a committee in the city or an association, so they go. More often into this in Barcelona and the ones that just go and vote every two years and that's it. Actually, if I answer more about the features, not sure, just ask me.

Author

Yeah, sure. Let's talk. About the features then, because yeah, you just mentioned that you obviously changed the platform since it's running. Can you maybe talk about one or two tools or features you integrated into the platform and how do you think they have changed how the citizens interact with the platform now than [compared to] it was maybe 5 years ago.

Interviewee 1

Hmm, yeah, I would highlight the proposals component. This is like the basic way participants have to interact with other participants and also with the City Council. So, in most of the participatory processes that are published in Decidim Barcelona, you have a proposals component, which means that you can just submit your contribution to any given topic. And the thing is that contributions go public from the very beginning. They don't have previous moderation on anything like that. They usually also have comments enabled, so we can foster the collective conversation. I mean, we try to avoid this kind of participation very individual and because it's important to have a sense of collective action and interest. So I would highlight this one and also attached to this one is the accountability module that I was mentioning before. Because usually proposals submitted by citizens are later converted to specific results. If you are depending on the type of process that you're running, the goal is just to elaborate, the initial contributions to more specific goals that can be an action in a public space or it can be a discussion of a document that that needs to be approved. So the link between the two, I think they it is quite interesting and something I would even say quite unique of Decidim this kind of relating everything with everything.

Author

OK. And how do you think the development of these two, the integration of the two, how has that changed for citizens to interact with the platform when it compared to the original Decidim in Barcelona?

Interviewee 1

Yeah, I mean. I would say that for most citizens, this is the way they have to see actual change right now, like OK we are investing some time to participate in the public policies of the city and this is the way that we have to see how is really becoming a reality and one for example interesting aspect is the combination of this accountability online feature with the offline signs that you can see across the city. For example, for the past participatory budgeting process there were some projects that were improvements in the public space, so whenever they start the works, the public works needed to do that. They put these big banners about, hey, this was approved in Decidim in Barcelona, this passed the final vote. So, we are starting now to implementing this specific action.

Author

Then let's continue with the offline aspects of Decidim, because I read that's a big focus point to not neglect the face-to-face aspect also of Decidim, so it's interesting to hear you talk about how to also give feedback to the citizens what has happened or telling them this is happening online. But I read also that there are still face-to-face meetings and also workshops to train the capabilities to use the platform efficiently. Can you tell me how they work and who do you want to target in terms of the society and who actually shows up to those meetings?

Interviewee 1

Yeah, this is a key aspect now who is actually participating in those spaces. So, I would maybe differentiate to different type of meetings going on right now in Barcelona. So, you have the associative

fabric⁴ of the city, the different entities that have a specific activity, so they can plan their assemblies, their committees and have them in a transparent way in the platform. So, the public going to these meetings would be more specific of these kind of entities. And then you have also the official meetings proposed by the City Council for each neighborhood. Also very important to have like a long extension of the to cover the whole city. So, I think this also has improved in the last years, like having really regular meetings, I would even say that for now in the new mandate, you know that Ada Colau is no longer the mayor. Now we have another mayor. So, there were some promises from the last mandate that are now in the hands of the new mayor. So interestingly, the neighbourhood committees were not that crowded maybe two years ago. Now they are like with a lot of people demanding that some of the promises that the last mayor did become a reality, you know, so they are working. I would say, yeah, specifically for some neighbourhoods in the city, they are very active and then I wouldn't qualify them as meetings, but they are very important when there is, like right now, a huge participatory process like the budget they deploy across the city a lot of information points with iPads and digital support to help people to interact with the platform.

For us this is key because otherwise it's not that easy to get people involved in the processes. So yeah, I mean I I'm not sure if you checked the recordings of the neighbourhood committees, but they are quite interesting to to see how is the dynamic and and what topics are discussed there.

Author

That's interesting, I I have not watched them. But I will, I will.

Interviewee 1

Maybe I can send you a couple of them that are specifically that are especially interesting to watch.

Author

That would be great. Thank you. When you just mentioned going to the city with iPads to help with the platform to have people interact with it. Usually if you talk about digitalization and participation you expect that's the older part of the population that you want to target and help more. And is that in your experience actually the case when you go to city, it's more an older population or is it more diverse? Because I read about that interesting enough also very young people are the ones that have to be targeted more. That are not just showing up by themselves, even though you expect: ohh it's technology, it's new, it must be the young people. But yeah, who is actually showing up. Who are you interacting [with] on the street?

Interviewee 1

Yeah, yeah, yeah. This is an interesting thing that surprised me as well. But we used to have, like, a collaboration with, with some design university a few years ago. And I was chatting with the students and for them it was like, no, I'm not going to give my data to the city. I mean, they were, like, very reluctant. And I was like, OK, but you're giving your data to Mark Zuckerberg to Elon Musk. But this doesn't worry you. But then your public administration is not. So yeah, this is an interesting perception from the from the young population. I would say that right now in the information points, maybe, yeah, mostly the middle. How do you say the the middle?

