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LIVING LAB #5

Envisioning Future Digital
Democracy based on social
and technological trends



FINAL REPORT

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1. Methodology

1.1 Objectives

Living Lab 5 (LL5) focused on examining the social, technological, and governance conditions necessary for public authorities to adopt and use digital democracy applications effectively and sustainably. The core objectives were to:

- Explore pathways toward a functioning digital democracy by identifying key risks and opportunities.
- Evaluate how evolving social expectations and technological developments—such as AI, digital ID, and social media trends—influence participation tools.
- Assess practical requirements for ensuring trust, inclusion, accountability, and resilience in digital governance.
- Provide actionable inputs for research and technical deliverables in WP2, WP3, WP4 and future policy briefs in WP6.



1.2 Structure and Agenda

LL5 was held at the KU Leuven Faculty of Social Sciences and structured as a one-day long collaborative exchange including expert panels and co-creation sessions. The day combined two thematic panels (Technological Trends and Social Trends) with scenario-based workshops where participants tested features in specific municipal contexts.

The two thematic panels included presentations of project internal research results and external experts on relevant trend topics including their reflections.

Agenda

Time	Session	Speakers
09:00 – 09:30	Registration – Welcome Coffee	
09:30 – 09:45	Welcome Project & Programme Introduction	Laurien Coenen (KU Leuven) Fatih Yilmaz (Beyond the Horizon)
11:00 – 11:15	Ice-breaker activity	
FOCUS ON TECHNOLOGICAL TRENDS FOR DIGITAL DEMOCRACY		
10:00 – 11:00	PANEL 1: Technological Trends in governance of Digital Democracy	Moderated by Xenia Klinge (DFKI)
	15' Infrastructure & Access: digital ID, authentication, core systems	Joseph Vural (Hybrid Core)
	15' Compliance Framework and Rights: data protection, digital & social rights	Luca Ceselli (ICT Legal Consulting)
	10' Reflection (The design of the Digital Democracy)	Gianluca Sgueo (SciencesPo – Ecole d'Affaires Publiques)
	10' Reflection (Hybrid participation)	Jorgos Coenen (Citizen Dialog Kit)
	10' Q&A	
11:00 – 11:15	Coffee break	
11:15 – 12:45	WORKSHOP 1: Applying Technological Trends to Digital Democracy Platforms	Facilitated by BtH
	Governance of the new actual features of the digital democracy app will be played and tested in pre-defined scenarios in line with the new technological trends. Red teaming methodology will be used to challenge assumptions of public administrations.	In 3 groups: 1/ Proposal Management (ideation) 2/ E-voting 3/ Citizen rewarding (gamification)
12:45 – 14:15	LUNCH	

FOCUS ON SOCIAL TRENDS FOR DIGITAL DEMOCRACY

14:15 – 15:15	PANEL 2: Social Trends in governance of Digital Democracy	Moderated by Christian Fuchs (UPB)
	10' Introduction to Governance Structures, Cooperation & Communication – ownership, participation framing & trust	Laurien Coenen (KU Leuven)
	30' Can social media influence our elections?	Brahim Zarouali (KU Leuven – Institute of Media Studies)
	10' Tokenism in digital democracy	Hanno Scholtz (University of Zurich, Civil Democracy)
	10' Q&A	
15:15 – 15:30	Coffee Break	
15:30 – 17:00	WORKSHOP 2: Governance requirements for Digital Democracy Applications	Facilitated by KUL
	Building on the pre-defined scenario exercise conducted in workshop 1, we now explore governance requirements to implement them in practice. A Q-sorting exercise will be conducted to prioritise governance requirements, concerns, and needs.	In 3 groups
17:00 – 17:15	Day 1 wrap up and concluding remarks	Laurien Coenen (KU Leuven) Fatih Yilmaz (Beyond the Horizon)

1.3 Techniques and Tools

The methodology utilized structured participatory and analytical techniques:

- ➔ **Gamification Element – Character Selection:** During check-in, participants selected a character¹ that closely aligned with their real-world professional mission and received a corresponding pin to wear throughout the day. This framed the perspective they would embody during discussions. Participants were divided into three balanced groups, each including two Red Team members to ensure critical analysis.



Figure 1 Participants' arrival and character selection

¹ Characters were designed by **Leen Sevens** – Educational technologist for the Humanities and Social Sciences Group at KU Leuven. The visuals that are associated with the roles are early illustrations from her current creative project on writing, illustrating a children's book about AI.

- ➔ **Scenario-Based Workshop:** Groups were assigned one of three municipal scenarios — Thessaloniki (ideation and proposal management), Geel (digital voting and hybrid support), and San Martín de la Vega (citizen scoring and awarding) — to test Digital Democracy Application features against realistic governance challenges. Participants began by watching short contextualisation videos, received three different barriers then worked through structured posters organising their analysis for each given barrier into three steps: Proposed Solutions, Red Team Challenges, and Final Responses.

