

23–24 September 2025 Paderborn, GERMANY

LIVING LAB #2

Envisioning Digital Democracy Based on Research & Best Practices



FINAL REPORT

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1. Methodology

1.1 Objectives

The second Living Lab was designed to collaboratively envision pathways towards an optimum digital democracy, combining insights from research, expert inputs, and practical co-creation activities. Building on Deliverable D2.1 (Interdisciplinary Knowledge Base on Digital Democracy, KER 1), the Lab aimed to:

- Test and refine conceptual categories of digital democracy through participatory exercises.
- Capture barriers, challenges, and risks identified by diverse stakeholders.
- Translate abstract ideals into practical policy recommendations.
- Generate material to inform future project work packages (notably WP3 and WP4).

1.2 Structure and Agenda

The Living Lab unfolded over two days (23–24 September 2025) in Paderborn, Germany, and combined plenary sessions, expert panels, and interactive workshops.

Day 1 – Focused view

- **Panel 1:** Presentation of selected findings from D2.1, followed by external speakers' interventions and plenary Q&A.
- **Workshop 1 (WS1):** Mindmap exercises defining ideal aspects of digital democracy (a. Online Participation, b. Open Governance, c. Digital Activism).
- **Panel 2:** Expert reflections and case-based presentations.
- **Workshop 2 (WS2):** Mapping core challenges to digital democracy (a. Disinformation/FIMI, b. Authoritarianism, c. Big Tech Monopolies).

Day 2 – Global View

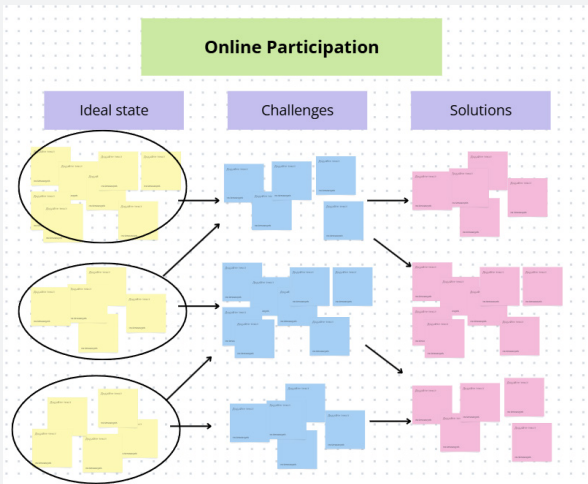
- **Recap & Synthesis:** Review of Day 1 results and cross-cutting insights.
- **Workshop 3 (WS3):** Drafting policy recommendations.
- **Digital Democracy Grading Toolkit:** Presentation and Design Feedback.
- **Closing Session:** Connection to Work Package 3 start-up meeting; alignment of outputs with future deliverables.

1.3 Techniques and Tools

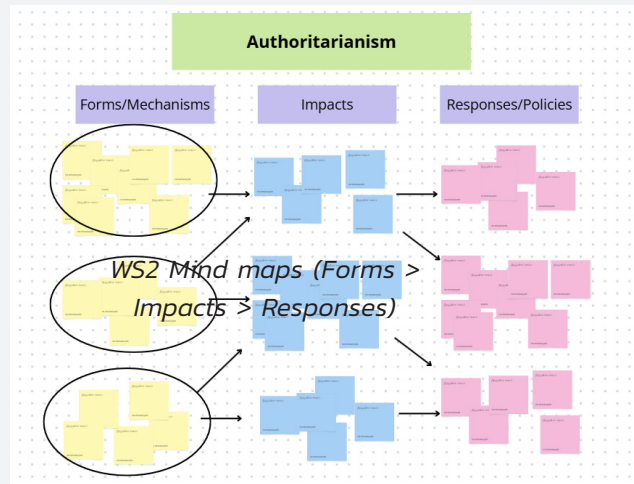
The Lab methodology combined structured expert input with co-creative participatory methods.

- **Mind Maps:** Used to visualise ideal states of digital democracy, with colour-coded annotations (ideals, challenges, solutions). Empty templates were distributed at the start of WS1.
- **Futures Wheel:** Applied to test potential direct and indirect impacts of identified democratic features. Each group received blank wheels to populate.
- **Posters:** One poster per digital democracy dimension was created, displayed in the plenary area, and later collected for documentation (see **Appendix B**).
- **Policy Translation Checklist:** In WS3, participants used a structured template adapted from the European Commission's 2025 Guide for Policy Briefs.

WS1 Mind maps (Ideal > Challenges > Solutions)



WS2 Mind maps (Forms > Impacts > Responses)



WS3 Futures Wheel (Ideals > Challenges > Policies)



Workshop techniques and tools

1.4 Participants

Living Lab 2 gathered a diverse group of participants, anonymised by affiliation rather than name, representing research, practice, governance, civil society, consultancy, and media.

- ➔ **Academic and research institutions:** KU Leuven (Belgium), Paderborn University, DFKI, Karlsruhe Institute of Technology (Germany), University of Westminster (UK).
- ➔ **Civil society organisation:** Fundación Cibervoluntarios (Spain), Januam (Germany)
- ➔ **Public:** Stad Geel (Belgium), Polish Ministry of Digital Affairs (not as a formal representative)
- ➔ **Media:** Austrian Broadcasting Corporation (ORF).
- ➔ **Think tank:** Beyond the Horizon, Centre for European Policy Studies (Belgium).
- ➔ **Consultancy and technical partners:** Hybrid Core (Belgium), Trust-IT Services, ICT Legal Consulting (Italy).

This composition ensured that both institutional expertise and citizen-oriented perspectives were represented in the discussions.

1.5 External Speakers

The Lab also featured expert interventions that framed and challenged the workshops. For reasons of consistency and anonymisation, names are not repeated here. In line with the methodology, each intervention was later analysed in relation to the workshop topics:

- ➔ **Panel 1:** Expert speakers provided input on the themes covered in WS1 (Online Participation, Open Governance, Digital Activism).
- ➔ **Panel 2:** Expert speakers provided input on broader structural challenges, which were connected to the themes of WS2.

1.6 Facilitation & Documentation

- ➔ Each workshop station was assigned a fixed facilitator to ensure continuity, guide rotations, and consolidate outcomes.
- ➔ Documentation included real-time notetaking, collection of posters, photographs of group outputs, and anonymised feedback forms.
- ➔ Selected pictures (e.g., posters, futures wheels, plenary discussions) are inserted under each workshop section.

2. Findings

2.1 Aspects of Digital Democracy

Panel Overview

This panel session introduced the Living Lab's analytical framework, grounded in the project's Interdisciplinary Knowledge Base on Digital Democracy. Experts presented the three core dimensions of digital democracy—**online participation, open governance, and digital activism**—by sharing key data, findings, and foundational recommendations. This overview provided all participants with a shared foundation of knowledge, which was then used directly in the following workshops.

3



INNOVAD
Innovative Democracy Through Digitalisation

Online Participation

Authors: Kevin Friesch, Christian Fuchs, Joel Museba (Paderborn University, Germany)

Introduction

This chapter examines how digital technologies are reshaping citizen participation in democratic life. It defines online participation (e-participation) as the use of digital tools to support and extend participatory democracy, enabling people to engage in political and social decision-making beyond traditional settings. Rather than replacing established forms of participation, these digital practices aim to complement local civic structures, foster collaboration, and make engagement more accessible.

Methodology

How online participation functions in practice is examined using global cases to explore its forms and enabling conditions.

