From Digital Divide to Democratic Dividend

Policy Synthesis #4

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1 Policy synthesis # 4

From digital divide to democratic dividend

1.1 Context: the complex reality of digital democracy

Since the rise of the internet in the 1990s, the concept of digital democracy has been heralded as a powerful antidote to declining political trust and citizen apathy. Digital tools and E-participation — from e-governance and e-consultation to social media activism — offer the potential to overcome geographical barriers, increase the speed and scale of information dissemination, and engage voices previously unheard in traditional political arenas, thereby deepening the role of citizens in policymaking [1].

However, the reality of digital participation has proven far more complex. Digital tools are not neutral; they are shaped by underlying social and economic inequalities. The "digital divide" is not merely about access to technology but also about the skills, confidence, and literacy required to use it effectively. Research shows that online participants are often systematically more privileged than the general population, thereby risking the reinforcement of existing power imbalances [2]. Furthermore, the very design of many platforms can foster polarization rather than consensus, transforming the public sphere into a battleground of trolls and disinformation, rather than a forum for reasoned debate.

1.1.1 Scope: building a trustworthy digital public sphere

This policy synthesis addresses how to harness digitalisation for democracy while mitigating its significant risks. It views digital participation not as a distinct category of democratic innovation, but as a cross-cutting set of tools that can enhance democratic processes.

Accordingly, this document diagnoses these structural barriers and provides recommendations to build a digital infrastructure that is fundamentally equitable, deliberative, and trustworthy. While this brief touches upon the risks of online conflict, the specific and complex challenge of political polarization will be explored in greater depth in a complementary policy synthesis dedicated to this topic

1.2 The landscape: a "digital wave" of experimentation

The last two decades have seen a surge in the use of digital tools for democratic purposes. This landscape is diverse, ranging from institutional platforms to grassroots activism.

- **Institutional adoption:** Governments and public bodies have increasingly integrated digital tools into their formal processes. The European Commission's "Have Your Say" portal, online public consultations at the Member State level, and the use of participatory platforms for municipal budgeting (e.g., Helsinki's OmaStadi) are prime examples. These efforts aim to make governance more transparent and responsive.
- **Specialized and AI-powered civic tech:** A dedicated field of "civic tech" has emerged, producing specialized open-source tools designed for democratic engagement. Platforms like Decidim, born out of Spain's 15M movement, are built on principles of transparency and co-creation. In contrast, other tools, such as the wiki-survey platform Polis, are explicitly engineered to find consensus among large groups [1, 3]. More broadly, artificial intelligence is now a key driver in the new generation of civic tech, primarily for its ability to help governments analyze and make sense of large amounts of citizen input. Artificial intelligence has revolutionized the analysis of large-scale citizen feedback. Using Natural Language Processing (NLP), AI systems help public authorities understand massive qualitative datasets from consultations [4]. As research from the INCITE-DEM [5] project confirms, these computational methodologies have matured, efficiently revealing insights that would be practically impossible to achieve through manual analysis. These tools can **cluster opinions, summarize trends, and navigate public sentiment**, dramatically increasing efficiency for public officials. Furthermore, generative AI is now making deliberative processes more accessible.