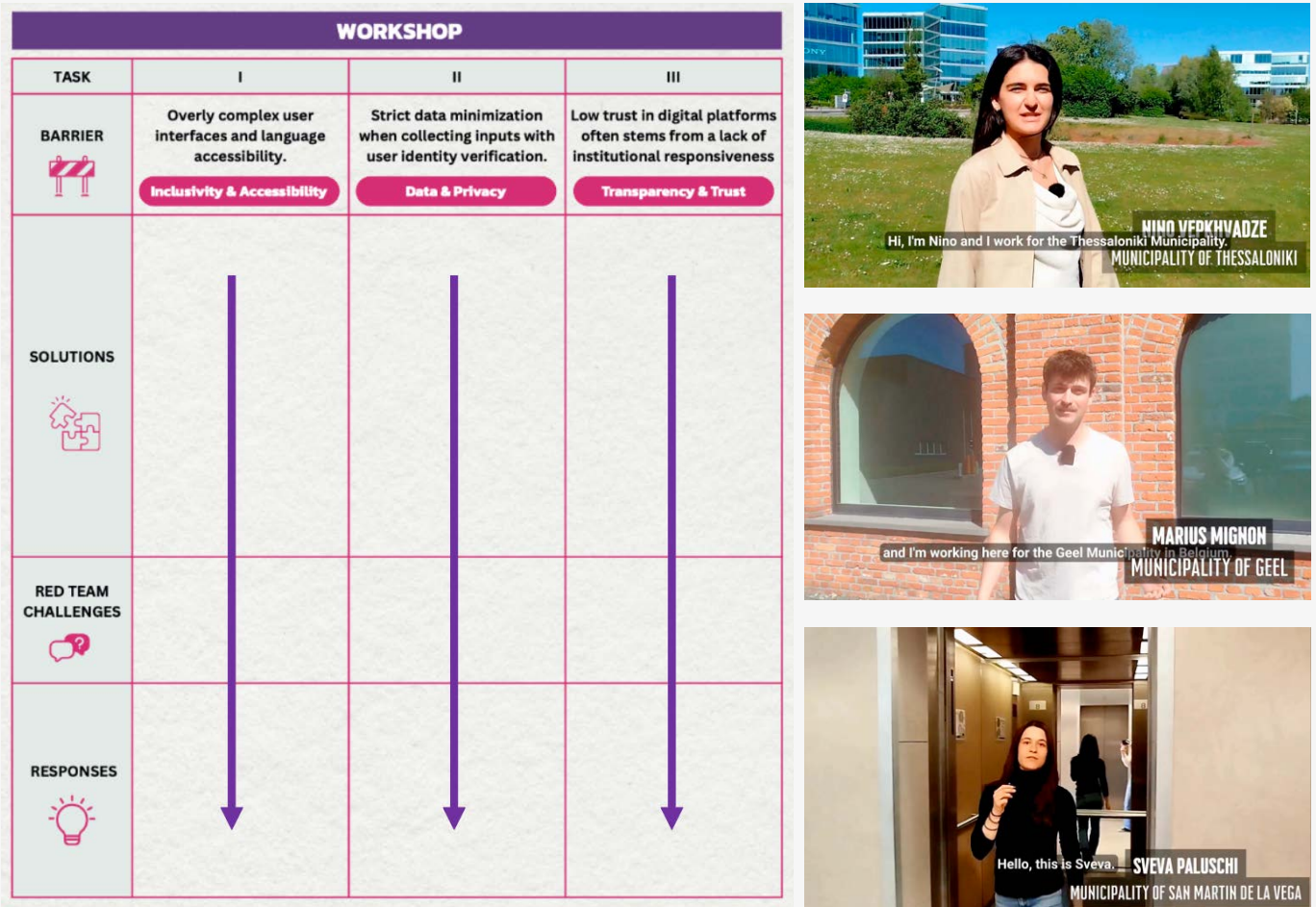


Figure 2 Scenario-based Workshop Structure and Contextualization Videos

- ➔ **Red Teaming:** Dedicated Red Team members intervened during workshops to challenge assumptions, surface unintended consequences, and stress-test proposed solutions.
- ➔ **Q-sorting exercise:** Participants used a Q-sorting methodology to prioritise governance requirements for implementing digital democracy in practice. Remaining in their scenario groups, each group received a stack of 41 organisational aspect cards spanning six categories — Project, Technology, Internal Structures, Citizens, Co-workers, and Participation — and completed two sequential sorting rounds. In the first round (Mat A), cards were distributed across three broad zones: somewhat less important, neutral/doubt, and somewhat more important. In the second round (Mat B), groups refined their rankings on an eleven-point scale from -5 (least important) to +5 (most important), with descriptive anchors guiding each position. Once sorting was complete, groups substituted their white cards with colour-coded equivalents to facilitate cross-group comparison. A closing plenary discussion compared rankings across all three scenarios, surfaced difficulties encountered during sorting, and identified any governance aspects felt to be missing from the card set.

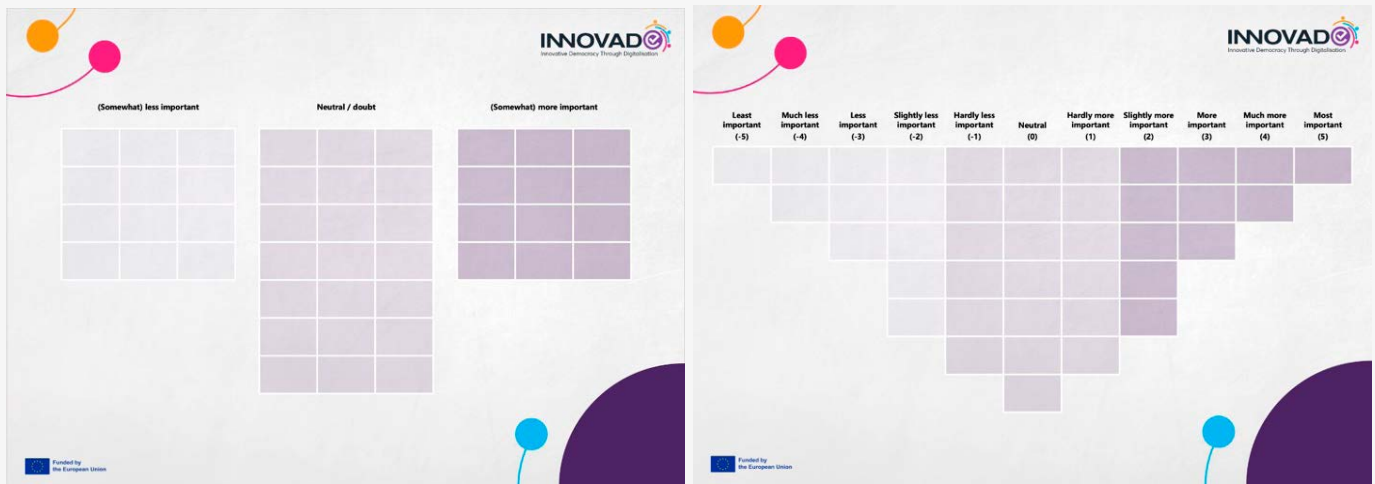


Figure 3 Mat A and B used for the Q-sorting exercise

1.4 Participants

LL5 convened a multi-disciplinary group including:

- ➔ **Researchers:** Representatives from KU Leuven (BE), University of Zurich (CH), SciencePo (FR), DFKI (DE), Radboud University (NL) and University of Paderborn (DE).
- ➔ **Government/Policy:** Local representatives from Stad Geel (BE) and officials from the European Commission (EU).
- ➔ **Digital Developers & Legal Experts:** Partners from Hybrid Core (BE), Trust-IT (IT), ICTLC (IT), SMALS (BE) and the Citizen Dialog Kit (BE).
- ➔ **NGOs & Civil Society:** Experts from EPD (BE), ECAS (BE), EUMANS (IT), and Beyond the Horizon (BE).

1.5 Facilitation and Documentation

Workshops were led by facilitators from Beyond the Horizon (WS1) and KU Leuven (WS2), who guided groups toward actionable outputs while Red Teams provided critical friction. Assigned notetakers from BtH took notes at all workshops and group discussions. Documentation consisted of:

- ➔ Detailed session notes and a comprehensive wrap-up of panel and workshop findings.
- ➔ Posters and sticky notes designed for facilitating the group discussions
- ➔ Consolidated rankings from the Q-sorting governance exercise.

2. Findings

2.1. Expert Panel: Technological Trends in Governance of Digital Democracy

The first expert panel, moderated by Xenia Klinge (DFKI), centred on technological trends in democratic engagement. Four experts gave separate presentations prefacing participant awareness on several key insights.

Digital Infrastructure and Access (by Joseph Vural)

- ➔ **Structural barriers:** lack of devices, poor connectivity, low digital literacy, and eroded trust — disproportionately affect those most in need of a political voice.
- ➔ **Key data points:** rural connectivity – fast internet – basic digital skills across all five partner countries; most of the elderly relying solely on a smartphone.
- ➔ **Design principles:** the platform must function on 3G connections and support offline preparation of contributions; it must be mobile-first; and public access points (libraries, town halls) with trained staff remain essential. On identity verification, mapped a spectrum from the incoming EU Digital Identity Wallet to SMS codes to in-person town hall assistance — all of which must remain available.
- ➔ **Core message:** fixing one barrier in isolation does not work. Connectivity, skills, affordability, and trust are structurally interlocked.

Compliance Framework and Rights (by Luca Ceselli)

7 regulatory domains shape the INNOVADE Digital Democracy App: EU participation rights, GDPR, the Digital Services Act, the AI Act, eIDAS, accessibility directives, and the NIS2/CRA cybersecurity framework. Designed according to these domains, the INNOVADE app will provide users with legitimate, trusted, and scalable digital democratic participation.

- ➔ **GDPR:** The app processes data across distinct purposes, each requiring its own legal basis. The risk of special-category exposure is real — votes or comments on mobility or migration can reveal political opinions even without explicit collection. The platform must not classify users as “frequent objector” or “low-trust citizen”; analytics must remain aggregated.
- ➔ **DSA:** Content moderation in public proposal spaces requires due-process mechanisms (notice-and-action, challenge rights). AI moderation cannot be the sole decision-maker in contested civic cases. Ranking and “trending” logic must be transparent; chronological ordering should be offered as an alternative.
- ➔ **AI Act:** A key red line — AI that influences voting behaviour in elections or referenda is classified as high-risk. Permitted uses include clustering proposals, detecting duplicates, and supporting accessibility. Forbidden are personalising political arguments or optimising turnout for one side. The citizen participation profile must remain private, non-competitive, and voluntary.
- ➔ **eIDAS:** Enables authentication and eligibility verification. It does not, by itself, authorise binding online elections. Unless a specific national legal basis exists, the DDA should describe itself as suitable for consultative voting only.
- ➔ **Accessibility:** Goes beyond WCAG 2.1 AA compliance — plain language, multilingual guidance, paper-to-digital logging, and non-digital fallback channels are all part of the requirement.