- **Understanding:** What is e-participation?
- **Cases:** from Porto Alegre's participatory budgeting to Barcelona's Decidim platform
- **A typology of e-participation:** 4 forms > e-activism, e-engagement, e-communities, e-ownership
- **Dangers:** how e-participation is turned into an ideology
- **Focus:** how platform design, institutional support, and resources shape meaningful participation

Stages of Online Participation Process



source: Xabier E. Barandiaran, Decidim Project, Ajuntament de Barcelona



Conclusion

- Online participation can strengthen democracy.
- The success of e-participation, however, depends on enabling resources, sustained political will, clear rules, strong facilitation, learning by doing e-participation, and institutional reforms.
- There is no technological fix to political problems.
- E-participation is NOT a technology, BUT a socio-political design process of society. Without proper socio-political design, participation risks becoming tokenistic and meaningless.
- Digital participation is a long-term governance process that requires continuous adaptation and integration into broader democratic and societal practices.

Recommendations

R3.1: **Avoid the park bench problem:** the issues and content of participatory digital democracy should be non-trivial and meaningful.

R3.2: Think about how **scarce resources** such as time can be freed up for citizens for empowering them.

R3.3: **Combine** online tools with offline interaction.

R3.4: **Avoid** making e-participation **too time-demanding** in order to avoid the dominance of a small number of citizens and the exclusion of others.

R3.5: **Safeguard rights** by combining constitutional digital democracy with deliberative and participatory digital democracy.

R3.6: **Include participatory budgeting** features in digital democracy tools.



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INTERDISCIPLINARY KNOWLEDGE BASE ON DIGITAL DEMOCRACY

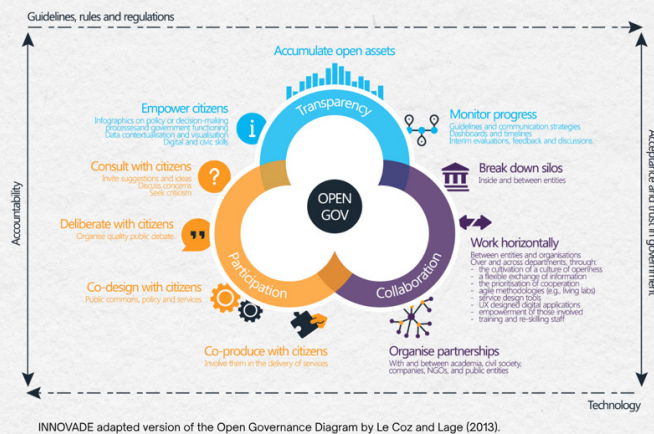
Open Governance (OG)

Authors: Laurin Coenen (KU Leuven, Public Governance Institute, Belgium), Victor Werimo (KU Leuven student Master of Science in Public Sector innovation and eGovernance [PIONEER])

Introduction

This chapter explores how digitalisation can foster more transparent, participatory, and collaborative governance. It presents open governance (OG) as a response to declining public means and trust, and rising policy complexity. It shows how digital tools and participatory mechanisms can reshape the relationship between the state and external actors (e.g., citizens, businesses or academia), enhancing the legitimacy of democratic decision-making and innovating policymaking and public service delivery.

OG in Theory



OG in Practice

To understand how OG presents itself in practice, the chapter explored several initiatives across Europe, examining design, use, challenges, coping strategies and effects to arrive at a list of recommendations.

- A systematic review of academic studies (n=52) and collection of well-documented use cases (n=14) across policy levels.
- An analysis of the evidence on OG goals, applications, actors, tools, challenges, and outcomes.
- A list of recommendations for the design, organisation and research on OG in a European context.

Conclusion

The analysis revealed that OG initiatives across Europe often combine open data, participatory platforms, and cross-sector collaboration, yet their appearance and success vary across contexts. They appear in diverse policy domains and at diverse policy levels—with most being held at a local one, and rely greatly on institutional commitment, coordination, and sustained resources and efforts to raise awareness among stakeholders to take root. Many face structural barriers within government and skills or inclusion gaps among citizens, showing that open governance is a context-dependent practice that must be actively supported and maintained.

Design recommendations (DRs)

- Digital democracy applications or tools are ideally ...
- DR4.1. ... accessible and intuitive to use.
 - DR4.2. ... visually attractive and engaging.
 - DR4.3. ... conceived to allow side support.
 - DR4.4. ... stripped down to their core.
 - DR4.5. ... including feedback or notification features.

Organiser recommendations (ORs)

- Public officials are well advised to ...
- OR4.1. ... hold realistic expectations.
 - OR4.2. ... formulate clear objectives, translated into inspiring action plans.
 - OR4.3. ... acknowledge, communicate, and showcase OG initiatives.
 - OR4.4. ... empower citizens and colleagues.
 - OR4.5. ... design adequate systems to monitor OG progress.

INTERDISCIPLINARY KNOWLEDGE BASE ON DIGITAL DEMOCRACY

5

Digital Activism

Authors: Octavio Barriuso Varela, Andrés del Alamo Cienfuegos (Fundación Cibervoluntarios, Spain)

Introduction

This chapter examines how digital technologies have reshaped political participation, tracing the evolution from early online communities to contemporary social movements. It shows how digital tools **enable new forms of mobilisation, amplify marginalised voices, and blur boundaries between everyday digital practices and organised activism**, while also exposing risks like slacktivism, platformisation, and corporate influence.

Conceptual Approach

Uses an interdisciplinary lens to rethink what counts as activism. The chapter challenges:

- **The romanticisation of activists** as separate from ordinary citizens.
- **The digital/physical divide**, showing they are intertwined.
- **The dismissal of small digital acts**, showing how they can accumulate political significance



Findings

Digital activism often relies on **decentralised, networked participation**, where **everyday digital acts** can build political momentum.

- **The 5C typology:** Connect, Circulate, Comment, Contribute, Collaborate
- **Micro-practices** (sharing, commenting, profile changes) gain weight through accumulation.
- **Local groups** (e.g. neighbourhood groups, Hoplr, Nextdoor) strengthen civic ties and action.
- The chapter also notes **the risks of surveillance and platform power**, showing how design shapes participation.

Conclusions

The chapter concludes that **digital activism blurs the line between online and offline participation**, showing how even small digital acts can accumulate political significance.

It argues that effective digital democracy **must build on existing community networks and be designed to amplify authentic civic voices** rather than merely simulate engagement. It needs to **combine individual expression with collective political force**.

Recommendations

R5.1: Real-Time Feedback

Monitor local social media discussions and embed INNOVADE ambassadors to capture emerging concerns.

R5.2: Build on Existing Networks

Strengthen community-led platforms and channel their input into local decision-making.

R5.3: Interoperability

Link social media communities with INNOVADE through seamless, regularly updated APIs.

External Reflections

Key Dynamics of Digital Democratic Activism

The discussion highlighted several core tensions in how digital tools are used for democratic engagement. A primary insight is the **critical interplay between digital and face-to-face activism**. While digital tools are superior for dispersing information and mobilizing across wide networks, in-person interaction remains more effective for centralizing efforts and building the strong bonds necessary for coordinated action. This is especially true in **hyperlocal activism** (i.e., activity in a very small, specific area—one neighbourhood, district, or even a single street), where the synergy between online and offline practices is essential for building resilient movements and ensuring social cohesion. Furthermore, a fundamental **tension exists between individual and collective dynamics**. Digital activism often lives at this intersection, where individual acts, like using a hashtag, feed into a larger collective identity. However, this raises critical questions about power, as control over a movement's main social media accounts can create internal conflicts and reproduce hierarchies, even within movements that espouse decentralized ideals.