Figure 4. Term network of interview quotes from the case study "Evoluir Oeiras"
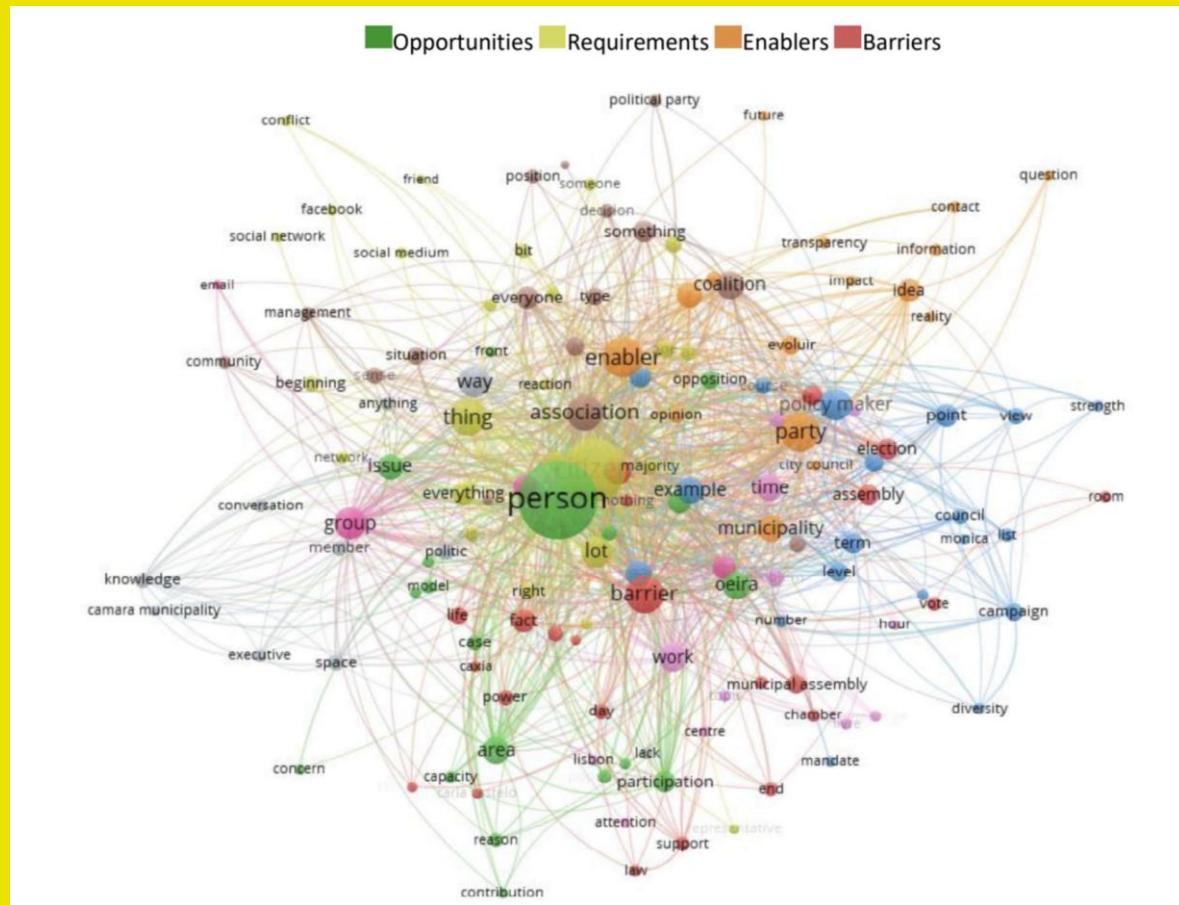
Figure 4. This image is a **term network visualization** that maps the most important concepts and their relationships from interviews conducted in the Incite Dem project about the "Evoluir Oeiras" citizen movement. It's a visual representation of how AI and Natural Language Processing can analyze qualitative data to find meaningful patterns. In essence, this visualization provides a high-level map of the discourse surrounding the "Evoluir Oeiras" movement. It confirms the project's findings that modern computational tools can efficiently analyze large volumes of text to reveal key insights [**5**].

- A new generation of **emerging deliberative technologies** uses social simulation to improve citizen deliberation. Tools like the Incite-dem **Dialogue Tool** [**6**]**,** based on Agent-Based Modelling (ABM), allow citizens to move beyond simply stating opinions to actively exploring the consequences of different policy choices. By creating a common framework that allows various stakeholders to see how individual actions contribute to collective outcomes, these tools help bridge critical gaps in understanding. Using a visual interface to model complex issues, such as a new windmill park, participants can run "what-if" scenarios—testing interventions like subsidies to assess their potential impact on community support and social polarization. This fosters a more informed and reflective approach to collective decision-making, reducing the risk of unintended consequences.