The Design of Digital Democracy (by Gianluca Sgueo)

- ➔ Gianluca, author of the book “The Design of Digital Democracy”, drew on Italian case studies to surface a persistent tension: citizens come to digital participation platforms with commercial-app expectations — **simplicity, speed, personalised experience** — and encounter the inherent complexity of governance. The resulting “**delusional reaction**” is not a user failure; it is a design failure.
- ➔ Two problems he identified as central: (1) the experience citizens want, and (2) the outcomes they expect. One Italian consultation reached 150,000 participants but was initially disorganised. Digital singularity —

personalised mass participation — is both the promise and the risk. The design challenge is drawing the line between a **public agora** and a **personalised interface** without turning participation into content consumption.

Hybrid and Hyperlocal Participation - Citizen Dialogue Kit (Jorgos Coenen)

- ➔ Jorgos presented the Citizen Dialog Kit (CDK) — physical survey devices deployed in public spaces — as a model for what hybrid and hyperlocal engagement can accomplish. Citizen dialogue kits have inclusive designs, featuring anonymity, large, readable fonts, and multilingual accessibility.
- ➔ Evidence from the Citizen Dialog Kit (CDK) challenged the assumption that platform features drive engagement; instead, **location is the primary determinant of who participates** (e.g., devices near skateparks reach youth, while those near cemeteries reach seniors).
- ➔ **On GDPR:** the CDK's current setup collects no personal data; the city owns all data.
- ➔ **On user experience:** novelty, ease of use, and local relevance drive engagement. Children under 12 and adults 31–60 rate the format most positively; teens find it too long; seniors find it slightly difficult but broadly accessible.
- ➔ **His framing for the INNOVADE platform:** hybrid engagement functions best as input for later deliberative stages, or as validation with a wider audience. Its value is not only data — it is volume and visible public presence.



Panel 1 discussions

2.2 Workshop 1 – Applying Technological Trends to Digital Democracy

The first workshop utilized three scenarios, set in three municipalities who are INNOVADE project partners: Geel, Thessaloniki and San Martín de la Vega, to test how technological trends impact core app features in different size municipalities. Each group worked through three specific challenges (barriers) linked with defined topics aligned with Digital Democracy App features: (1) Project Proposal; (2) E-Voting and (3) Citizen Rewarding.

Groups used the same method: initial solutions were proposed, then subjected to Red Team challenges, and finally refined into consolidated responses.

Each group was presented a short video that introduced the municipality, the topic of the scenario and challenges that needed to be overcome and given a short demo of the digital democracy app feature prototype.

Group 1: Proposal Management

DIGITAL DEMOCRACY APPLICATION NEW DIGITAL TRENDS			
1 Proposal Management (E-deation)			
DDA FEATURES			
Proposals	Geospatial impact	Democraseek	
- allows CITIZENS to submit structured project ideas - using digital forms with descriptions, tags, photos, etc. - comment, feedback, support	- AI services for GOV users - generate participation heatmaps - estimate the social or environmental impact of proposed projects at the municipality level.	- AI chatbot for ALL users - Answers digital democracy related questions - adapt its interaction style to the profile, needs, etc.	
WORKSHOP			
TASK	I	II	III
BARRIER	Overly complex user interfaces and language accessibility. Inclusivity & Accessibility	Strict data minimization when collecting inputs with user identity verification. Data & Privacy	Low trust in digital platforms often stems from a lack of institutional responsiveness Transparency & Trust
SOLUTIONS	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.
RED TEAM CHALLENGES	- How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users?	- How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users?	- How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users? - How can we ensure that the interface is accessible to all users?
RESPONSES	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.	- Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions. - Use a simple, intuitive interface with clear instructions.

Figure 4 Group 1 poster work

First scenario centred on the “Green Neighbourhoods 2035” initiative, where the municipality of Thessaloniki in Greece aimed to crowdsource citizen ideas for urban improvements like pocket parks and pedestrian safety.

Using the INNOVADE Digital Democracy App’s (DDA) **proposal management**, **geospatial analysis**, and **AI chatbot (DemocraSeek)** features, the goal was to transform simple ideas into actionable solutions.

The session was organised around **three core challenges (barriers)**:

- ➔ the accessibility and usability of the platform for a diverse population;
- ➔ data minimisation and identity verification;
- ➔ building and sustaining citizen trust in the platform and in the institutional actors behind it.

🔗 Challenge 1 — Overly Complex User Interface and Language Accessibility:

The challenge concerns keeping the platform accessible to all citizens regardless of digital literacy, age, or language background. A blank-page interface requiring free-form input risks being perceived as threatening, particularly for less confident or less experienced users.

Initial Solutions: Non-digital alternatives and in-person contact points were proposed first to address the generational divide, broadly accepted as a necessary baseline. To reduce the intimidation of a blank interface, several solutions converged: limiting options to reduce cognitive load, providing pre-defined submission categories with AI-assisted suggestions, an entry-point question on the homepage to orient users, an algorithm-based guidance tool, and city-level pre-brainstorming sessions. To manage submission volume and redundancy, duplicate-prevention (surfacing similar proposals before submission) and thematic clustering of proposals into buckets were proposed. Finally, an intermediate feedback mechanism and a visible proposal stage tracker were proposed so citizens could follow what happens to their submissions.

The Red Team underlined that layering too many features simultaneously risks producing an over-engineered platform that is harder, not easier, to use leading to the accumulation of guided tools, AI suggestions, and pre-brainstorming sessions may collectively create a system too complex to maintain or navigate. On proposal clustering, the red team questioned who decides whether two proposals are similar enough to group, noting that any such system requires significant and sustained human oversight. On the stage tracker, the concern was one of misaligned expectations: if citizens submit ideas implying a dedicated implementation team but nothing visibly moves, trust erodes quickly. The tracker is only meaningful if it reflects a credible process with honest framing.

Refined Response: The group recommended clarifying the platform's core purpose before layering additional features. On clustering, the intent was restated as grouping for human review rather than automatic merging, with oversight built in from the outset. The stage tracker should be accompanied by honest framing, making clear that this is an idea-submission tool, not a project-funding mechanism and by realistic timelines. The deeper motivational concern was also acknowledged: if citizens do not believe their input leads to anything concrete, they will not participate.

🔗 Challenge 2 — Data Minimisation and Identity Verification:

The challenge presented to the group was to balance the need for identity verification, that is necessary to prevent manipulation and ensure data quality, with the principle of strict data minimisation and the accessibility barriers that login requirements create.

Initial Solutions: The group proposed a tiered access model: open browsing without registration, with verified accounts required only for actions carrying civic weight such as voting or commenting. User data was identified as necessary for quality assurance, verifying who has voted and ensuring equitable representation, but collection should be justified point by point against these purposes. Physical participation pathways were proposed for non-digital inclusion. On visibility, the group noted that full anonymity undermines the sense of community, while full transparency raises privacy concerns for some citizens.

The Red Team pointed out that even a minimal login requirement remains a significant barrier for users with lower digital literacy, potentially excluding a portion of the population the platform is designed to reach. The red team pushed further on data minimization: beyond verification and follow-up, what personal data is actually needed? On physical pathways, the risk of double-counting was raised: if citizens can participate both physically and digitally, how can the platform ensure the same person does not vote twice? The trust implications of anonymity were also questioned: invisible identities may reduce the credibility of contributions.

Refined Response: A pragmatic boundary was agreed: physical participation should be facilitated throughout the process, but the final vote should be conducted digitally only, providing a clean and auditable record while still allowing non-digital engagement at earlier stages. On visibility, the group resolved the tension through differentiated settings: proposal authors' names visible to logged-in users, but not to anonymous visitors, allowing citizens to self-select their level of exposure without forcing a binary choice between full transparency and full anonymity.

🔗 Challenge 3 — Building and Sustaining Citizen Trust

The challenge addresses institutional legitimacy: do citizens trust that their municipality has the capacity and the will to act on their input? As the group framed it: "Do I trust that my municipality has the means to deal with my input?"

Initial Solutions: The single initial solution proposed was to actively communicate success stories: concrete examples of citizen input leading to visible outcomes, as the primary mechanism for building trust in the platform and in the institution behind it.