Author

Age bracket.

Interviewee 1

Yeah. Yeah, exactly. I would say that from what I've seen directly, I am not monitoring and we should ask also the colleagues from Barcelona, one of the problems that we have in the city and we are trying to solve is that tension about privacy and demographic data. That we really need to analyze properly what type of people is participating in the platform because we try not to get any personal data

⁴ Likely a direct translation of the Spanish "tejido asociativo," referring to the network of local associations and civil society groups.

that is not absolutely necessary. So right now we're working on a module that is about data donation that at least states that if you want to contribute to the project with your demographics, we assure you that they will be treated in an aggregated way. And so on. But yeah, we really need this kind of and addressing other minorities. There are some specific actions that we, I mean we the have Barcelona City Council tries to do to also involve population from other segments that usually don't participate. I'm not sure if you heard about the story about the cricket girls. This was an interesting one and I'm sure there are a lot of stories happening in all the cities around the world and we are actually right now searching for these studies because they are like, OK, we can do that. So this was also in the past participatory budgeting process that there was a group of young girls, that usually play cricket in one in one facility that was not really properly adapted to practise this sport because in Barcelona it's not that popular as in as in Pakistan or in London. They were concretely from the Pakistani community, they don't usually interact a lot with Decidim Barcelona and something like that, but they just submitted a proposal like asking for improvements in that facility to properly practise this kind of sport. And all of a sudden, a lot of people were participating in the comments of that proposal, but also in Urdu, you know, in their own language and the people from the City Council were trying to help translate in and everything. So, this was the most supported. The most voted proposal from their district, and they finally, I mean the Guardian also wrote a piece about this story because it was like, wow. We don't know exactly why, but this is like gaining traction and involving a lot of people like, OK, let's make this real and yeah, they finally like 6 months ago or something like that, they inaugurated the new facility properly. So you know, it's like, OK, yeah. We know that we can address and involve other people, but it's still a challenge to because you need to offer something that is important for the different segments of the population and not only, you know, talk about regulations and something like that. So when people see opportunity to actually transform for real their living conditions, sure they will participate.

Author

OK, that's a very interesting story.

Interviewee 1

I can also send you some links if you want to dig into the site.

Author

Yeah, I think I will do some research into that because yeah, that's also part of the scope of my research. Because we know that people participate, but the interesting part is: Who participates and why and who doesn't and why? So talking about, minorities or segregated communities that usually do not take part in those progresses with the City Council. Is there efforts to target them specifically to specifically target people that you assume wouldn't come from their own and how has that worked?

Interviewee 1

Yeah, related to that story, I would say that there is a active effort to, for example, to explain everything in the different languages of the city, not only Catalan and Spanish, but actually translate to the different languages that are being spoken in the city. I don't have a lot of vision about what is really going on. Sorry, I don't think I can help you. A lot of this. We know that, for example, New York, they also have like this huge deployment of information points. With different languages and even interpreters and and something like that. To yeah. To involve people that from different contexts and and origins.

Author

No worries. But then let's stick with this because I found the aspect of language very interesting. You said that when the proposal from the cricket girls first came, that the comments were in different languages and the City Council tried to translate it or help translating it. They see them have or did Decidim have Tools to help with that? Now everybody talks about AI. Natural language processing. Were there any newer tools that were used or is it done manually?

Interviewee 1

It was done manually at that moment because it was something unexpected, so it was just like, OK, let's try to keep the conversation moving. And so they were I, I guess usually external tools, but this it's true that we've been thinking also about taking advantage of AI regarding translations and transcriptions of meetings. So because we work also with the European Commission, they developed a module that does automatic translation for the 23 or 24 languages in the in the European Commission. And we are also trying to expand that for the whole community, especially for the transcription of meetings, automatic transcriptions, always reviewed by an ad. In, but yeah, we think that would be interesting and foster this kind of, yeah, multilingual conversational because I I would say that this is quite it's more important that maybe since at first sight know that if someone addresses you in your own language, it's really different the experience of being involved. Actually taking into account in that regard, no in that topic.

Author

And then staying in the realm of more technical aspects. Now that you're talking about experimenting with the integration of AI for the transcription stuff, I I'm sure over the years Decidim has been operating, that Decidim Barcelona has been operating, there's been also other technological advancements that could have been integrated in the system. Is there something that sticks out to where you say, we implemented this and it had an effect on how the citizens used it, or how the platform operates?

Interviewee 1

I mean regarding integrations with other technologies, I could say that for example, during the pandemic, it was really key and in fact we worked very hard to improve the meetings of the platform because we couldn't get together in a place. We were working to integrate the different video conference tools like this one [Zoom] for the city meetings. So this was something that stayed because we still have this kind of meetings online and regarding all the integration, I mean, we also have this integration that it's not really used as much as we thought it would be, but I think it's still interesting the integration with note pads, you know with yeah, notepad or create pad or this kind of real time collaboration documents to take the minutes of a meet in a collaborative way. But you know then when you go to a face-to-face meeting, usually they have the facilitators and so on. So people are not really into taking the minutes. But yeah, this these are the two that comes to mind regarding integrations.