Policy Synthesis and Fact Sheets

- **Hybrid models:** Experience shows that digital participation is most effective not as a replacement for, but as a complement to, traditional engagement. Hybrid models that blend online and offline interactions are becoming a best practice. During the development of Barcelona's Municipal Action Plan, an impressive **87% of proposals from a hybrid process were implemented**, compared to just 42% from a digital-only process [**3**]. This demonstrates that combining the scale of digital with the depth of face-to-face interaction yields more impactful results.

Despite this proliferation of tools and experiments, the ecosystem remains fragmented and faces significant systemic challenges that limit its transformative potential.

1.3 The diagnosis: the unfulfilled promise of e-participation

The promise of inclusive e-participation is shadowed by a series of interconnected barriers that prevent technology from being a panacea for democratic deficits. Without a deliberate strategy to overcome them, digital tools can inadvertently do more harm than good.

The persistent digital divide and systemic exclusion

The most significant barrier is the digital divide. This gap extends beyond simple access to devices and internet connectivity to include digital literacy, skills, and confidence.

- **Socioeconomic bias:** Research consistently finds a continuing digital divide along socioeconomic lines. Social factors, such as class, age, ethnicity, and educational level, significantly influence how people utilize the internet for civic purposes [**2**]. This gap is not simply about access, but about the skills, confidence, and resources needed to engage in complex online political discussions [**7**].

Figure 5: Average value of the DESI index between 2017-2022 in Europe
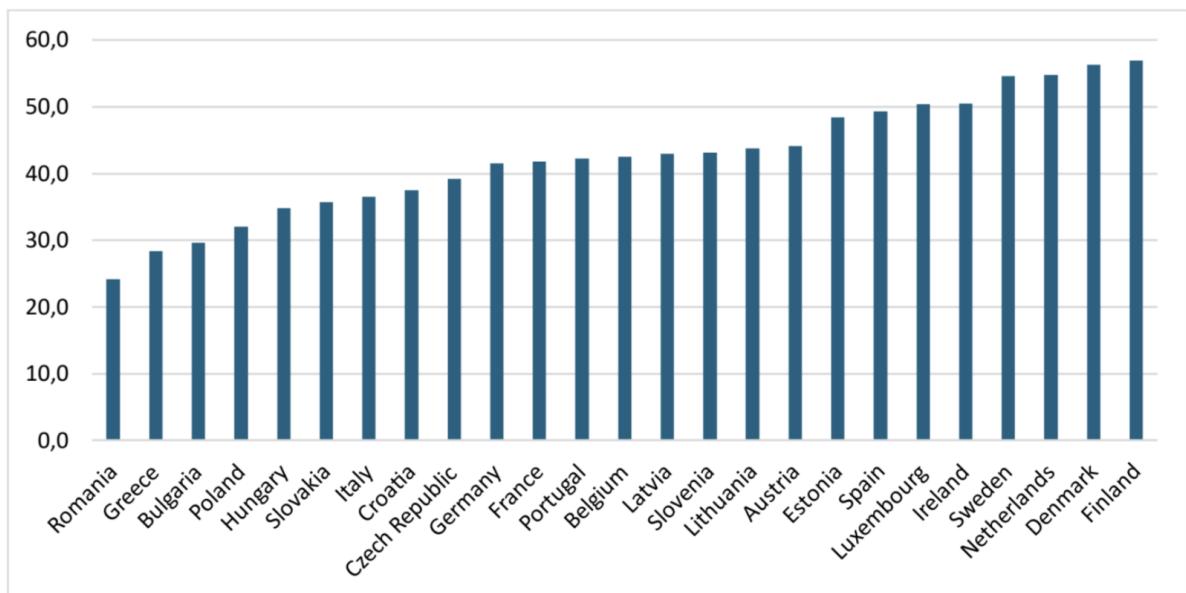
Figure 5: This bar chart, generated by Incite Dem authors [8] using the data from the European Commission's Digital Economy and Society Index (DESI) [9] , displays scores for the years 2017 to 2022, highlighting a significant digital performance gap across the EU. Nations in Southern and Eastern Europe, such as Romania and Greece, rank lowest, reflecting challenges in digital skills and online public services. In contrast, countries like Finland and Denmark score highest, demonstrating their advanced integration of digital technology.