The Red Team pointed out that a new platform has no success stories to share. Relying on a strategy that requires a track record to function is not viable at launch. The objection went deeper: even in established contexts, citizens who have seen past decisions made without consultation, or against expressed preferences, may be sceptical of a municipality that now presents itself as eager to listen. Success stories alone cannot carry the weight of institutional trust-building where that trust has already been eroded.

Refined Response: The group reframed the trust-building strategy around transparency, honesty, and political commitment rather than retrospective communication of outcomes. In the absence of local examples, inspirational cases from other municipalities should be used to make participation feel tangible and credible. Political commitment should be made concrete and binding: elected officials should publicly commit to a defined budget and honour it regardless of electoral cycles. The tone of all communications should be deliberately honest and problem-oriented, positioning citizens as partners rather than passive respondents, with a dedicated human contact point always available alongside the digital interface.

Group 2: E-Voting

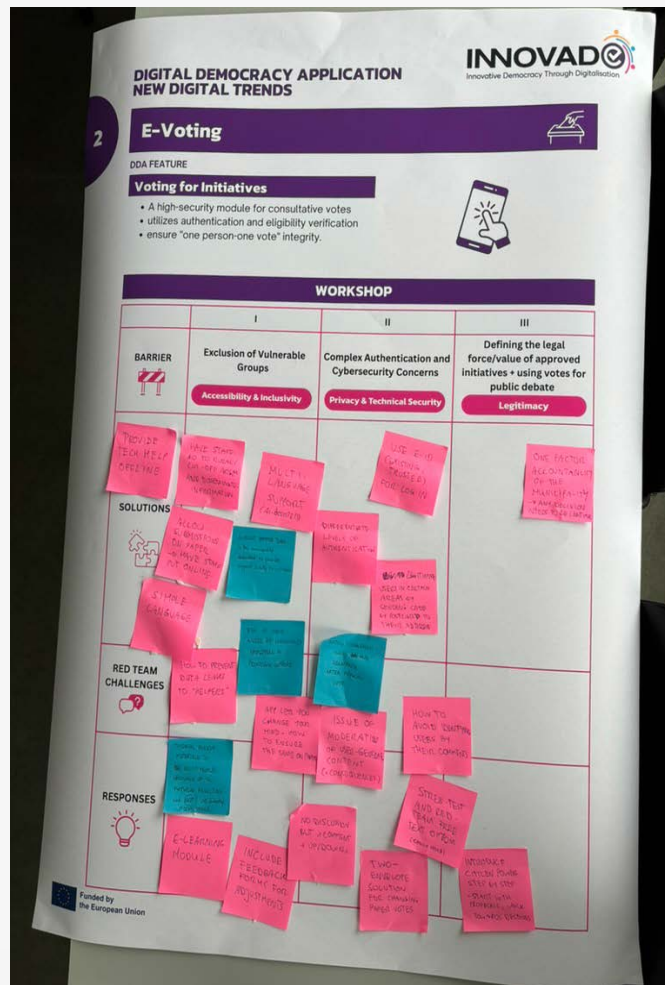


Figure 5 Group 2 poster work

The **second scenario** was set in the municipality of Geel in Belgium. It involved a consultative vote regarding local policies, such as making the historic city centre car-free on weekends or selecting between various greening initiatives.

The group's objective was to define **voting modalities** under **initiatives** feature: commenting, feedback, while ensuring the highest level of security, broad accessibility, and a hybrid participation model guaranteeing inclusion.

Three **challenges** structured the discussion:

- ➔ exclusion of vulnerable groups;
- ➔ complex authentication and cybersecurity concerns;
- ➔ the legal force and legitimacy of consultative e-votes.

🗨️ Challenge 1 – Exclusion of Vulnerable Groups

A digital-only system risks capturing only the voices of young, tech-fluent citizens, leaving behind elderly residents, people with limited digital literacy, and those from immigration backgrounds with lower familiarity with institutional digital tools.

Initial Solutions: The group's primary response was a hybrid participation model: municipalities should maintain physical participation options alongside the app. Municipal facilities should serve as assisted access points where staff provide tutorial-based guidance, not logging in on someone's behalf, so citizens can practise the process before casting their actual vote. Full multilingual support covering all languages spoken in the country was identified as essential, with AI-assisted translation validated by native speakers. Plain language throughout the interface was equally emphasised. A French initiative in which a bus travels through villages to reach older and isolated residents was cited as an inspirational model for proactive outreach. A feedback form was also proposed to allow citizens to flag accessibility problems encountered during the process.

No formal **Red Team** objection was raised against the hybrid model, but the group itself identified a procedural complexity: how can municipal employees helpfully assist someone through a process as sensitive as logging in and casting a vote without compromising the secrecy or integrity of that vote? The boundary between assistance and undue influence requires careful procedural definition.

Refined Response: The group converged on the hybrid model as the non-negotiable foundation. Assisted access at municipal support points should be tutorial-based rather than involving direct account management. Proactive outreach, drawing on mobile municipal service models, should be considered to reach isolated or immobile citizens. The feedback mechanism should be integrated to capture ongoing accessibility issues and inform iterative improvements.



Group 2 working on the Scenario 2

🔗 Challenge 2 — Authentication and Cybersecurity

The challenge is to guarantee one-person-one-vote integrity without creating an authentication system so complex it excludes less tech-savvy users, or so data-hungry it undermines citizen trust in the privacy and security of the platform.

Initial Solutions: The group's central proposal was to delegate authentication to existing national e-ID infrastructure rather than building from scratch, offloading the most sensitive security questions to an established framework while leveraging existing citizen familiarity. Differentiated authentication levels were discussed for lower-stakes interactions. On vote-change parity between digital and physical participants, a paper envelope model was proposed: citizens take their ballot home, retain the option to change their mind, and return the final vote only when certain.

Two significant concerns were raised by the **Red Team**. First, on content moderation: automated moderation with transparent explanations and consequences offers one solution, but it introduces traceability risks: a system capable of tracking users could in principle be used against legitimate political speech if the municipality or a future government chose to misuse it. Second, the premise of pushing digital voting was questioned in contexts where paper-based systems already function reliably: trust in digital systems may need to be built gradually, drawing on national-level examples and existing institutional credibility rather than asking citizens to trust a new tool from scratch.

Refined Response: The group's refined position anchors authentication to existing national infrastructure: the e-ID, minimising both the data footprint and the trust deficit. Differentiated authentication levels remain open for lower-stakes features. The paper envelope model offers a practical solution for vote-change parity. On moderation, the group recognised that no fully satisfactory automated solution exists: the governance of moderation: who decides, on what criteria, with what accountability, requires explicit political and institutional definition before the feature is deployed.

🔗 Challenge 3 — Legal Force and Legitimacy of Consultative E-Votes

What does a consultative e-vote mean in legal and political terms? Does a majority outcome carry any obligation for the municipality, and can the feature eventually be extended to binding decisions?

Initial Solutions: The group proposed that municipalities should provide a formal motivation whenever they choose not to follow a consultative vote outcome, creating soft accountability without legally binding the result. To prevent citizen disillusionment over financially unachievable proposals, a defined budget envelope for each vote should be published from the outset. Two reference models were cited: the EU Citizens' Initiative, as a model for formalising participatory rights at the institutional level; and the participatory budget model, as the most direct precedent for binding e-voting at the local level.

No formal **Red Team** objection was recorded, but the implicit tension running through the discussion was between the flexibility of a consultative tool on one hand, and the democratic credibility that only a binding commitment can provide on the other. The risk of citizen disillusionment when voted-for initiatives fail to materialise for reasons that were never communicated was acknowledged as a fundamental design concern.

Refined Response: The group proposed a graduated approach to legal force: consultative votes carry a formal motivation requirement when not followed; participatory budget-style votes carry a binding commitment tied to a pre-published budget envelope; and the EU Citizens' Initiative model informs the longer-term development of the feature toward more formalised citizen initiative rights at local level. A key precision here is that non-binding status for a consultation is acceptable, provided this is made explicit from the outset: the scope and actual influence of any consultative process must be communicated transparently at the start, so that participants are not led to expect binding outcomes that the process was never designed to deliver.