Strategic Adaptation in a Complex Digital Landscape

In response to these dynamics, activists have developed a sophisticated, strategic approach to technology. A central finding is that **there is no single “perfect platform”** that meets all needs. Instead, movements operate within an **ecology of tools**, selecting platforms based on specific strategic functions. For example, they may use public-facing platforms like Facebook for broad outreach and normalizing ideas, while reserving encrypted tools like Signal or Telegram for secure, backstage coordination. This necessity for strategic tool selection forces continuous **innovation and experimentation**. The process of adapting and repurposing digital infrastructures to serve tactical goals is, in itself, a significant form of democratic innovation, demonstrating a pragmatic and agile approach to technology.

The Critical Role of Context in Shaping Goals

Underpinning all strategic choices is the undeniable **importance of context**. The current global trend of democratic backsliding profoundly shapes activist priorities. In this environment, the focus for many is less on pioneering new, ideal models of democracy and more on the urgent defence of existing democratic rights. This shift in context creates a pressing need to experiment with different forms of democratization under significant time pressure. It forces a strategic distinction: the tools and approaches needed to **prevent democratic regression** may differ from those used to **enable democratic progression**, highlighting that activism is not a one-size-fits-all endeavour but a responsive and context dependent practice.

Structural Barriers to Meaningful Participation

A key reflection was the **danger of assuming an “ideal” citizen or user**. Just as *homo economicus* is an abstraction, real citizens have limited time, skills, and resources. This is especially true for minorities and underrepresented groups, who often face the highest barriers to engagement.

Participation also looks different across scales. Local initiatives such as participatory budgeting can show clear, immediate impact, while engagement at the European level tends to involve smaller groups of specialists and is harder to sustain. Two barriers to participation were highlighted. First, the **“park-bench problem”**: citizens are invited to deliberate on issues that are perceived as minor or inconsequential, which undermines motivation to engage even if decisions are eventually acted upon. Second, the risk of tokenism: citizens are formally invited to participate, but no tangible outcomes follow, leaving the process empty and eroding trust.

The discussion also underlined the **role of social ties** in sustaining participation. Citizens working long hours or juggling multiple jobs find it difficult to engage in online forums or lengthy processes unless they are supported by strong networks or by facilitation in smaller, more manageable groups. Finally, the role of civil society remains contested. While organisations bring valuable expertise and representation, they are often sidelined in EU-level dialogues. Stronger integration of civil society, alongside direct citizen input, could help create a more inclusive and impactful model of digital democracy.



Reflections on digital activism by an external speaker

Workshop 1a — Online Participation

2035 Ideal State

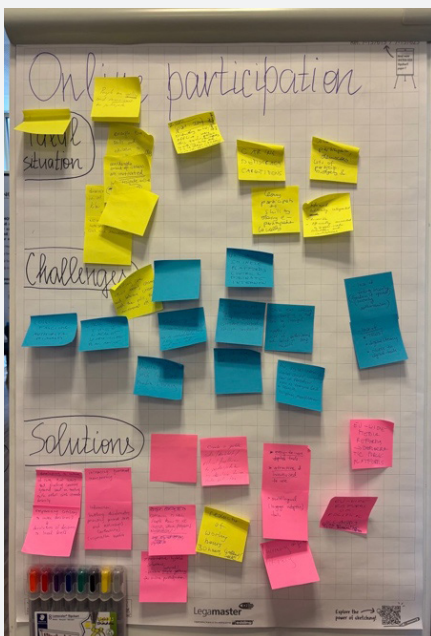
- ➔ **Seamless participation:** Citizens are able to engage in multiple forms of participation — such as quick polls, deliberation threads, citizen juries, and participatory budgeting — embedded directly into their daily lives rather than requiring separate platforms.
- ➔ **Fuse models of democracy, especially participatory and deliberative digital democracy with constitutional digital democracy:** Participatory and deliberative democracy are also (mis)used by anti-democratic forces. One should, however, not shy away from using and developing such tools but rather combine participatory and deliberative digital democracy with constitutional digital democracy's focus on human and civic rights in the digital age.
- ➔ **Trusted AI facilitators:** AI functions as a transparent, multilingual civic partner that explains policy options clearly, highlights trade-offs, and helps structure debates in a way that is trusted and non-manipulative.
- ➔ **Inclusive design:** Participation systems are accessible by default, with interfaces that accommodate people with low levels of digital literacy and tailored entry points for underrepresented groups.
- ➔ **Balanced platform governance:** Digital participation is neither monopolised by big tech nor controlled by a single public authority, but operates within a regulated and sustainably funded public-interest ecosystem with interoperable components.
- ➔ **Clear accountability loop:** Every participatory process follows the principle of "you said → we did," with visible outcomes, responsible actors, and clear timelines.
- ➔ **Enabled participants:** Citizens are motivated and capable of contributing because they have the time, skills, and confidence, supported by digital literacy programmes, smart facilitation, and structural measures such as reduced working hours and a European "Democracy Day."
- ➔ **Culture of care:** Interactions between citizens and institutions are grounded in care ethics, fostering respectful and constructive deliberation.

Challenges

- ➔ **Time and resource constraints:** Busy schedules, poor work–life balance, and lack of resources prevent many citizens from participating consistently.
- ➔ **Perceived institutional apathy:** Citizens often believe that political systems are uninterested in their contributions, leading to disengagement and apathy.
- ➔ **Disinformation and authoritarian trends:** Polarisation, manipulation, and authoritarian narratives discourage participation and undermine trust in democratic processes.
- ➔ **Digital divides:** Unequal access to devices, internet connectivity, and digital literacy excludes large parts of the population.
- ➔ **Platform dependence:** Current participation often relies on non-democratic platforms dominated by US and Chinese companies, limiting public control and accountability.
- ➔ **Outsourcing and fragmentation:** Outsourcing problems and fragmented infrastructures create confusion and weaken trust in participatory systems.

Solutions

- ➔ **Citizen empowerment:** Governments and civil society should create conditions that foster a sense of empowerment, encouraging citizens to believe that their voices matter.
- ➔ **Local responsibility:** Participation should be anchored at the local level, where institutions take responsibility for engagement and provide structures that connect citizens with decision-making.
- ➔ **Transparency and accountability:** Institutions should commit to clear communication and make participation results visible, reinforcing the “you said → we did” principle.
- ➔ **Independent media reform:** EU-funded reforms and support for independent journalism should reduce disinformation and strengthen democratic public spheres.
- ➔ **Digital literacy and outreach:** Programmes should raise digital literacy and target groups with limited access, such as the elderly, ensuring that participation is inclusive.
- ➔ **Routine civic engagement:** Participation should become a habit supported by rituals and structures, such as hybrid events that combine online tools with in-person gatherings and symbolic initiatives like a European “Democracy Day.”