In **Catalonia**, organizers revealed a diversity problem in the shift to online tools like Decidim for cooperative assemblies, and they acknowledged that even with digital access, participation was unequal, with a typical participant being **"male, older, and middle-aged, often with an engineering background."** They also recognized a critical shortcoming in their failure to involve **"young people, migrants and people of colour."**[1] This reflects similar challenges faced by grassroots movements, such as Croatia's **"We Can!,"** which noted that its strong online communication efforts had limited reach among older demographic groups [**10**].

- **Design-driven exclusion:** Exclusion is often built directly into the architecture of digital tools themselves. Many platforms are designed with a specific type of user or governance structure in mind, reflecting the assumptions of their creators. When a community's needs or culture do not match this built-in design, the tool becomes a barrier rather than a bridge, creating a frustrating experience that discourages engagement.

The **Decidim platform**, designed with a " very institutional approach" for the Barcelona Municipality, was difficult for more horizontal cooperatives to adapt. An organizer noted they had to "'hack the way the platform works a little bit'" to meet their legal needs. This difficulty caused a loss of autonomy, requiring them to "'call coders to help all the time'[2]" and ultimately led one cooperative to abandon the platform for simpler tools [**10**].

The crisis of trust, security, and privacy

For citizens to engage, they must trust the platforms they are using. This trust is fragile and easily undermined.

- **Data, security, and privacy concerns:** The adoption of digital tools introduces valid citizen concerns about data privacy and the security of the deliberative process. Opaque technologies can decrease public confidence, and when used in democratic spaces, this can damage trust in the outcomes. Deliberative processes can be vulnerable to new forms of undue influence; for example, AI-generated content can be used to pollute online debates

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[1] Quotes from interviewees in the INCITE-DEM project's case study on "Catalonia's cooperatives' digital experiments"

[2] Quotes from interviewees in the INCITE-DEM project's case study on "Catalonia's cooperatives' digital experiments"

Policy Synthesis and Fact Sheets

("astroturfing"), amplifying specific interests and distorting policymakers' understanding of citizens' actual preferences [**4**].

- **'Democracy washing':** There is a pervasive fear that e-participation can be a "democracy washing" tool—a superficial exercise to legitimize pre-made decisions without giving citizens real influence. The impersonal and often opaque nature of digital tools can fuel this mistrust. When citizens submit their feedback to a platform, they usually have no clear view of how it is processed or valued, leading to the sense that their engagement is a mere box-ticking exercise.
- **The risk of algorithmic authority**: While AI presents opportunities to make participation more efficient, it also introduces the risk of creating a dependency on automated decisions. Over-reliance on AI to make choices can undermine the deliberative process, obscure accountability, and reduce citizen agency [**4**]. The role of AI should be to enhance human deliberation, not replace it. AI is best used as a tool to compile, structure, synthesize, and improve the vast amounts of information generated in participatory processes, making it more manageable for human participants to analyze and discuss. The final decision-making power must remain firmly in human hands.

In envisioning **future democratic practices**, citizens see a clear, supportive role for artificial intelligence. One participant in an Incite-Dem Democracy-Lab imagined a process where "The topics are recorded by an AI and immediately clustered, sorted, and cross-checked. This allows the status of decisions to be presented on the spot."[3] This view frames AI not as a decider, but as a powerful assistant that enhances transparency and efficiency, enabling human participants to make more informed choices [**11**].

Degradation of online deliberation

The digital public sphere is not inherently deliberative. The architecture of many digital platforms, particularly social media, is designed for engagement and virality, rather than reasoned consensus-building. This design can actively undermine the quality of democratic discourse.

- **Echo chambers and polarization:** Social media algorithms designed to maximize engagement often create "echo chambers" where users are exposed only to reinforcing viewpoints, where interacting primarily with people who hold similar views intensifies one's own beliefs and enhances polarization, leading to more extreme opinions. This dynamic may compromise deliberative processes by making it more difficult to find common ground [**4**].
- **Low-quality discussion:** Beyond polarization, unstructured online discussions often result in lower-quality deliberation compared to facilitated face-to-face communication. Online moderation is exceptionally challenging, and achieving constructive debate requires significant investment in skilled human facilitators and platform designs that reward consensus-building over conflict [**3**].