Group 3: Citizen Rewarding and Engagement

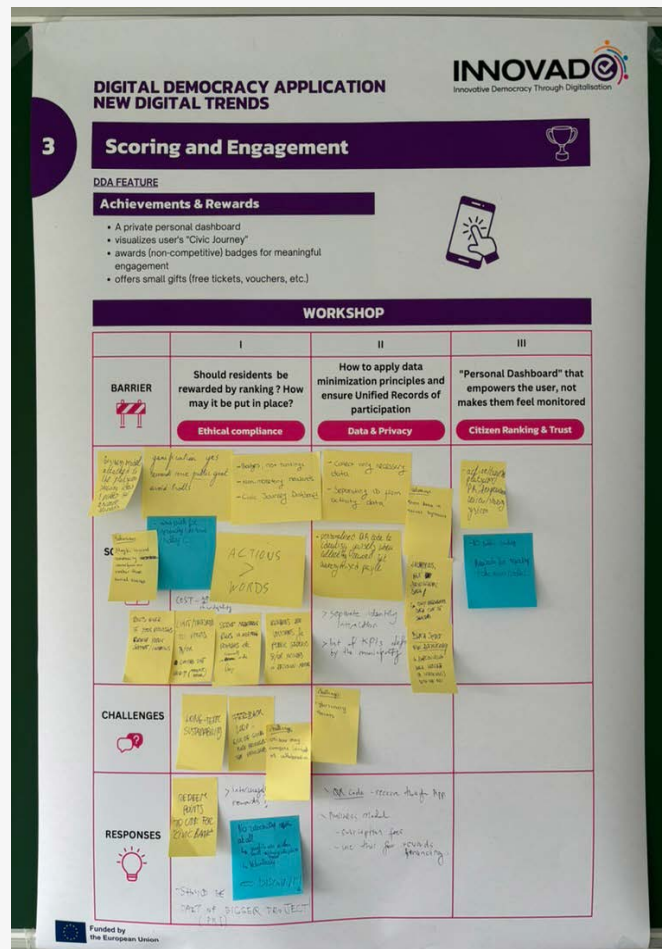


Figure 6 Group 3 poster work

The third scenario, set in San Martín de la Vega, Spain, addressed historically low engagement in local government by introducing a **"Citizen Rewarding" feature** during a consultative vote on green spaces. This profile aimed to recognize and reward civic engagement across both digital and physical actions, such as attending town hall meetings.

Three **challenges** structured the discussion:

- ➔ the ethical dimensions of rewarding and ranking participation;
- ➔ data minimisation and the safe synchronisation of physical and digital engagement records;
- ➔ and the design of a personal dashboard that empowers rather than monitors citizens.

🕒 Challenge 1 – Ethical Dimensions of Rewarding Participation

The core tension is whether civic participation should be rewarded or ranked at all, and if so, how to do so without amplifying existing inequalities: particularly the digital divide, the generational divide, and the gender gap.

Initial Solutions: The group questioned whether rewards should reflect the quality of a proposal or simply the act of participation. A blind evaluation mechanism was proposed: the system retains a record of a user's past contributions, but other users cannot see a submitter's reputation when viewing a new proposal, separating quality assessment from social visibility. Points were suggested to carry a limited validity period to incentivise sustained and relevant engagement. Rather than direct monetisation, rewards could take the form of tax reductions, discounts on public services, or access to community goods.

Sustainability and visibility concerns were raised by the **Red Team**: public rankings may deter rather than motivate less confident participants. A trolling and quality problem was anticipated: if points are awarded for volume of participation, users may submit large numbers of low-quality proposals to inflate their scores. Most fundamentally, the equity and inclusion risk was flagged: any ranking system tends to reward those with the most time, resources, and digital fluency, potentially deepening the very divides the platform is designed to address.

Refined Response: The group moved away from individual competition entirely, proposing a collective reward model, a “collective hero” profile, in which rewards benefit the entire community as a public good rather than accruing to individual users. Rewards were tied to proposal adoption by the municipality rather than submission volume, removing the incentive to submit low-quality content in bulk. Community moderation through up and down voting was proposed to distribute quality control across the user base. Active inclusion outreach targeting expats and offline populations was emphasized to ensure those least likely to engage digitally are proactively supported.

🕒 Challenge 2 — Data Minimisation and Safe Synchronisation of Physical and Digital Participation

How to record and recognise participation across both physical and digital channels — so that attending a town hall receives equivalent recognition to voting digitally — without creating a surveillance infrastructure or collecting sensitive personal data beyond what is strictly necessary?

Initial Solutions: The group proposed strict adherence to data minimisation principles, collecting only the data points strictly necessary for the functioning of the reward system. Aggregated data and IP-based identification were suggested as ways to protect individual identities while still enabling participation tracking.

IP-based identification was immediately challenged by the **Red Team** as conflicting with data minimisation goals: IP addresses can constitute personal data and their use for identification introduces traceability risks. The question of data governance was raised and left partially unresolved: who owns the data generated by the platform, and who is responsible for the infrastructure on which it runs? Cybersecurity was identified as a fundamental and cross-cutting concern affecting all aspects of data storage and interaction.

Refined Response: The group developed a structural privacy-by-design approach. The central proposal was to decouple user identity from activity data, and to decouple platform interactions from the storage of that data, so that engagement records are not automatically linked to identifiable profiles. Data should be stored in secure, preferably local systems. For recognising physical participation, personalised QR codes were proposed: a citizen attending a town hall presents a QR code that records attendance for reward purposes while maintaining an anonymous profile on the platform, elegantly bridging the physical-digital gap without transmitting or storing personal data in connection with the participation record.

🕒 Challenge 3 — Designing a Dashboard that Empowers Rather than Monitors

How to present a citizen’s participation record in a way that feels motivating and empowering rather than surveillant or judgmental, while using aggregated data to ensure no demographic group is systematically underrepresented, and preventing platform misuse such as hate speech or bot manipulation?

Initial Solutions: The group proposed reorienting the dashboard away from monitoring entirely, offering rewards not for accumulating points but for actively contributing to platform integrity — for example, by reporting fake news or misuse. The group also recognised that for many citizens, the intrinsic motivation of contributing to a meaningful cause is itself a sufficient reward, and that a formal ranking system may undermine this by making participation feel transactional.

Red Team underlined that the citizens may be wary of any system that tracks and displays their behaviour, even privately, and may find non-material rewards unconvincing. On recognising existing volunteer work performed outside the app, the initial proposals did not resolve the practical and definitional questions this raises — what counts, who validates it, how it is recorded.

Refined Response: The group proposed eliminating public ranking entirely. The dashboard should present only the individual user’s own civic journey, with no comparative ranking visible to others. To add flexibility and personal meaning, reward points should be made transferable: users can donate them to finance specific causes

or transfer them to other citizens, transforming rewards from personal assets into tools for collective action. Clear, accessible information about how data is stored and used should be provided throughout the platform, and a feedback mechanism should allow users to rate and share their experience, giving citizens an ongoing voice in how the system evolves.



Group 3 working on Scenario 3

2.3 Expert Panel: Regulatory and Social Landscapes

The second expert panel, moderated by Christian Fuchs and opened by Laurien Coenen, introduced participants to issues of ownership, participation framing, and trust within digital democracy. Two experts gave separate presentations on topics surrounding social trends and AI in digital governance.

AI, Bots, and Disinformation (by Brahim Zarouali)

Politicians have always sought innovative ways to persuade and influence voters – this most recent iteration is epitomized in “computational politics,” or the use of social media, algorithms, and big data to reach and influence political audiences. Three trends – political bots flooding digital platforms, political deepfakes used as effective manipulation tools, and the use of large language models (LLMs) for (biased) voting advice and policy explanations – are illustrative of computational politics. The key takeaways from these trends include needs for heightened legal regulations to limit manipulation, greater platform responsibility to reduce AI-driven content and protect users, and enhanced digital literacy among citizens.

Countering Fatigue and Tokenism in Democratic Innovation (by Hanno Scholtz)

The crisis of democratic innovation is the tension between polarization and populist trends and the failure of outdated models of democracy to address modern challenges. “Tokenism” in democratic participation refers to a portion of the population that is better equipped and socially positioned to take part in democratic participation. Because the participating portion of the population operates on a level of privilege, this is not representative of a whole society. Thus, an institutional response must make citizen decisions binding rather than consultive and integrate representation into the architecture of innovation.