Online Participation group discussion and results

Workshop 1b — Open Governance

2035 Ideal State

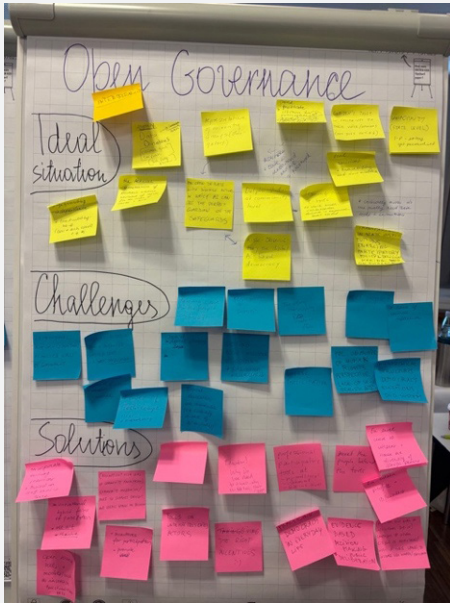
- ➔ **Transparent institutions:** Public institutions operate with transparency as a default, making decisions openly and providing easy access to data and information for all citizens.
- ➔ **Responsive governance:** Authorities actively demonstrate that citizen input shapes decisions, embedding the principle of “you said → we did” into everyday governance.
- ➔ **Collaborative structures:** Citizens, businesses, academia, civil society, and governments – everyone with a stake in society – work together through co-creation platforms and participatory budgeting to design and implement policies.
- ➔ **Empowering structures and data intermediaries:** There are sufficient structures, practices and guidelines in place that support both internal users and external, non-state actors in open governance processes.
- ➔ **Institutionalised participation:** Participation processes are embedded into the legal and administrative framework, ensuring continuity beyond political cycles or individual projects.
- ➔ **Mechanisms for safety, exchange and direction:** Open governance is facilitated by digital infrastructures that are secure, interoperable, and oriented toward the public interest and public value co-creation rather than private profit and the use of digital tools, solely out of opportunity

Challenges

- ➔ **Bureaucratic rigidity:** Administrative procedures and hierarchical structures limit the integration of participatory mechanisms.
- ➔ **Lack of responsiveness:** Even when participatory channels exist, citizens often feel that institutions ignore or dismiss their input, eroding trust.
- ➔ **Power asymmetries:** Established elites, majorities and influential interest groups can dominate participatory processes, marginalising less powerful voices.
- ➔ **Limited resources:** Public institutions may lack funding, training, or personnel to implement participatory governance effectively.
- ➔ **Platform dependency:** Governments greatly rely on commercial platforms that compromise privacy and accountability, rely on legacy solutions which perpetuate the proliferation of applications without functional integration.

Solutions

- ➔ **Institutional reform:** Governments should adapt bureaucratic processes to make them more flexible and open to citizen input.
- ➔ **Legal guarantees:** Binding legal frameworks should ensure that participatory structures are sustained across political cycles.
- ➔ **Public-interest platforms:** Investment in secure, interoperable digital infrastructures should reduce dependency on commercial providers.
- ➔ **Capacity building:** Training and resources should be provided to public servants to implement open governance practices effectively.
- ➔ **Equity safeguards:** Participatory processes should include measures to prevent elite capture and to amplify underrepresented voices.



Open Governance group discussion and results

Workshop 1c — Digital Activism

2035 Ideal State

- ➔ **Inclusive activism:** Digital activism is not limited to those with time and professional skills, but accessible to all citizens regardless of background.
- ➔ **Independent platforms:** Activists use platforms that are transparent, authentic, and free from corporate or state control.
- ➔ **Spaces of innovation:** Activism fosters creativity and out-of-the-box thinking, functioning as a space for democratic innovation.
- ➔ **Civic education:** Activist practices contribute to democratic learning, for example by embedding civic education within workplaces or community organisations.
- ➔ **Democratic legitimacy:** Digital activism is recognised as a legitimate form of political participation, strengthening the democratic system.

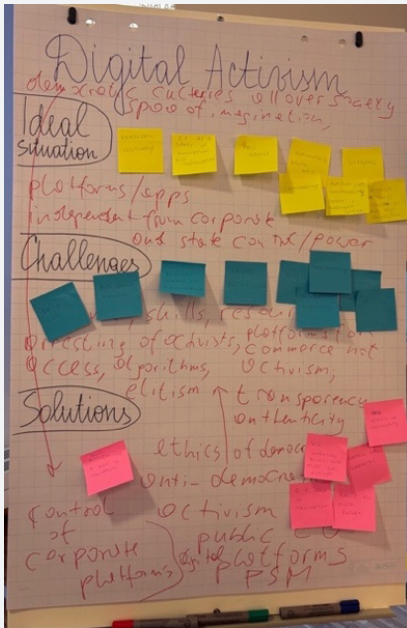
Challenges

- ➔ **Resource inequalities:** Time, skills, and financial resources are unevenly distributed, limiting who can participate in activism.
- ➔ **Repression risks:** Activists face legal persecution, arrest, and surveillance, particularly when crossing borders or working in authoritarian contexts.
- ➔ **Platform shortcomings:** Existing platforms often promote manipulation, surveillance, and corporate activism rather than genuine civic engagement.
- ➔ **Threat of anti-democratic actors:** Bots, trolls, deepfakes, and disguised extremist groups undermine democratic activism and spread harmful narratives.
- ➔ **Systemic corruption:** When democratic systems themselves are seen as corrupt or unresponsive, activism risks losing its effectiveness or legitimacy.
- ➔ **Geopolitical dependencies:** European activism is constrained by reliance on US and Chinese platforms, while investment in AI tools risks ignoring environmental and social harms.

Solutions

- ➔ **Democratic culture:** Civic education and democratic practices should be integrated into social structures, including trade unions and workplaces.

- ➔ **Public-interest platforms:** The EU should invest in independent digital platforms that serve as secure spaces for democratic activism. Public service media are especially important actors in this context. They are already important media actors that have a democratic remit, operate in the interest of the public, and are part of the public sphere.
- ➔ **Ethical frameworks:** Activism should be guided by democratic ethics that prioritise transparency, authenticity, and inclusivity.
- ➔ **Reduced working hours:** Structural reforms such as shorter a working week with full wage compensation can provide citizens with more time for civic engagement.
- ➔ **Checks on corporate influence:** Stronger regulation should limit corporate dominance in activism and protect independent civic spaces.
- ➔ **Supportive social structures:** Democracies should develop networks and protections that defend activists against repression and ensure their voices can be heard.



Digital Activism group discussion and results

2.2 Digital Democracy's Global Trends and Challenges

Panel Overview

This panel shifted focus to the global trends and challenges within digital democracy. Experts presented findings from three dedicated chapters, providing a comparative analysis of **e-voting, global trends, and foreign interferences (FIMI)**, supported by key data and actionable recommendations.



INNOVAD
Innovative Democracy Through Digitalisation

6

INTERDISCIPLINARY KNOWLEDGE BASE ON DIGITAL DEMOCRACY

Securing Democracy in the Digital Age: A Comparative Analysis of E-Voting Systems

Author: Hasan Suzen, Ph.D (Hybrid Core, Belgium)

Introduction

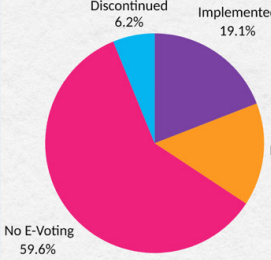
Electronic voting promises greater accessibility and administrative efficiency, yet it also raises pressing questions of privacy, transparency, security, and democratic legitimacy. In Europe, interest has accelerated with digital-ID rollouts and post-pandemic digitisation, but adoption remains uneven due to constitutional constraints, cybersecurity risks, and divergent legal cultures (GDPR, eIDAS 2.0). The result is a **fragmented landscape that tests the EU's ambition for trustworthy digital participation**.

Research question:
How can the European Union design and implement secure, transparent, and inclusive electronic voting systems that align with its democratic, legal, and technological frameworks?

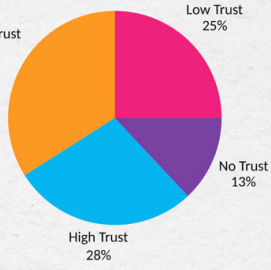
Methodology

A comparative, interdisciplinary review across three lenses: technical/cryptographic integrity, legal/regulatory compliance, and institutional/civic feasibility. A **benchmark of three architectures** (blockchain-based, cryptographic protocol-driven, hybrid) **against four performance dimensions**: voter privacy, election security, transparency (public observability/E2E-verifiability), and scalability/sustainability. **Case analyses:** Estonia, Switzerland, Germany, France.