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[3] Quote from a participant in a Democracy Lab organised by the INCITE-DEM project.

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The **Spanish Citizen Climate Assembly** was conducted primarily online, utilizing digital tools such as Zoom and Decidim. However, the participants themselves identified the limitations of a digital-only format for crucial tasks. They decided that an additional, in-person session in Madrid was necessary because they "needed more time to deliberate". One participant noted that in online sessions, "you felt like you had a stopwatch next to you," which inhibited free expression. The experience of the final face-to-face session—"seeing each other's faces, having more time to argue"—and conducting the final vote with physical ballots was seen as essential to "guarantee the transparency of the process" and ultimately "increased the overall level of satisfaction"[4]. This demonstrates a clear demand from participants for hybrid models to ensure high-quality deliberation and trust [**10**].

Resource and capacity deficits

The civic tech ecosystem struggles with persistent resource challenges, which can hinder its development and sustainability:

- **Unsustainable funding:** Open-source tools are notoriously difficult to fund and maintain. Funding often comes from experimental grants that encourage the creation of new tools rather than the refinement and consolidation of existing ones. This results in a fragmented landscape of promising but under-supported projects.
- **Lack of human capacity:** Technology is not self-executing. Effective digital engagement requires dedicated and skilled human resources, including facilitators, community managers, and technical support staff. As the cooperatives interviewed in the Incite Dem project[**9**] noted, the real asset for participation is the allocation of expert facilitators; without them, the technology's potential remains "largely untapped."[5]

1.4 Recommendations: building an inclusive digital democratic infrastructure

To transition from a fragmented and inequitable landscape to a coherent and inclusive digital democracy, a systemic, human-centered approach is necessary.

1.4.1 Prioritize digital inclusion as a foundational right

Digital access and literacy must be treated as essential public utilities, necessary for full participation in 21st-century society. Public authorities must fund ambitious programs to provide affordable internet access, devices, and digital literacy training, targeting marginalized and

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[4] Quotes from interviewees in the INCITE-DEM project's case study on the "Spanish Citizen Climate Assembly".

[5] Quotes from interviewees in the INCITE-DEM project's case study on "Catalonia's cooperatives' digital experiments"

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vulnerable communities. To ensure tools respond to a diverse range of needs, development teams must be diverse themselves, recruiting and testing with users from different backgrounds to build more inclusive technology from the ground up.

A design fiction proposal from the Democracy Labs **– The "GovGuide"**[6]

This official, AI-powered chatbot would be launched to simplify democratic life for every citizen. The "GovGuide" helps users navigate bureaucracy, understand their rights during major life events, and comprehend complex policies and election promises in plain language. By integrating with common communication tools and speaking multiple languages, it would serve as a universal entry point, transforming digital access from a complex challenge into a supported and understandable right for all.

1.4.2 Design human-centered and hybrid engagement models

Technology must serve human needs, not the other way around. This means prioritizing usability and integrating digital tools into blended engagement strategies, **with a strong emphasis on user-centered design and accessibility**. For major policy initiatives, a hybrid engagement model that combines the broad reach of online tools with the deliberative depth of in-person meetings should be the default..

A design fiction proposal from the Democracy Labs **– The "Municipal Digiboard"**[7]

This model envisions an open online platform for local democracy, accessible on both public smart surfaces and personal devices. Through the "Municipal Digiboard," residents can share ideas, report issues, vote on projects, and collaborate directly with officials. AI supports the process by analyzing data to help prioritize community needs. The system would be integrated with physical neighborhood centers, ensuring a truly hybrid model where all residents can participate, regardless of digital access.