PANEL 2: Social Trends in governance of Digital Democracy

2.4 Workshop 2 – Governance Requirements for Digital Democracy

Workshop 2 employed a **Q-sorting methodology** to help participants map out project priorities and governance requirements for a digital democracy platform.

The goal of the exercise was to determine which requirements were baseline essentials versus “nice-to-have” features. Participants, representing perspectives from technology development, the public sector, and academia, were tasked with taking all stakeholder viewpoints into account while reasoning through their assigned organizational contexts.

The exercise statements were intentionally kept a bit vague to draw on unique personal interpretations and reveal how different stakeholders view the same principles.

The exercise used a color-coded system to categorize different organizational focus areas:

- ➔ Green = Focus on organisational structures (i.e., a structural embeddedness of citizen participation)
- ➔ Blue = Focus on a specific digital citizen participation project or initiative
- ➔ Yellow = Focus on citizens and how to be accessible and inclusive
- ➔ Orange = Focus on co-workers and how they feel, learn and behave in participation processes.
- ➔ Mint green = Focus on the digital and legal side of things.
- ➔ White = Focus on citizen participation from an idealist, philosopher or dreamer point of view—what should it ideally be.

Workshop Results: Identifying Core Priorities

Group 1

- ➔ **Focus & Dynamics:** This group worked from the context of an e-ideation scenario and engaged in a **“difficult discussion”** regarding the fundamental hierarchy of project needs.
- ➔ **Key Debate:** The primary point of contention was whether **committed politicians** or a **dedicated budget** served as the more essential baseline requirement.
- ➔ **Priorities:** The group generally reached consensus that **internal organizational structures** (standard green cards) were “nice-to-have” basics, but they struggled more with prioritizing high-level political elements.

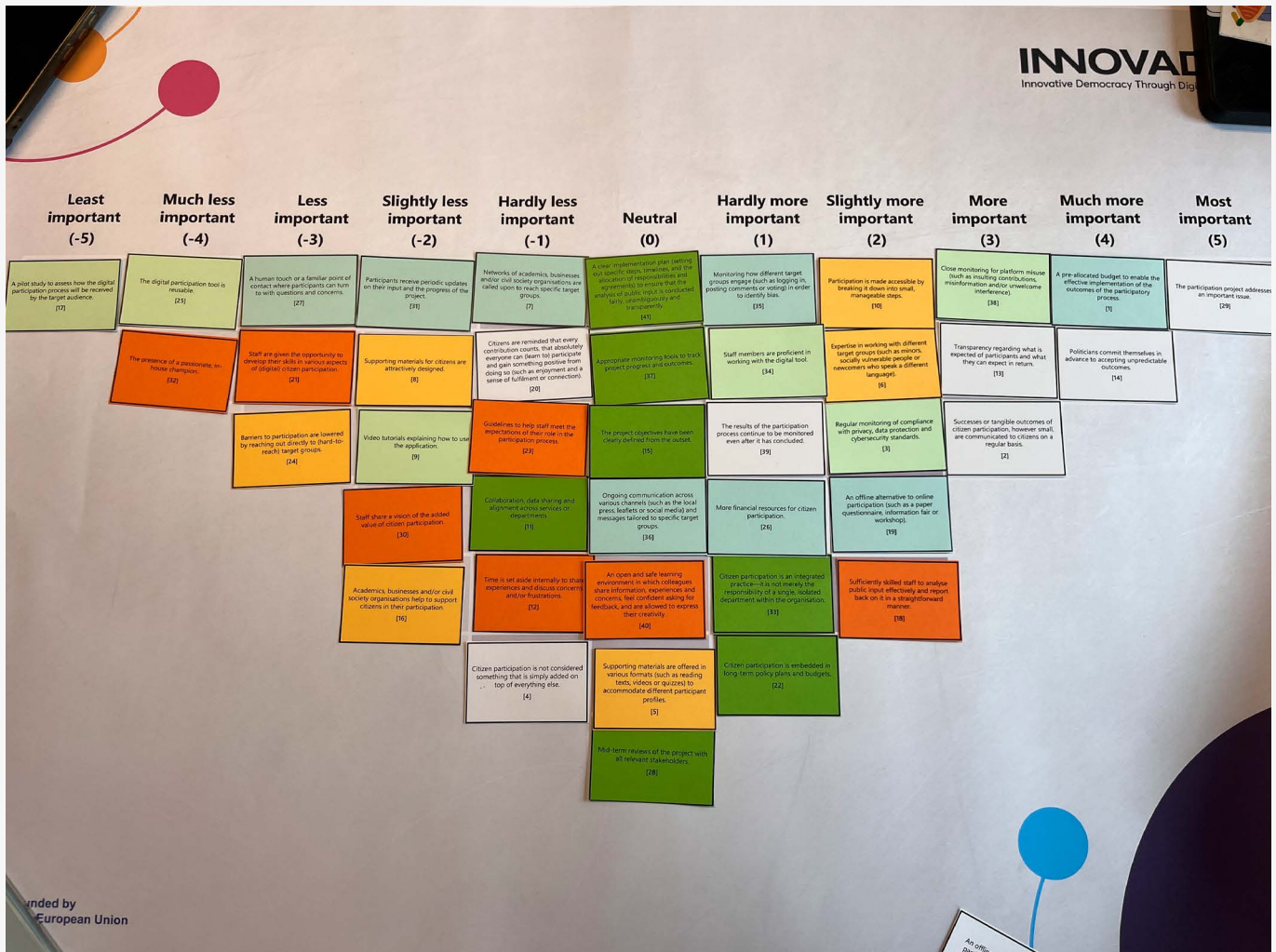


Figure 7 Group 1 Q-sorting results

Group 2

- ➔ **Focus & Dynamics:** Described as the most **technology-centered** and **project-centered** team, this group focused on the practicalities of implementing a digital voting system.
- ➔ **Key Focus:** Unlike the other teams, Group 2 placed a high value on **coworker development and support** (orange cards), emphasizing the need for staff to be properly equipped to run participation processes.
- ➔ **Resource Constraints:** The local government representative from this context consistently flagged that certain high-level requirements—such as **dedicated pilots, integrated practice**, and **specialized multilingual staff**—were often too burdensome for smaller towns with limited resources.