Author

OK. Thank you. That's very interesting. When it comes to the face-to-face meetings. Can you shortly explain how that is integrated with the online aspect of Decidim, I know there's that's a focus to have a seamless combination, but could you shortly explain?

Interviewee 1

[Laughs] No, not that seamless. In fact, this is one of the focus that we want to have now. Like, how can we really improve this kind of hybrid approach not to participation. But how it works is that you usually publish your meetings online with the agenda, ideally so everybody knows what is taking place, the topics that are going to be discussed and so on. Then usually when people go to this offline meeting, they work with offline materials, you know, with posits. And the thing is that the platform lets you upload everything. I mean, if you recorded the session, you can embed it into the meeting. If you worked with an offline dynamic facilitation, working with posits and so on, you can take pictures and upload them to the platform, so it's more like documenting what is going on offline. You could even have like a hybrid meeting, like having some people online and people offline. That this requires some logistics, but we know that there are some cases that they are also using this this type of meeting in in the platform and right now for us our focus is like OK, but if you are working with some proposals because you are discussing about specific topic that for a specific area of the city. How can we make that people can upload directly and very agile way their contributions and they get linked to the meeting and to the process. So how can we improve this kind of dynamic? Because if not it's quite an overhead. Or the facilitators and administrators so it would be great if we could improve like this kind of interaction real time when they are in the meeting. But for that we need to really make it very easy, very simple. This is

not like the main characteristic of the setting, because it's like a powerful tool, but with a lot of options. So yeah, we're kind of thinking of how can we simplify the experience for certain context.

Author

And how is the experience of somebody who cannot attend it, such face to face meeting? So it is done so I can go online. I can look at the recording, I can read the transcript. Can I then add a discussion to it? Can I work on proposals? How is it for me? Somebody who only turns in afterward.

Interviewee 1

Sure, that that's just such an important point. Yeah. Yeah. Because for a lot of people, it's simply not possible to attend the face-to-face meeting. So they usually also enable the comments for a given meeting so they can keep up the conversation. And I mean, it's all considerable, but the administrators can also enable like a specific space for submitting contributions, in case that people I mean in an asynchronous way.

Speaker

OK.

Author

Let me know if you if you have experience on that for the face to face meetings because it seems to be that it's very neighborhood centred, so the people who go there, are involved in it, it's in their close vicinity. Who, from the neighborhoods are usually the people that show up? Is it more that you have retired people that have more time and are very invested, or do you have the parents that go is there any trend you can see.

Interviewee 1

Yeah, I mean, I wouldn't say I'm not sure if there is specific demographic really I I am recalling like the last recording I saw from this neighbourhood committee that I I mentioned before and they were like actually they were there were also young people. I mean, I guess it depends on the topics that are being discussed and the kind of community that you are trying to. Interpolate, but yeah, not sure. Not sure to tell you like no, there is a consistent trend of this specific demographic, but sorry.

Author

I think that's a great sign that you can't just say, Oh yeah, it's always these people that show up. It's. Never those that.

Interviewee 1

No, no, I would say, yeah, they vary.

Author

I'm sure you also get a lot of feedback from citizens to say to integrate this or this annoys me. Have you gotten feedback from people saying something specific about how their experience. Or I hear about my friends. They don't want to use it because of this or they tell me, oh, I really want to use it because of that function it has.

Interviewee 1

I mean not me directly, but I know that there is. Yeah, they, they there are these kind of feedbacks. And I realise that there is also very, I mean there is a an aspect here about communication, how the City Council communicates certain actions and decisions they make, for example, with a very well designed if you want process, it can be very well designed. With this I mean everything explained with the different phases of the process and so on. But then when you need to give back to citizens to give your seat back. It's not always understood or even it's not accepted. No. So yeah, but but I think this is healthy. I mean it's about also these kind of conflicts about different interest in the city and not sure exactly. If

there are like specific mechanisms to handle that or this is like being addressed 1 to one issues when they arise.

Author

OK. And you you talked about how the City uses posters to show the the outcomes as well from to keep citizens informed what actually happens of of the proposals or for the participation? Is there other mechanisms to? Yeah, to make to have citizens ability to track the outcome. I'm sure for the cricket girl it was hard to miss. I'm sure the media also talked about then the outcome of the proposal. But if it's a smaller proposal or discussion that you took part of, how do you see the outcome?

Interviewee 1

Yeah, yeah, yeah. I mean mainly through the different dashboards in the city, in Barcelona, where you can really track. A specific project that interests you. I mean, they are all there, but usually how it works is that you can follow for updates specific process or proposal or project and they regularly send newsletters to everyone who is subscribed to this newsletter. I would say that this is also important to keep people up to date. Another interesting thing is that is that is the campaigns that the different communities launch on their own when they need to mobilise a lot of neighbours or people, for example? Right now, the schools, especially the schools and the parents associations, not sure how is the the word in English, but you know like the parents for the school they they get together and they launch like massive campaigns through WhatsApp, and TikTok, even I mean Instagram and all this kind of support. So yeah, I would say that this is also a mechanism to later track the progress. For example, right now it was like the final vote. So I'm sure there is a lot of activity in all those channels. About what projects got selected what not? So it's like a mix, the online communication top down, let's say from the City Council, the horizontal communication between these kind of informal groups and then the off offline supports that let you know that, hey, we're we're doing this.