Global Adoption of E-Voting Systems



Public Trust in E-Voting Systems



Analysis

Mechanisms:

- Blockchain:** strong auditability; privacy trade-offs.
- Cryptographic protocols:** ballot secrecy & software independence; limited public legibility.
- Hybrid:** balances integrity/privacy; added governance and complexity.

Countries:

- Estonia:** mature remote i-Voting; device/client risks persist.
- Switzerland:** pilots paused after audits revealed flaws.
- Germany:** constitutional requirement of public observability limits opaque systems.
- France:** restricted Internet voting for expatriates under strict oversight.

Key Findings

- No single e-voting design wins** - success requires balancing privacy, transparency, security, and scalability.
- Legal culture and institutional trust are crucial** in shaping system adoption and legitimacy.
- EU frameworks need to be harmonised:** Fragmented standards cause legal uncertainty and uneven security/access;
- The effectiveness of any e-voting system hinges not just on its technical specifications,** but on its integration with inclusive design practices, public trust, and valuesbased regulation.

Recommendations

R6.1: Establish a **European Electoral Technology Agency (EETA)**

R6.2: Adopt a **Modular Regulatory Framework** for E-Voting Technologies

R6.3: Prioritise **Hybrid Architectures and Post-Quantum Resilience**

R6.4: **Institutionalise** Voter Education, Civic Audits, and Participatory Design

R6.5: **Align Electoral Technologies** with EU Digital Sovereignty Goals



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INTERDISCIPLINARY KNOWLEDGE BASE ON DIGITAL DEMOCRACY

Global Trends That Influence Digital Democracy

Authors: H. Turner, Fatih Yilmaz (Beyond the Horizon, Belgium)

Introduction

Digital democracy is expanding through AI, blockchain, big-data platforms, and digital ID, yet it faces persistent risks: digital exclusion, misinformation, privacy/cybersecurity threats, and growing platform power. This chapter maps the **technological, political, social, and economic drivers of change**, compares **regional trajectories** and outlines **plausible futures** to locate the main opportunities and pressure points for policy.

Objective:

Translate global evidence into concise guidance for inclusive, transparent, and accountable digital participation by synthesising trends, challenges, regional cases, and scenarios into actionable levers for governance and implementation.

Methodology

The study employs a comprehensive and interdisciplinary methodology:

Desk Research: Reviewing academic literature, policy documents, and historical records to map the evolution of digital democracy.

Regional Case Studies: Examining examples from the European Union, United States, Asia-Pacific, and the Global South to understand diverse approaches to digital governance.

Analysis

Challenges

- **Digital Exclusion:** Socio-economic and geographic disparities continue to hinder equitable participation.
- **Misinformation:** The proliferation of fake news and algorithmic echo chambers threatens informed decision-making.
- **Surveillance Risks:** Misuse of advanced technologies raises ethical concerns and undermines trust in democratic institutions.

Regional Case Studies Future Scenarios

- **EU:** Regulatory leadership and mature e-government; Estonia's e-ID underpins high online-voting uptake.
- **North America:** Strong civic-tech innovation and cybersecurity efforts amid polarization and access gaps.
- **Asia-Pacific:** Advanced "smart nation" and participatory models alongside governance risks.
- **Africa:** Infrastructure and literacy initiatives expand access but divides remain.

OPTIMISTIC: Inclusive Digital Democracy
Inclusive, transparent, and secure systems, driven by technological integration and global collaboration.

DYSTOPIAN: Digital Authoritarianism
A dystopian reality marked by digital authoritarianism, misinformation crises, and socio-economic divides.

PRAGMATIC: Adaptive Hybrid Future
A pragmatic approach that combines adaptive policy frameworks with ethical technological innovation to achieve sustainable progress.



Conclusions

The evolution of **digital democracy** represents a pivotal moment in the history of **governance**, offering both unprecedented **opportunities** and complex **challenges**. This study underscores that the **future of democratic systems** lies in their **ability to harness** the transformative potential of **digital tools** while **safeguarding** core **democratic values** such as **inclusivity, transparency, and accountability**.

Recommendations

R7.1: Develop **ethical AI regulations**, enforce robust **data protection laws**, and invest in **digital literacy** to ensure equitable access.

R7.2: Prioritise **secure and privacy-focused platforms**, scalable **digital identity systems**, and **AI tools** for combating misinformation.

R7.3: Foster **public-private partnerships**, build trust through **transparent governance**, and promote media literacy to empower citizens against disinformation.

8

INTERDISCIPLINARY KNOWLEDGE BASE ON DIGITAL DEMOCRACY

Foreign Interferences in Digital Democracy

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Introduction

This chapter examines how foreign information manipulation and interference (FIMI) threatens Europe's digital democracy. We analyse **109 verified cases** (2020–early 2025) to identify operational tactics and trace their impact across the democratic chain: **information → communication → (co-)production**. The objective is to inform practical, multi-level safeguards for resilient digital participation.



Methodology

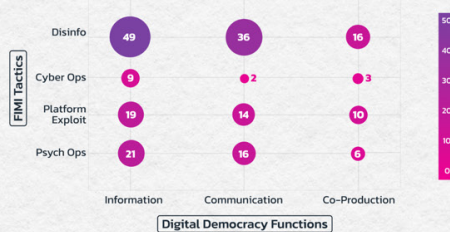
Dataset of 109 FIMI cases (2020–2025)



Analysis: FIMI Case Studies

FIMI Tactics / Digital Democracy Functions	Digital Disinfo and Manipulated Content	Cyber-Enabled Info Operations	Social Media and Platform Exploitation	Digital Psychological Operations
Information e-information	Injects falsehoods into the information space, hindering the access to accurate information for citizens <i>Operation Matryoshka</i> <i>Recent Reliable News</i>	Targets information platforms via hacks or data leaks disrupting the availability of digital information <i>Cyberattack on NXP</i> <i>Operation CuckooBees</i>	Algorithmic manipulation creates information overload, drowning out legitimate monitoring efforts <i>Doppelgänger Case</i> <i>War on Fakes</i>	Polarizes online discussions, reduces trust and generates fear in the information space to turn citizens against certain demographics <i>Paperwall Case</i> <i>Killnet</i>
Communication - e-campaigning - e-petitions - e-deliberation	Fabricated narratives enter public discourse and impact which issues are prioritized <i>Operation EcoBoost</i>	Shifts narratives in domestic agenda setting through data leaks <i>Iranian Cyber Attack on Albanian Gov Network</i>	Amplifies polarizing topics via bots or fake engagement, artificially bringing issues into mainstream visibility <i>Chinese Partners Albania</i>	Promotes narratives on sensitive issues to shift public attention to foreign strategic interests <i>Pro-Russian Narratives with Romanian Far-Right</i>
Co-production - e-consultation - e-participatory budgeting - e-voting	Misleads or polarizes voters which can skew election and policy outcomes <i>Cambridge Analytica 2024 EU Elections</i>	Malign attacks (DDoS, hacking, etc.) disrupt e-voting and other digital platforms for decision-making <i>Russian Interference in Italian Energy Sector</i>	Makes use of bots or troll accounts to show support or dissent for issues, causing a perceived consensus among the public <i>Russian FIMI in Moldovan Elections</i>	Makes use of fear or identity-driven messages to sway how citizens vote or make decisions <i>Doppelgänger Operations in Polish Presidential Elections</i>

FIMI Incidents Heatmap (per tactic and democracy function)



Conclusions

FIMI campaigns not only **pollute information environments** and **distort political communication**, but also **undermine the legitimacy of democratic decision-making**, especially when targeting e-voting systems and civic consultation tools.