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[6] The 'GovGuide' is a Design Fiction Product, a specific methodological output that uses narrative and speculative artifacts to contextualize and explore the potential of democratic innovations co-created during the project's Democracy Labs (DLabs), where diverse participants—including citizens, policymakers, and technical experts—collaborated to develop 'imaginaries' for democratic futures and then worked to translate those ideas into tangible, story-driven proposals.

[7] The 'Municipal Digiboard' is a Design Fiction Product, a specific methodological output that uses narrative and speculative artifacts to contextualize and explore the potential of democratic innovations co-created during the project's Democracy Labs (DLabs), where diverse participants—including citizens, policymakers, and technical experts—collaborated to develop 'imaginaries' for democratic futures and then worked to translate those ideas into tangible, story-driven proposals.

1.4.3   Foster a healthy and deliberative online public sphere

The quality of online deliberation can be improved through intentional design and active facilitation. This includes supporting tools designed for consensus rather than conflict and investing in high-quality online moderation as a core public service skill. A healthy public sphere is also one where participation is valued. By creating systems that recognize and reward civic engagement, participation can be transformed from an occasional duty into a sustained and positive cultural norm.

A design fiction proposal from the Democracy Labs**– The "Civic Wallet"[8]**

This proposal reimagines participation as a rewarded contribution, not just a duty. The "Civic Wallet" is a state-supported digital platform where citizens earn tokens for both formal democratic actions (like voting) and informal community engagement (like volunteering). These tokens could then be redeemed for tangible benefits such as a paid day off, public transport credits, or other services. This system fosters a vibrant civic culture by formally acknowledging the value of citizens' time and effort.

1.4.4   Build a sustainable and trustworthy civic tech ecosystem

A thriving digital democracy requires a stable, well-funded, and collaborative ecosystem of tools and practitioners. This involves shifting from short-term grants to long-term funding for the maintenance and improvement of open-source "digital commons." Fostering communities of civic technologists and public-community partnerships is essential for ensuring that technology remains secure, transparent, and aligned with democratic values, rather than corporate interests.

Furthermore, it is crucial to adopt a portfolio approach when designing and funding digital strategies. Analysis from the INCITE-DEM project [**5**] shows that there is no single "recipe" for achieving positive outcomes, such as social learning between citizens and policymakers. This demonstrates that the civic tech ecosystem must be flexible, supporting a variety of models rather than searching for a single best practice.

A co-created proposal from the Democracy Labs **– The "Participation Navigation App" [9]**

This is a vision for an interconnected, AI-supported digital platform that makes global and local democracy a seamless reality. The app ensures accessibility through a universal digital identity and

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[8] The Civic Wallet is a Design Fiction Product, a specific methodological output that uses narrative and speculative artifacts to contextualize and explore the potential of democratic innovations co-created during the project's Democracy Labs (DLabs), where diverse participants—including citizens, policymakers, and technical experts—collaborated to develop 'imaginaries' for democratic futures and then worked to translate those ideas into tangible, story-driven proposals.

[9] This is a direct policy proposal that emerged from discussions within the INCITE-DEM Democracy Labs (DLabs). It reflects a consensus among participants—citizens, civil society members, and public officials—on a practical, immediate solution needed to strengthen local democratic infrastructure and address barriers to participation.

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provides AI-guided summaries of complex proposals in easy-to-read language. It focuses on radical transparency, allowing citizens to see exactly how their input fits into the larger puzzle and what the final majority-backed suggestion is. This makes participation simple, effective, and builds trust through a fully traceable process.

1.5 Conclusions

Digitalisation offers a profound opportunity to reinvigorate democracy, making it more participatory, responsive, and legitimate. However, technology is not a panacea. If deployed without careful consideration for inclusivity, usability, and the quality of deliberation, it risks amplifying existing inequalities and eroding public trust. The path forward is not to abandon digital tools but to embrace them with a human-centered and democratic-by-design approach.

By treating digital inclusion as a fundamental right, mandating hybrid engagement models, intentionally designing for healthy deliberation, and investing in a sustainable civic tech ecosystem, we can begin to build a coherent, equitable, and resilient digital infrastructure that supports the democratic challenges and opportunities of the 21st century.

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