Speaker

Right.

Author

That that sounds very, very interesting. I can imagine that lot of the tacking the outcomes is something that doesn't happen on the Decidim platform itself, but it's grows organically.

Speaker

Yeah.

Author

Then I have one more question if you can. What areas do you think of Decidim Barcelona specifically could in your opinion need help or improvement to ensure more to target more people that are not using the platform yet.

Interviewee 1

Mm-hmm. Yeah, I mean I should start by saying that this is not like a matter of the platform itself. I see it more like a political aspect. Like, is there a political will to really go beyond the usual processes that every city has. And if yes, well, then we can talk about how can we improve the platform. We got for example, this idea and we didn't abandon it yet to for the Decidim Barcelona to become like the social network of the city, kind of like a substitute for. Twitter or platforms like that, like a place that where you can go and just have your own space. Without any framework specific framework, because now all spaces in the Decidim Barcelona are created by the City Council. So what if we could also have like a bottom-up space, maybe not very limited but maybe more free where every citizen can just like comment on the things that they worry about and have this kind of conversations also in that in that platform. But, yeah, it really depends on the political will because and I also understand the other side like I mean if you commit to do more things regarding participation, it also takes a lot of work and I mean and the teams behind all this are not very big. Really. So yeah, I would say that it can be definitely

improved, but I would be cautious on not raising some expectations that you later cannot sustain. Yeah, I would say bottom-up dynamics would be really interesting to see in Decidim Barcelona.

Author

Then there was a very interesting point you made which makes sense. Would you then agree that? The dissident platform only represents the nature of the politics that are already in place in the city because you think about it.

Interviewee 1

Most.

Author

Yeah, so it's. That.

Interviewee 1

I mean, I mean, we have the, the citizen initiatives. I'm not sure how many like maybe 20 or 30 initiatives have been going on during all these years. So there are some changes that came from the bottom, but yeah, mostly it is these are the topics that we need to discuss and decide on and they are created by the by the City Council.

Author

Alright. And thank you so much for talking to me. I will. I will stop the recording now.

Interviewee 1

Thank you. OK.

C2: Interview 2 (Decide Madrid)

1. I was very impressed by the scale and ambition of Decide Madrid - it seems quite unique. What do you think has been the platform's most important innovation so far?

One of the most important innovations was the introduction of citizen proposals with binding thresholds. This allowed any resident to propose an idea, and if it reached enough support, it would proceed to a public vote. This mechanism gave citizens real decision-making power and demonstrated a new model of large-scale participatory democracy. Additionally, the use of open-source software has been key in ensuring transparency and adaptability.

2. How have tools added after the initial launch (e.g., Decide ML) helped manage large-scale participation? Have they changed the way citizens interact with the platform over time?

Tools like Decide ML, which used artificial intelligence to group and categorize proposals, helped manage the high volume of contributions, making navigation easier for both citizens and the administration. They made recurring concerns more visible and helped identify shared priorities. Over time, these tools encouraged greater interaction by making the platform more accessible and user-friendly.

3. Have you observed changes over time in who participates, especially among groups like young people or older adults? What do you think helped or hindered their participation?

Yes, we've noticed some changes. Initially, most participants were middle-aged and more digitally literate. Over time, outreach campaigns, digital literacy workshops, and mobile-friendly features helped attract younger users, while community support and in-person facilitation were key to engaging older adults. Still, the digital divide and institutional distrust remain barriers for some groups.

4. Have you received feedback about what made people feel included or excluded when using the platform?

Yes, feedback has shown that clear language, ease of use, and visible results are essential for inclusion. People felt excluded when the process was too technical or when they didn't see follow-up on their contributions. Inclusion improved when community facilitators were involved, deadlines were clearly communicated, and proposals were visibly taken into account.

5. What role do you think trust and transparency play in encouraging people to return and participate again?

Trust and transparency are fundamental. People are more likely to return when they see their input is taken seriously, when the process is transparent, and when decisions and limitations are clearly communicated. Publishing all data openly and ensuring that voting mechanisms are secure and auditable has been crucial in building trust.

6. How do you ensure that people who submit proposals or vote can see what happens with their input?

We do this by providing regular updates, visual tracking of progress, and public reports at each stage of a proposal. We also send personalized notifications to those who submitted or supported proposals. Transparent municipal responses, even in cases where proposals are rejected, are key to maintaining engagement.