Case studies from across Europe, including cyberattacks, coordinated disinformation, and strategic narrative manipulation, demonstrate that the threat is **widespread, adaptive, and strategically embedded** within geopolitical rivalries.

Recommendations

- R8.1: Build **Multilevel Resilience** Across Democratic Functions
- R8.2: Centre **Trust, Transparency, and Cognitive Integrity** in Platform Design
- R8.3: Embed Detection and Response to **Hybrid Interference**
- R8.4: Design for **Deliberation**, Not Just Expression
- R8.5: Strengthen **Local-Level Defences** as Democratic Frontlines

External Reflections

Challenges on the Road to Digital Democracy

A primary challenge is **tech-solutionism**—the assumption that technology alone can fix democracy, which often overlooks underlying issues like poor media literacy. This is compounded by **bureaucratic inertia** and **system complexity**, where hierarchical structures and dense regulations stifle innovation and citizen-driven methods. Underpinning these structural issues is a **non-participatory mindset**, reinforced by intergenerational divides and old habits.

Furthermore, a significant **theory-practice gap** exists; citizens often show limited interest in democracy beyond elections, while civil servants lack the time for training. This is exacerbated by a **scarcity of resources**—limited time, funding, and staff—making it essential to demonstrate the tangible benefits of participation. In the broader landscape, **real threats** like disinformation and cyberattacks collide with stereotypes, confusing citizens about the value of engagement. This occurs against a worrying **global authoritarian drift** and critical **funding gaps**, where investment in participatory digital infrastructure is sidelined. Ultimately, these interconnected challenges point to a need for a **systemic redesign** of our political, social, and economic systems for the 21st century.

Additional Perspectives and Critical Insights

Beyond the structural challenges, the digital arena itself is a contested space. It was highlighted that the **rise of extreme politics online** is not necessarily due to superior ideas but their strategic mastery of digital platforms, which have become arenas where democratic and anti-democratic forces collide. This is facilitated by a broader **erosion of social life**, where digitalization and remote work weaken traditional solidarity spaces like trade unions, undermining the social cohesion that democracy relies upon.

The discussion also stressed that it is time to move **from analysis to action**. While problems like fake news are well-diagnosed, the focus must shift to building solutions and new democratic infrastructures to counter public resignation. In this context, the importance of **public-service media (PSM) as important European media actors dedicated to the democratic public sphere was underscored**. The European Broadcasting Union is an international union of such democratic media. Initiatives such as, for example, the [Council for European Public Space](#), [Public Service Media](#) and [Public Service Internet Manifesto](#), [Open Future](#), [Public Spaces Incubator](#), [BBC Public Service Internet](#), the [Swiss Federal Media Commission](#)'s suggestion to create a public space that is not a profit space, Arte's work on creating a [European streaming platform](#), and [Eurostack](#) demonstrate how modernized PSM can serve as a vital, democratic counterweight to commercial and extremist platforms, forming the backbone of a pan-European digital public sphere.

Proposed Directions Forward

To address these challenges, a multi-pronged approach is essential. We must champion **hybrid participation models** that intelligently combine offline and online deliberation to make policymaking both inclusive and evidence-based. Alongside this, there is a pressing need to develop **transnational ethical and policy frameworks**, such as a socio-technological contract, to guide the development and use of digital democracy tools.

A critical focus must be on **youth engagement**, building on successful initiatives like Poland's Youth Citizens' Assembly to co-design safer digital futures and empower the next generation. Finally, a key direction is to **leverage and modernize existing public infrastructure**, notably public-service media, positioning it as a trusted hub for democratic engagement in the digital age.



Reflections on digital democracy's challenges by an external speaker

Workshop 2a — Disinformation and FIMI

Forms

- ➔ **Coordinated campaigns:** Polarising narratives—especially around immigrants—are spread through coordinated inauthentic behaviour, including troll farms, bot swarms, hacked or throwaway accounts, and biased algorithms that reward outrage.
- ➔ **Synthetic media:** Deepfakes and AI-generated content blur the line between fact and fiction, making it harder to distinguish reality.
- ➔ **Organised harassment:** Targeted harassment begins on fringe or closed platforms, then spreads through influencer seeding and micro-targeted ads.
- ➔ **Foreign interference:** In Poland, Russia-linked propaganda and anti-Ukrainian rhetoric—sometimes echoed by political actors—are pushed by bots, trolls, and state-aligned outlets, distorting agendas and drowning out authentic voices.

Impacts

- ➔ **Erosion of trust:** Confidence in media and institutions weakens, leaving voters confused and vulnerable to manipulation.
- ➔ **Silencing of voices:** Targeted harassment discourages participation and suppresses diverse viewpoints.
- ➔ **Agenda capture:** Manipulated narratives skew public debates, slow emergency responses, and amplify cross-border interference.
- ➔ **Verification gaps:** Election periods highlight how hard it is to fact-check at scale without imposing heavy-handed control.
- ➔ **Persistence of misinformation:** False claims stick in people's minds, fuelling polarisation and shaping distorted opinions.
- ➔ **Polluted information space:** With reality blurred, AI systems trained on polluted data reinforce the cycle, fragmenting politics and pushing important issues to the margins.

Responses

- ➔ **Content provenance:** Tools like watermarking, source labels, and claim logs help verify origins and track manipulation.
- ➔ **Rapid response:** Fact-checkers, platforms, and authorities can collaborate in fast-response cells for corrections, takedowns, and right-of-reply windows.
- ➔ **AI-assisted verification:** Automated legitimacy checks and hate-speech detection, combined with human oversight, reduce errors and strengthen accountability.
- ➔ **Media literacy:** Embedding micro media-literacy in civic participation and long-term education builds resilience through critical thinking and open debate.
- ➔ **Positive civic engagement:** Celebrating democracy through engaging events strengthens trust and participation.
- ➔ **Context-aware identity:** Verified accounts for official civic platforms can filter bots and abuse, while anonymity remains protected where safety or whistleblowing requires it.



Disinformation and FIMI group discussion and results

Workshop 2b — Authoritarianism

Forms

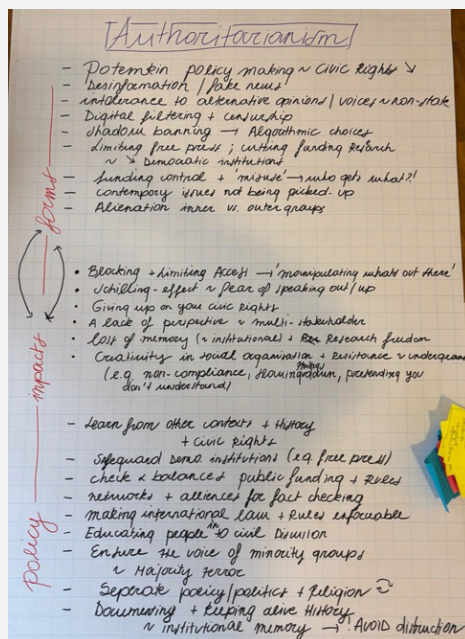
- ➔ **Surveillance expansion:** States extend monitoring through data grabs and repurposed digital tools (e.g., IDs or chatbots turned into instruments of control).
- ➔ **Legal intimidation:** Protest-criminalising laws, SLAPPs, and harassment of officials and civil society restrict civic action.
- ➔ **Platform manipulation:** Algorithmic filtering, shadow-banning, throttling, and walled gardens shrink the digital public sphere.
- ➔ **Fear-based narratives:** Strong-leader rhetoric, normalised lies, and intolerance of dissent create a climate of fear and conformity.
- ➔ **Financial capture:** Crony networks starve independent media, research, and democratic institutions of funding.
- ➔ **Restricted participation:** Citizenship rules, censorship, cyberattacks, Potemkin policymaking, and monopolised platforms limit access to meaningful debate and marginalise alternative voices.