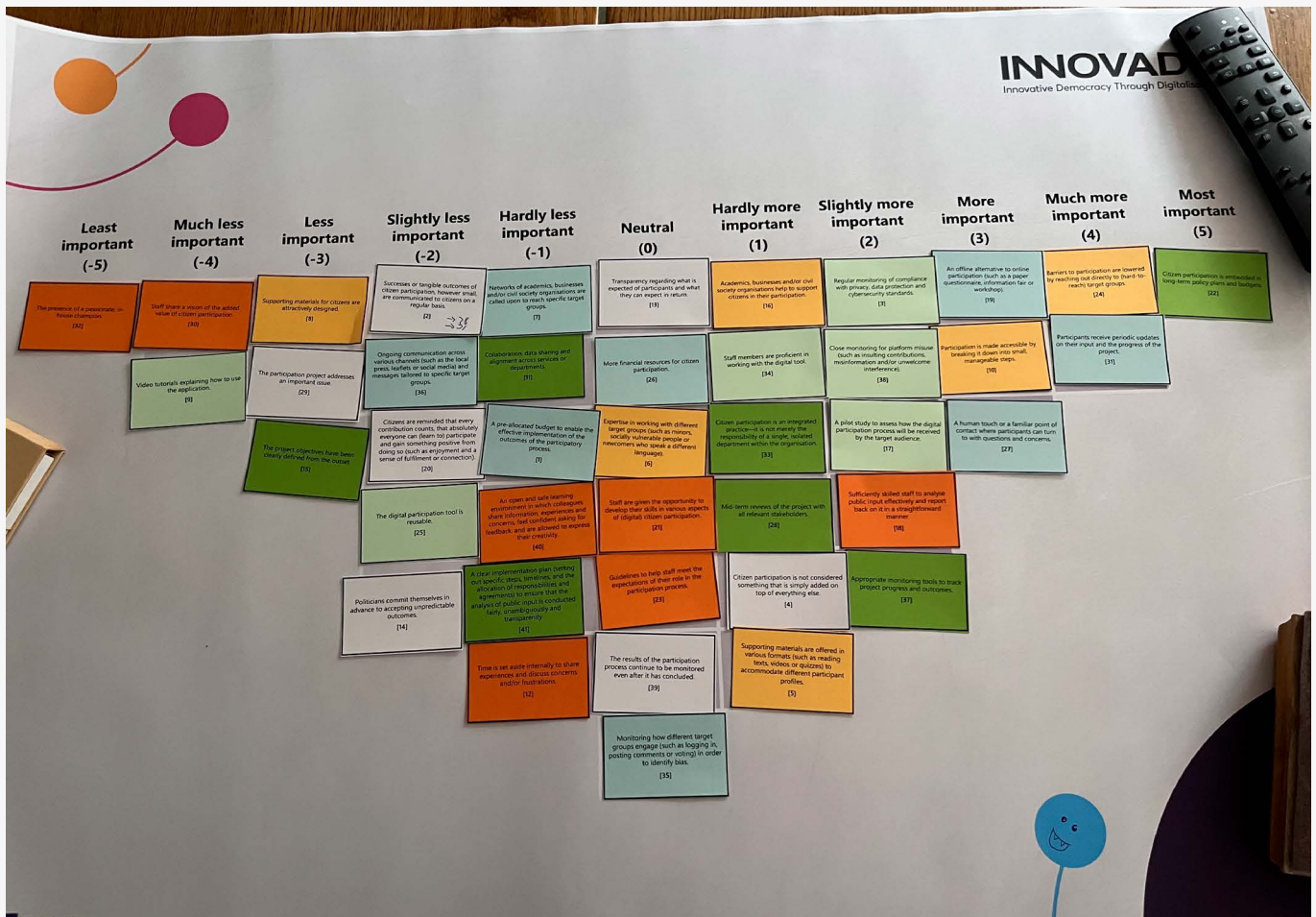


Figure 8 Group 2 Q-sorting results

Group 3

- ➔ **Focus & Dynamics:** This group was famously dubbed the **"dreamers"** of the workshop due to their idealistic approach to digital democracy.
- ➔ **Key Focus:** Their priorities leaned heavily toward **high-level democratic ideals** and "utopian" concepts (yellow cards).
- ➔ **Neglected Areas:** In contrast to Group 2, this team paid **"very little attention" to the needs of internal coworkers** or the practicalities of staff development.
- ➔ **Specific Rankings:** They marked **strategic integration** (embedding participation in long-term plans) and **political commitment** as essential, while ranking the need for an **"in-house champion"** (a passionate project leader) as a low priority.

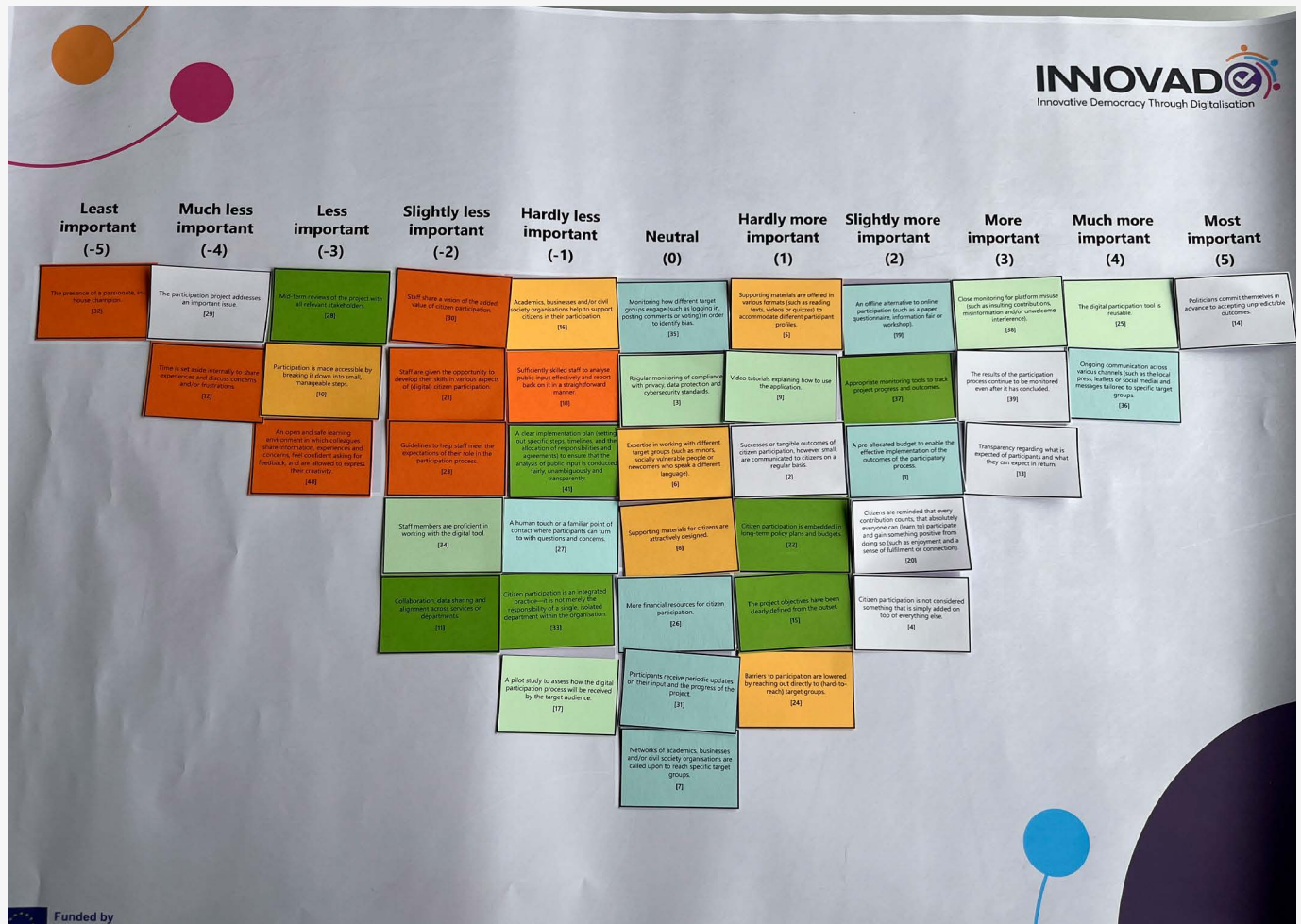


Figure 9 Group 3 Q-sorting results

Cross-Group Consensus

Despite different organizational mindsets, the groups arrived at several **“Very High Priority”** essentials that were considered non-negotiable for a successful platform:

- ➔ **Strategic Integration:** Citizen participation must be embedded into long-term policy plans and institutional budgets from the start.
- ➔ **Political Commitment:** Leadership must commit in advance to accepting and acting upon unexpected or challenging outcomes from the process.
- ➔ **Transparency:** Absolute clarity is required regarding process rules, citizen expectations, and how results will be used.
- ➔ **Inclusion and Accessibility:** Maintaining a permanent **offline alternative** is essential to ensure those without digital access are not excluded.
- ➔ **Communication & Outreach:** Ongoing, multi-channel communication tailored to different target groups—including businesses and NGOs—is vital to lowering participation barriers.
- ➔ **The Sustainability Gap:** A major deficiency identified across all groups was the lack of a **long-term business strategy**. Participants suggested that platforms must move beyond project-based funding by exploring revenue models such as subscriptions for public authorities, premium service add-ons, or even nominal participation fees for citizens.
- ➔ **Software Reusability:** To justify the high cost of investment, the groups emphasized that platforms must be designed for **multi-participation and reusability**, allowing different organizations to use the same base software while personalizing it for their specific needs.
- ➔ **No “One-Size-Fits-All”:** The conclusion was that while a small set of universal values (like transparency and political commitment) applies everywhere, the broader governance framework must be **configurable to the specific resources, size, and context** of the implementing organization.