7. With everything you've learned, what has been the biggest takeaway and what would you still like to improve?

The biggest takeaway is that meaningful participation requires much more than digital access — it needs trust, institutional responsiveness, and inclusion. What we still want to improve is the connection between online and in-person participation, ensuring underrepresented voices are heard, and making the platform even more intuitive and inclusive, especially for those with low digital literacy or accessibility needs.

C3: Interview 3 (Expert)

Host: Alright. Then once again, for formal purposes, you read the information sheet, and you agree to it right.

Interviewee 3: Yes.

Host: Okay, perfect.

Host: One of the things that became clear while reading just general information about Decidim Barcelona was, I think that's also something you described that transparency and accountability are the baseline expectations that citizens have for participation in the city today. Could you maybe reflect on when and how those expectations were formed? Was it only with the start of the platform? And is it surprising to you how quickly those norms then became something that citizens expected as the pure baseline of participation today.

Interviewee 3: Well, I would say that there were 2 important events in in Spain and in Barcelona in particular. In the last years one was the indignados movement that asked very explicitly to improve the quality of democracy in general, and very in particular, the quality of institutions.

And one of the main claims was participation in general. Not everybody understood the same thing about that. Some people thought about direct democracy, so more participate in budgeting or even remote hybrid voting, and this kind of stuff. Others thought more about transparency in between deliberation processes, etc. But in general there was a huge momentum on improving participation, improving engagement, and what comes behind, which is open data, transparency, accountability, etc.

And then, in many municipalities, there was what at that time was called the municipalities for change, or the mayors for change, which were actually some of the activists that had gone to the street or to the squares that won the elections, or at least, if they did not win the elections, they actually became mayors or entered the office.

That's absolutely the case of Barcelona with Major Arado Colau. And actually, she really tried to bring inside the institution the ways of working as an activist. So more horizontal, more network, with open data with transparency, with deliberation processes.

So, I would say that many people thought or asked for that kind of ethos or of way of doing things. I will not say that it work well for everyone, or that everyone really agreed on the way that it was put forward.

But in some way the ethos or the culture of participation, and especially of transparency stick. And it's it is still mainstream today. Some of these changes have been reverting back, and we have seen this far right and extreme right populism parties which are sort of a reaction to this. But in general terms, I don't think no one would go back to no transparency, no participation, no accountability. So yes, it is something that people wanted, people expected. And even if there are some criticism on the way that it was put forward of writing practice. I think that this change will stick. I don't know if forever, but for a long time.

Host: Okay, that's that feeds into another question that I had, and I guess you kind of answered it already. How regime proof the platform itself is because obviously, the implementation also depends on the government that is in in charge of the city, so what do you think? What features of Decidim Barcelona specifically are in place to ensure that political turnover does not change the core.

Interviewee 3: Yeah, I would say that the platform is quite robust or quite regime proof, but the initiatives are not. What does this mean? I don't think the platform is neutral. I actually don't think any kind of technology is neutral, but very specially the Decidim is tailored for transparency and for a lot of accountability. And this means that for each and every module, there's a direct democracy module, the legislation module, the community story, the commissions, module, the television processes, module, etc. For each module there's presets that are difficult to change, not to change, but to leave void. If there are some, if for each module do you have a schedule? And you have some responsible people that are behind you do have to fill that in, and if you don't that will appear as void on the outside, on the trans level. So what? Who are the members? What are the goals? What will be the reporting, the technological, the technical reporting, and the political reporting or feedback that you will be providing, etc. Yes, of course you can hide these, and you cannot, you don't have to fill it. But people will miss that.

Especially when you can compare with other initiatives in other towns or other municipalities, or at other levels of the administration, and see what they're doing with the with the tool. So in this sense it is not neutral. And in this sense, of course, you can tamper, and you can like, try to hide things or change the meaning of these of these sections of the platform. But it's really tough doing that because you can compare. On the other hand, of course, you cannot use the module of deliberation, democracy, and just use the one for participatory preparing of laws which is quite different. I mean, it's much more institutionalized. It's more vertical. It's more unidirectional.

And then you can use this one and not, for instance, the other one, or you can use the participative budgeting and not use the other ones. And yes, so you can do that. And so you can change the scope of the platform. But I would say that it does set a minimum threshold, that even if the more participatory washing government is using it, it's difficult to go below this threshold.

Host: Okay. Speaking of thresholds, I looked at Decidim Barcelona and Decide Madrid. And what both platforms have in common is the 1% threshold for proposals to reach initial proposals to reach the next stage and in Madrid. That seemed to be quite significant bar and not a lot of proposals pass that threshold. And the question I would ask you, if do you think there could be a trade-off in terms of the threshold and the percentage threshold for proposals that but all that still would give the outcomes legitimacy. Do you think there's some openness to move such a threshold? If you realize that not enough proposals are passing the line, which wasn't a problem for Decidim Barcelona, but on the Madrid side, especially.

Interviewee 3: But my approach to this is very personal. I mean I have not measured it, so take it with a big, big grain of salt. But I would say that when Madrid initiates their platform Consul they have more in mind, would not say direct democracy, but really I was about to say this: empowering institutions. Not that much, but at least gaining back some of the sovereignty that institutions had been led over the years.