Impacts

- ➔ **Self-censorship:** Fear silences individuals, and minorities are pushed out of public debate.
- ➔ **Polarisation and overload:** Platform business models amplify extremes, driving polarisation and emotional fatigue that leads many to disengage.
- ➔ **Captured policymaking:** Power consolidates around elites while independent media, NGOs, and safe civic forums decline.
- ➔ **Locked-in control:** Rules and tools entrench vendors and central authorities, making reform harder.
- ➔ **Erosion of rights:** Citizens gradually surrender freedoms, lose sight of institutional norms, and face higher risks for even small acts of resistance.
- ➔ **Creativity loss:** Collective imagination and experimentation in civic organisation weaken over time.

Responses

- ➔ **Rights-based design:** Participation processes should prioritise privacy by default, include anti-retaliation safeguards, and enable anonymous modes when safety is at risk.
- ➔ **Independent oversight:** Ombudspersons, regular audits, safe whistleblower channels, and protection of courts, free press, and rule of law create accountability.
- ➔ **Hybrid safe spaces:** Mix trusted in-person venues with moderated digital forums and provide legal support for those targeted.
- ➔ **Transparent governance:** Publish evidence, explain decisions clearly, and demonstrate "you said → we did" outcomes, while lowering barriers to local political participation.
- ➔ **Civic learning and storytelling:** Invest in education, fact-checking alliances, and preservation of institutional memory, while ensuring inclusion and minority protection.
- ➔ **EU-level standards:** Back reforms with enforceable European frameworks, keeping policy secular and focused on problem-solving rather than polarisation.



Authoritarianism group discussion and results

Workshop 2c — Big Tech Monopolies

Forms

- ➔ **Dominant gateways:** A few platforms act as gateways for information, enclosing users in walled gardens with proprietary algorithms, ad-driven incentives, and costly data lock-in.
- ➔ **Unilateral control:** Terms of service can change without accountability, shaping what users see or say and reinforcing radicalisation pipelines through engagement-maximising designs.
- ➔ **Global concentration:** A handful of firms—largely US- and China-based (e.g., Instagram, X, TikTok, YouTube, Apple, Amazon)—control attention, socialisation, and deliberation spaces.
- ➔ **Commercialised interaction:** Personalised communication is monetised, isolating citizens and weakening shared public spheres.
- ➔ **Geopolitical entanglement:** Platform dominance ties into chip supply chains, a growing security surface, and business models shifting toward enclosure and monetisation.

Impacts

- ➔ **Erosion of rights:** Privacy is undermined by pervasive data extraction, while large-scale opinion shaping occurs without transparency or accountability.
- ➔ **Erosion of democracy:** The combination of the digital giants and authoritarianism has contributed to the erosion of democracy and the digital public sphere.
- ➔ **Vendor lock-in:** Policy and procurement dependencies centralise power, crowding out alternatives and letting private actors run de facto public spaces.
- ➔ **Political influence:** Money and data compound into disproportionate influence, simulating participation without real impact.
- ➔ **Fragmented discourse:** Polarisation and emotion-driven debates deepen, while civic discourse drains into commercial feeds.
- ➔ **Mental health harms:** Always-on, competitive attention markets fuel anxiety, dysmorphia, and other wellbeing impacts.
- ➔ **Systemic risks:** Surveillance expands, cybersecurity vulnerabilities multiply, and tech oligarchs emerge as unchecked rule-setters.

Responses

- ➔ **Alternative platforms:** Not-for-profit Internet platforms dedicated to democracy are an important alternative to the digital giants.
- ➔ **Public service media:** Public service media (PSM) are important European media actors dedicated to the democratic public sphere. They should play an important role in establishing a democratic European public Internet that is an alternative to the version of the Internet advanced by the digital giants.
- ➔ **Initiatives for a democratic Internet:** Initiatives such as, for example, the [Council for European Public Space](#), [Public Service Media](#) and [Public Service Internet Manifesto](#), [Open Future](#), [Public Spaces Incubator](#) (), [BBC Public Service Internet](#), the [Swiss Federal Media Commission's](#) suggestion to create a public space that is not a profit space, Arte's work on creating a [European streaming platform](#), and [Eurostack](#) demonstrate how a public service Internet can serve as a vital, democratic counterweight to the digital giants commercial and extremist platforms, forming the backbone of a pan-European digital public sphere.
- ➔ **Public funding:** Public funding of the development and sustainability of the digital public sphere and democratic Internet platforms is crucial
- ➔ **Public/commons partnerships:** There are already successful alternative Internet platforms and initiatives such as Wikipedia, Creative Commons, free software, Mastodon, platform co-operatives that aim at advancing the digital commons. Partnerships of public service media and digital commons initiatives could help advance democratic alternatives to the digital giants and a European digital public sphere.
- ➔ **Telling alternative stories about the digital public sphere:** A democratic Internet and alternatives to the digital giants are not utopias. There are already attempts and success stories such as Wikipedia. Such stories need to be more told in order to inspire debates, initiatives, and policymaking (see [European Alternatives](#)).