In the year or 2 years that that passed between the initial design of Consul and the current design of the city, which you know 1st was an adaptation. Then it was a brand new coding. I would say that in Barcelona, maybe because Catalonia is a more participatory one and has a lot of tradition, I mean, for years or for decades, has a higher degree of participation and of social security organization. There was sort of the goal not to fully disempower this civil society organization and the institutions, not only public institutions, but most especially civil society, which again in Catalonia, unlike in Madrid, are very strong. So I would say that one, and for me it's a positive good balance that is established with the Decidim is that while providing voice to people that had no voice or that felt not represented, but civil society, organizations, labor unions, political parties. There were many people that were not felt, not represented by these ones, and they are now provided with a voice on their own, without having to reach a huge political masses that you're required to be a political party or a labor union.

Well, this is true, and people that had not this fellow represented could participate on their own directly. It also provides some leverage to the ones that have already been organized for ages, not to lose this power or not to lose this leverage on society, not to lose a voice that have been working for years.

And I would say that this is a sort of balance that it's. And again, this is a very personal opinion. It's achieved with higher success in the case of Barcelona than in Madrid. It's more, I would say, respectful with the tradition of organization, with the tradition of institutions, rather than what Madrid does, which is sort of breakup, and trying to regain all power for the citizen without taking into account that most of these citizens are already organized that it's not only public institutions, but they're all the institutions that are in the head of citizens.

Host: That is also something that I found while researching, that this definitely does a way better job, or actually does an active effort in including civil institutions or civil society actors, gives them a way to have a vote, and not only vote as an individual citizen. Which, yeah, was one of the findings that why dissident was more effective in narrowing gaps in participation.

Interviewee 3: If you allow me, I would say that, and this I will use the concept not very, with not a lot of rigor, but I would say that while Madrid wants to democratize power, Decidim wants to democratize in institutions and instruments decision making instruments, which is not exactly the same thing. Madrid wants to regain the direct power to make the decisions. And what the scene does is okay. Institutions have worked very well. We have some instruments that are working very well, but the problem is that they are not in everybody's hands. So let's try to have them in everybody's heads, not only the institutions, but on people. And that's why, in many, in many processes, not only in Barcelona, but at the Catalan level, too.

We see how civil organizations, academia, universities, even other from other countries. Counterparts, for instance, in development, corporation and individuals are using exactly the same tools for exactly the same purposes, but from a different point of view, or a different leverage of power. Sorry for the interruption.

Host: No worries, no worries. It actually brings me to another point. Because, yeah, as you said, Decidim tries to put the the democracy in the hands of people. But what one part of that is also the I think it's believed it's called Meta Decidim right and the open source and using github which very clearly puts power or in the hands of more people that weren't involved in such processes beforehand, if it was strictly institutionalized by traditional governance processes. But, on the other hand, you could, of course, as an average citizen that is not involved in such a technocratic space could say, it's a sort of democracy by the technocrats. You could call it like that, how would you assess that?

Interviewee 3: I think that method, of Decidim, and empowering, or creating or fostering the creation of the association, the city, so not the platform, but the association behind it, it's a very bold, bold, very, very bold movement. It's in that case it's resigning from keeping power on the tool and the governance of the tool. It's all of the power is shifted to civil society. It gives money, I would say, for free, I mean. It's not binding money; it's not in a change on services. It just gives money. This was done by the city council of Barcelona and the Catalan government.

It was really a tough, tough thing to do to subsidize an organization, a civil society organization without anything, any change that goes and really toured the force with the legal advisors in both administrations to say, we're giving this active for free, which is the code we're giving them money, but we're not monitoring it, because none of these 2 administration are part of the of the organization. Sorry of the association. They cannot be because it they are not physical persons, but legal persons. So I think that this movement was very, very bold, giving away the code, giving some money away and giving completely away the governance of the code and of the of the development of the code and the governance that it mostly unseen, I would say in Spain, of course, and I would say that in all Europe, especially in the southern part of Europe, where you have this more Napoleonic point of view, maybe in Anglo-saxon bodies it's more useful to do these things, but not in a Napoleonic or a Weberian point of view. So this is very, very bold, and I think that this is one of the successes of Decidim versus Consul is the community that it creates. It's much more transparent. It's really horizontal. There is no way that you can influence, not even influence the development of the tool. Of course you cannot tamper in it. I think this is a most significant way of doing things, and this is a very, very different one.

Host: Just from my understanding, because I was not aware of the monetary aspect that there is monetary support by the Barcelona and but also Catalonia governments. how does it work? How is the money distributed, how does it reach the individuals.

Interviewee 3: Well, it's a grant that is given to the to the Association and, unlike other grants where you say I need money to pay my rent, so I give you a grant. So you have to accomplish some issues or some conditions, what these 2 administrations acknowledge is that this infrastructure is critical, for the country in the case of Barcelona is for the city in the case of Catalonia is for the country. They acknowledge it's a public good that needs to be subsidized, just like culture or health or other things that these guys are doing it very well, and we will give them money for free just to maintain this thing that has been acknowledged, that it's a good thing. So it's not any change. It's not under any kind of conditions. It's not because they are doing something, especially, etcetera. It's not any change of services. Sometimes you give grants, or you have some agreements with some 3rd sector organizations to provide for some services just like childcare. For instance, in this case it's these guys are doing something good for the country. It's worth supporting them in a change of nothing, and with no monitoring, etc. Just there the idea that they exist, and they produce this thing. It's enough for us. As I said, this is very exceptional in the administration. It really needs a lot of consensus and lot of legal advice to be put in line, but it's a way that it was done at first the capital government or the municipality acknowledges that it is a public good that needs to be supported, no matter what. And it's the money is given for free in a change of nothing.

Host: If you know any insight that the money goes to the association, the association decides how it will be split if it, i guess events, maybe, or it goes directly into to individuals.

Interviewee 3: It's mostly coding. So I mean, all the all the people working, no, most of the people at the organization are volunteers. The President, all the members of the board, etcetera. Most of them are volunteers. I think they only pay 1 2 people to manage the organization, and this money, and most of the money goes to develop the core and for the de-bugging. So this is their priority to maintain a code that it's clean, that it's update with the changes of technology of Php on troubleshoot. So what they do is they hire all the coders of the firms, and they pay them, and they and they develop the code. So there's, I would say, 1, 2 people working more or less full time or part time for the organization, and most of their work is to manage all the tickets, the pull request, etc, manage the repository in GitHub, and of course, contract the services from other developers. But there is not such thing as a big staff, because most people are volunteers. So it's not that you distribute money is that you just pay your contracts and your bills.

Host: Okay and while we talked a few minutes ago about regime proof, I'm assuming that those grants that are given from the Catalonia Government or for the Barcelona Government. Those are then probably ones that are not as regime proof, right? When you said there's a lot of legal advice that went into it. That's something that's volatile.

Interviewee 3: Of course this not averaging proof depends on the Government at a given time to think that this is worth supporting or not. You might think that it's better was supporting an organization that works for Catalan language, or that works for another thing. Yeah, this one, I mean providing money for a civil organization, of course, is not bulletproof.

Host: Okay, you tell me if that's an area you have expertise, or you have also insights. My original scope of the thesis was to focus on very new technologies, such as AI. While I was looking at governance, collaborative governance projects all over the world. I realized there's not a lot of them that actually effectively use AI that goes above a chatbot in the corner of the screen while still being collaborative and giving power to the citizen and not only be consulting.

Madrid does implement some level of algorithmic classification of proposals. They're working on it. I heard from my interview that that is something that Decidim also is obviously considering.

What do you think could be helpful algorithmic/AI influence on the on the platform while not just giving power to this black box?

Interviewee 3: Well that there are at least 3 aspects that are worth considering using AI. The 1 and 2 are similar, but the users are different, which is for summing up all the contributions and different means. One is for the manager of the platform or the project. The other one is for the end user. So the uses I would say it's more or less the same. But of course it's a little bit different that the procedure and how to apply it. If I am a new user and I jump into a process that has already 1,000 contributions that is definitely stopping me from contributing. I mean, I do have to read 1,000 contributions, and most especially I might be repeating a debate that has already been taking place, I would not say close, but that has already been taking place. So 1st consideration is that one, if I jump into a conversation that has been going on, for I don't know days or months, or whatever how can I jump in and make myself an idea of what is going on and where I can make some contributions? So, AI could help me by summarizing and saying, "Well, these three topics are more or less open for debate. The other ones, here is a summary, but do not enter into them because they are already in agreement. But in these three topics, you really could enter and have a debate."

The second thing is more or less the same, but for the manager it's not exactly the same. Because you can help to recognize the different voices. I mean, even in deliberative democracy, it's not just about how many people are saying one thing, but what are the many things that have been said. So first, acknowledge or try to identify the different profiles or ideas or approaches, the naming and the framing, etc. Second, try to see where there are some clusters or some big factors that you can gather and say: out of these 1,000 contributions, there are actually three big topics. Yes, you might think there are 30 ideas, but the topics are more or less around three big things. So the idea of summarizing, identifying the profiles, and seeing where the critical masses are, or what the big topics are, that is something that would help.

The third thing, which I think might be the most interesting one, but we are a little bit far from it, just a little bit, depends sometimes on money, on interest. The city can be federated, so you can have different instances independent from one another, but you can federate the outputs. That is something

that was developed by the Catalan government because they needed federation at the Catalan level for 1,000 municipalities. So there was a module that helped to share content between the different instances of the city, with the idea that if I am Ismael and I live outside of Barcelona, which is where I live, but I work in Barcelona and I'm interested in biking, I might be interested in some debate on biking in the northern part of the country, even if I never go there because it's 300 kilometers away.