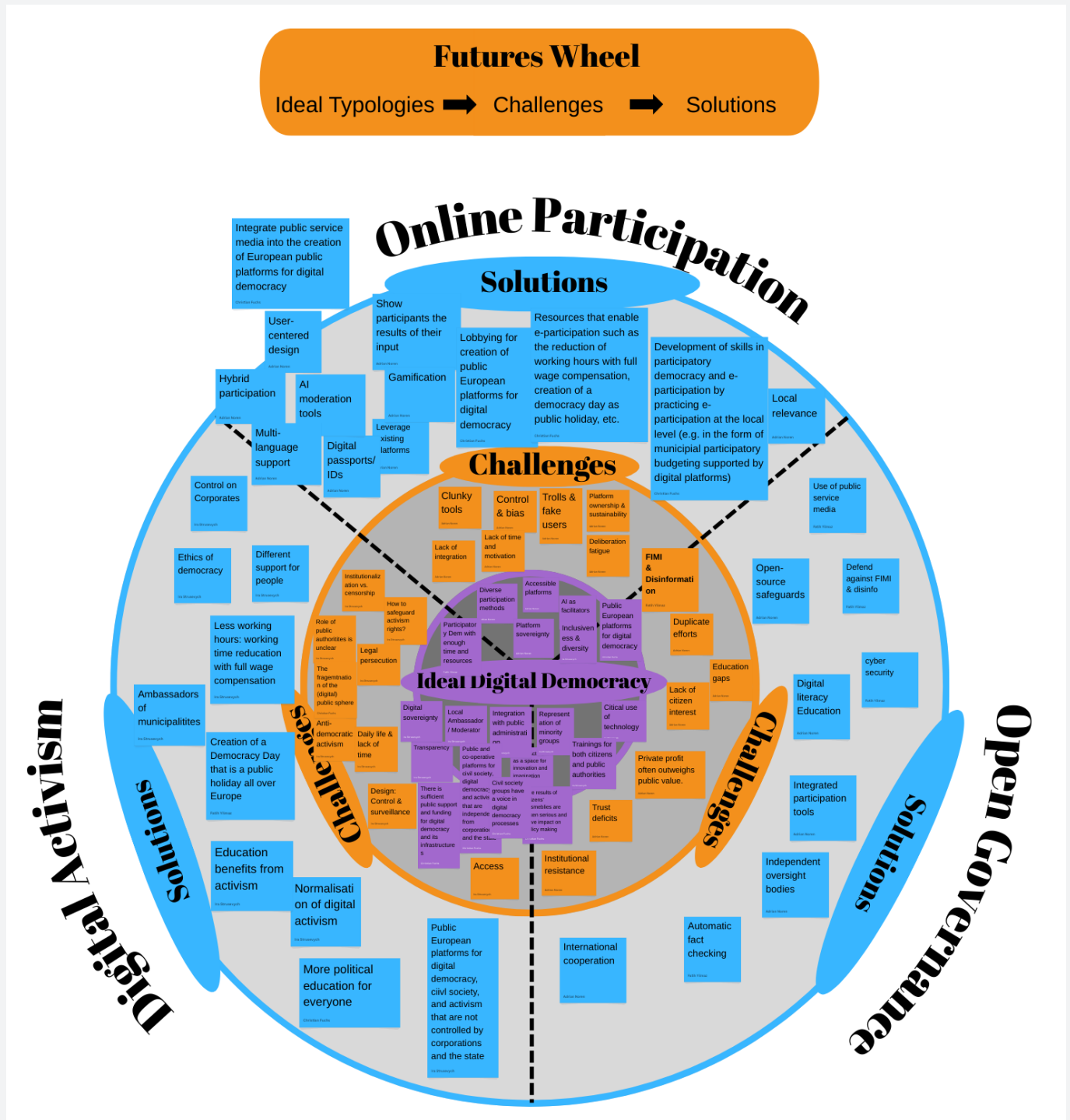
- ➔ **Interoperability and openness:** Mandate open APIs, data portability, and public archives, while developing public-interest platforms that interoperate without dependency on commercial networks.
- ➔ **Ethical procurement:** Use open, transparent procurement and funding to reward accessibility, ethics, and security, reducing lock-in.
- ➔ **Legal backbone:** Strengthen EU digital rules, liability measures, and robust cybersecurity/psyops readiness; decentralise ownership and regulate dominance.
- ➔ **Visible harms:** Develop metrics for polarisation and manipulation, fund infrastructure programs beyond pilots, and support public-public, public-commons, public-co-operative, and public-academic partnerships.
- ➔ **Independent journalism:** Reinforce professional quality journalism, fact-checking, and constitutional rights; enable local forums and volunteer networks.
- ➔ **Public-interest advocacy:** Promote democratic lobbying for civic tech and enforce clear rules against digital trolling, keeping the public square plural and resilient.



Big Tech Monopolies group discussion and results

3. Discussion

The results of the first day panel discussions and workshops are outlined on a future's wheel in the following figure. Ideal typologies of digital democracy are defined for each aspect; the challenges are listed and solutions to overcome challenges and get closer to ideal conditions are summarised. At the final stage, these solutions are translated into concrete policy recommendations at local, national and EU levels.



Ideal States

The Living Lab envisioned a digital democracy in which **participation is seamless, inclusive, and embedded in daily life**, supported by **trusted digital infrastructures and responsive governance structures**. Citizens would have access to **transparent and accountable institutions**, where participation follows a clear “you said → we did” feedback loop. **Digital activism** would be accessible to all, recognised as legitimate, and conducted on platforms free from corporate or authoritarian capture. At its core, this vision emphasises **inclusivity, trust, hybrid participation (digital and face-to-face), and long-term institutionalisation** beyond electoral cycles or single projects.

Challenges

Against this ideal, participants identified major obstacles:

- ➔ **Systemic barriers:** Bureaucratic rigidity, resource constraints, and institutional inertia limit the uptake of participatory practices.
- ➔ **Political pressures:** Global authoritarian drift, shrinking civic space, and the strategic use of disinformation by anti-democratic actors undermine trust and participation.
- ➔ **Technological and political-economic dependencies:** Reliance on monopolistic big-tech platforms creates risks of surveillance, lock-in, and manipulation, while digital divides exclude large parts of the population.
- ➔ **Cultural and mindset gaps:** Apathy, perceptions of institutional unresponsiveness, and declining social solidarity further erode democratic engagement.

Solutions and Policy Recommendations

Building on these challenges, participants translated ideals into actionable recommendations:

EU Level

- ➔ Update the Better Regulation Agenda to include binding open governance principles and ensure citizen and civil society involvement in all legislative processes.
- ➔ Fund and scale European public-interest digital infrastructures and European public Internet platforms to reduce reliance on big tech and strengthen digital sovereignty.
- ➔ Create sustainable, cooperative platforms for democratic participation and activism, independent from corporate or state capture, and supported by European public-service media and public funding.
- ➔ Institutionalise (online) participation symbolically and practically through initiatives such as a European “Democracy Day”, a public holiday throughout Europe dedicated to democracy.
- ➔ Advance the public discourse about what enabling structures and resources (digital) participation requires, including time, skills, motivation, etc.

National Level

- ➔ Reform legal and administrative frameworks so participatory structures endure beyond electoral cycles and political turnover.
- ➔ Invest in civic and digital democracy education across schools and adult learning, embedding resilience against disinformation and authoritarian narratives.
- ➔ Safeguard independent journalism and public-service media as central pillars of democratic information ecosystems. Integrate both into the creation of public Internet platforms and a European digital public sphere.
- ➔ Introduce labour reforms such as reduced working hours with full wage compensation to give citizens the time and capacity to engage meaningfully in democratic processes.

Local level

- ➔ Appoint participatory directors or ambassadors within municipalities to ensure citizen input is systematically addressed in decision-making.
- ➔ Promote hybrid participation by linking online tools with existing community life (festivals, assemblies, schools), so engagement becomes a routine part of daily experience.
- ➔ Encourage grassroots capacity building through participatory budgeting and small-scale community initiatives that make the benefits of participation tangible.

4. Conclusions

Living Lab #2 confirmed many of the findings from **D2.1** but also added important depth and practical detail. Participants strongly reinforced the importance of inclusivity, transparency, and resistance to corporate monopolisation, which had already been identified in D2.1. At the same time, they provided new insights on how these principles can be made workable. For example, while D2.1 highlighted the need for accessible digital platforms, the Living Lab stressed that online-only solutions risk excluding people, and proposed hybrid formats that combine digital tools with face-to-face gatherings.

These outputs are directly relevant to **WP3 (Pilots and Case Studies)**. They give the pilots:

- ➔ **Clear priorities** to test, such as everyday participation that fits into citizens' routines, accessible interfaces for people with low digital literacy, and visible feedback loops that show how input translates into decisions.
- ➔ **Concrete design ideas** that can be trialled, including participatory directors at the local level and hybrid participation strategies.

The event also included a first presentation of the **Digital Democracy Toolkit**, which is being developed as a way to grade and assess digital democracies. While still in progress, it was received as a promising instrument for identifying strengths and weaknesses in democratic practices. This will be particularly useful in WP3, where pilots can be benchmarked against common criteria, and later compared across different national and local contexts.

Overall, Living Lab #2 served as a bridge between the analytical work of D2.1 and the experimental phase of WP3. It confirmed that the challenges identified earlier remain central but also translated them into actionable ideas and dilemmas for pilots to explore.

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