But I might be interested in joining that debate. I might be interested in joining a debate in Barcelona, because it's where I work and I spend most of my time there, even if I don't live there. Maybe I could not be voting there because I am not registered in that municipality, but the system acknowledges or recognizes that I am registered in Barcelona, which is the nearest city, and I can be there.

Artificial intelligence could help a lot in this. We are now used to calling it the Facebook of Participation, which is increasingly a bad concept, but you get the meaning, the idea that, as much as I contribute and as much as others contribute, this AI could help identify what is of interest to me and propose different things. So every morning I log in to the website, the Catalan one, which is the federation, and it says look, in your municipality this is happening. In your topic, this is happening. In your area of interest or your geographical area of influence, this is what is happening. We invite you to join.

I think that is a very interesting one, which is, I would say, more human, transparent, and more human-centered, not policy-centered, not administration-centered, but: Ismael, these are your interests. Just join and spend some time with us. I think we're far from it, because the federation is not actually very much working. It takes a lot of time. It means that someone has to take care of the federated content. But sometimes I would say the technology is already there, it's just a matter of someone thinking this is relevant.

So I think that these three things, helping people make a meaningful contribution, helping managers to find the meaningful contribution, and making it more transparent and more human-centered, are the three options that have been considered in the last years.

Host: Okay, that is very insightful. One point is, when you talk about AI, especially the potential dangers. You were very clear about the different purposes it could serve, but do you also think, in those discussions, that there's a risk that these features may be helpful to a degree, but could also be dangerous? How do you create guardrails for those dangers? For example, you talked about AI summaries that tell you which part of the discussion you can join and which part is already agreed on. But who decides what is agreed on? Maybe you lose input because somebody assumes their point was already made, but it wasn't.

Interviewee 3: I think the two big risks in the three aspects that I mentioned are quite identified. One is the difference between just summarizing what is going on in a given dataset, let's call it that, versus enriching it with other datasets. In the case of ChatGPT, it's: do you go to the internet or not? Do you stick to the documents I sent you, or do you go outside and try to enrich things?

I think that when you just limit the scope of the AI to a dataset, and only to that dataset, and do not enrich it, risks are, I won't say zero, but really, really lower down.

So one configuration, if we wanted to detect what is going on, what people have debated, etc., is: do not try to make it fancy, do not try to make it explainable. Just summarize what has been said here, and please do not go outside and look for other sources. This would reduce enormously the risk of hallucinations and of stating things that have not been stated.

The other one is about providing advice or conclusions, that is judgment. Again, we know that summarizing is pretty well done by AI today, but it's in judgment and constructing knowledge where AI hallucinates and begins to say things that nobody said, especially when there are values and ethics behind them.

So again, if we stick to just summarizing the pros and cons and the differences that may have been found, that is okay. If you ask, "What would be your advice?" or "What do you think is more supported or coherent?" that's a value, that's a judgment, and I would very much refrain from that.

So if we stick to the data, the text that has only been uploaded to the website, and we just summarize, without making any kind of judgment, I think the risks are very, very low.

The problem is that normally we want AI to do much more, and we don't want to spend that much time with the data. Then we ask, "And what would you do?" I would say that if we set aside recommendations and values, risks are not zero, but they are quite low.

Host: Okay. If I understood correctly, you could say the purpose of AI, if it's used for summarizing and for combining data, would be to create some sort of coherence. That's something I argued in my thesis, that Decidim Barcelona's nature of having a wide-open input phase fosters participation, but maybe at the risk of coherence. On the other side, in Madrid, the way it's constructed is way more streamlined and direct, but that also excludes more marginalized voices and has other issues by being so forced and streamlined. Do you think these two aspects are an inevitable trade-off? That you have to lose some coherence if you want wider participation, and vice versa, with Decide Madrid, where you try to streamline it more to have coherence, but lose the ability to hear a wider array of voices? Do you think that's inevitable, or is there a design solution?

Interviewee 3: I don't think there's a trade-off. I'd rather think of it as a toolbox, a plural toolbox. If you want diagnosis, you foster deliberation, you foster different profiles, and you foster listening to many voices, however incoherent or unstructured they are. Because what you want is diagnosis. What is the problem with housing? Well, we do not know. Actually, there are like 1,000 problems behind housing, there's migration, there's poverty, there's lack of work, etc. Lots of things.

So if you want to know what's going on with housing in Barcelona, then it's one tool. If you want to make a decision, that is something very different. Then you want people representing the critical mass. And maybe it's not even participation. Initially, you need, I don't know, a federation of neighborhoods or labor unions, which are enabled by law in Spain to represent workers.

So I don't think it's one or the other. It really depends on what you want. Again, if you are in one end of the policy cycle and it's about diagnosing what's going on, the more unstructured and broad the input, the better. If you actually want to decide whether you want to go to Iran and bomb them, maybe it's not even participatory, you have to go to the Congress and vote with the elected representatives.

So I don't think it's a trade-off. I think it's different tools that you should know how to use and tailor to the most appropriate use.

Host: All right. Thank you. I think we touched on everything I prepared. Thank you very much. I'm going to stop the recording now.