The exercise also highlighted areas where priorities diverged based on organizational philosophy and personal experience. Some teams adopted a **pragmatic, technology-centred** approach, focusing heavily on coworker support and digital tools. Other teams were characterized as **“dreamers”** who prioritized high-level democratic ideals but paid significantly less attention to the practical needs of the internal staff running the processes. Additionally, some traditional requirements—such as specialized staff for reporting and analysis—were ranked lower because participants noted that **AI can increasingly handle these technical tasks**.



Group 3 working on Q-sorting exercise

3. Discussion

The findings of LL5 highlight that a flourishing digital democracy requires more than functional software; it requires a robust societal and regulatory ecosystem.

- ➔ **Interlocked Barriers:** Technical solutions cannot fix structural barriers alone. Connectivity, digital skills, and trust are structurally interlocked and must be addressed through public access points and mobile-first design.
- ➔ **Regulatory Complexity:** The app must navigate seven distinct regulatory domains, including the **AI Act** (which classifies AI that influences voting behaviour as high-risk) and the **GDPR** (which warns against classifying users through analytics).
- ➔ **Managing Expectations:** There is a persistent tension between the “commercial-app” expectations of citizens (ease and speed) and the inherent complexity of democratic governance. Failing to bridge this gap leads to citizen disillusionment.
- ➔ **The Importance of Location:** Hybrid engagement evidence showed that **location determines who participates** more than platform features do (e.g., devices near skateparks reach youth; those near cemeteries reach seniors).
- ➔ **European Digital Sovereignty:** In light of threats from bots and deepfakes on US-based platforms, building **European digital alternatives** and fostering digital literacy is no longer optional for democratic integrity.

Based on the LL5 findings and the Day 1 synthesis, the following actions should be considered for future project development:

- ➔ **Regulatory Compliance:** Technical development must explicitly address the seven regulatory domains, specifically ensuring that **content moderation** includes due-process mechanisms like notice-and-action and challenge rights.
- ➔ **GDPR Protection:** The platform must not classify users (e.g., “frequent objector”) based on behaviour; **analytics must remain aggregated** to avoid exposing political opinions through metadata.
- ➔ **Countering Misinformation:** Because major platforms are often beyond EU enforcement, the project should focus on building **digital literacy** and European alternatives that prioritize transparency in ranking and “trending” logic.
- ➔ **Liquid Democracy:** WP3 should assess the feasibility of **delegation features** (Liquid Democracy) to address democratic fatigue by allowing citizens to choose whether to engage directly or delegate their input to trusted actors.
- ➔ **Accessibility and Infrastructure:** The platform must be mobile-first and functional on 3G connections, with support for offline preparation of contributions to accommodate poor connectivity in rural areas.
- ➔ **Identity Verification:** A spectrum of authentication options—from the EU Digital Identity Wallet to SMS codes and in-person assistance—must be supported to maintain inclusion.
- ➔ **App Feature Refinement:**
 - ➔ **Ideation:** Implement AI clustering at the citizen proposal phase so users can group similar ideas before submission.
 - ➔ **Voting:** Test different headings (e.g., “Opinion Mapping”, “polling”) to manage user expectations of the “legal force” of their vote.
 - ➔ **Scoring:** Remove public ranking dashboards to prevent monitoring anxiety; focus on private “Civic Journey” dashboards and transferable reward points.
- ➔ **Hybrid Feasibility:** Conduct a technical and financial feasibility check for using “**totems**” (like the Citizen Dialog Kit) as physical participation points in municipalities like San Martín de la Vega.

4. Feedback and Evaluation

To assess the participants' experience and collect recommendations for improvement, an online evaluation survey was conducted following Living Lab 5. In total, 14 participants completed the questionnaire, representing a wide range of professional backgrounds — including academia and research, civil society organisations, government institutions, the private sector, and media — as illustrated in the figure below. This diversity ensured that feedback reflected multiple perspectives across the democratic innovation ecosystem.

Quantitative Evaluation

Participants were asked to rate different aspects of the event, including overall experience, structure and content, speakers' expertise and relevance, venue, catering and logistics, pre-event communication, and interactivity of the format.

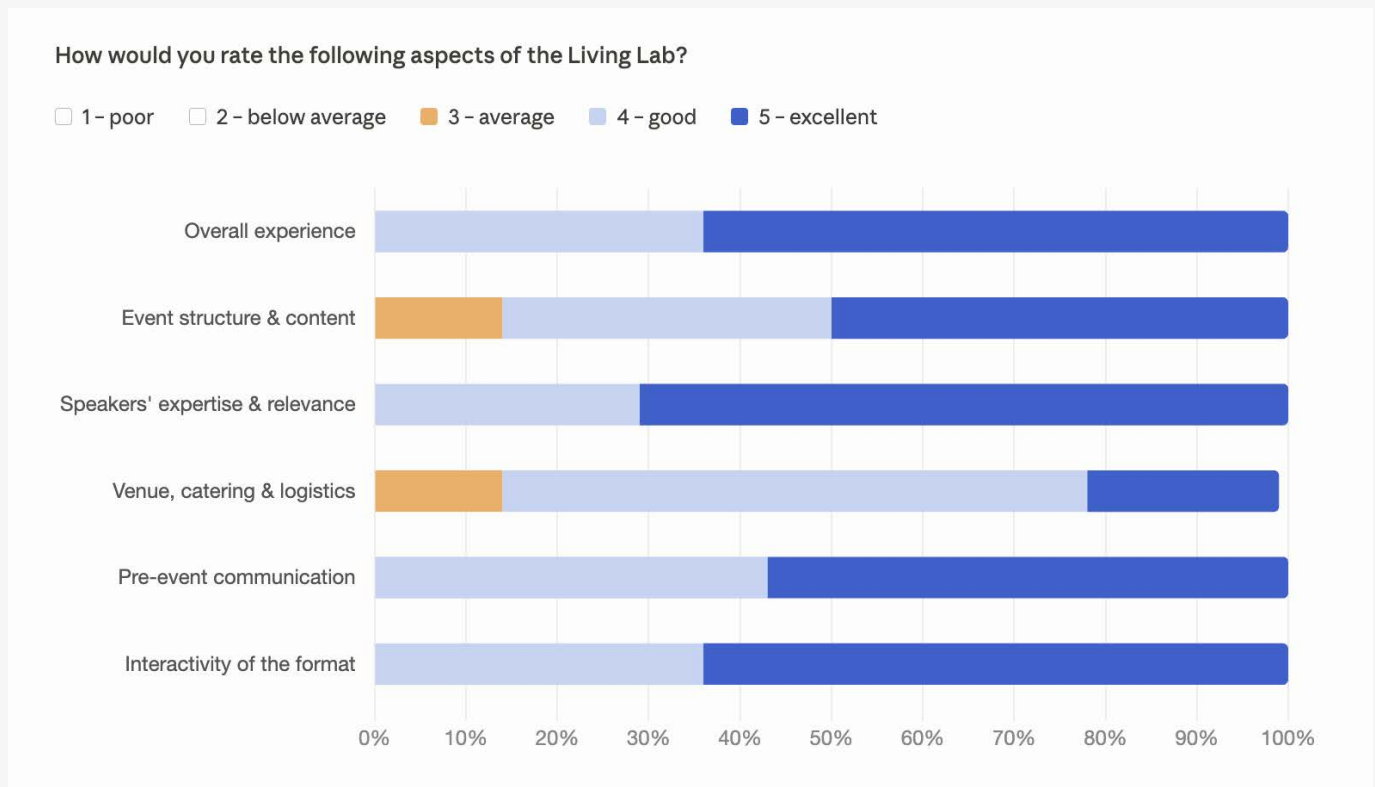


Figure 10 Living Lab 5 Evaluation

The results show a very positive overall evaluation:

- ➔ **Speakers' expertise and relevance** received the highest average score (4.79/5), confirming the strong calibre and relevance of the invited contributors and the value participants placed on the depth of expert knowledge presented.
- ➔ **Overall experience** and **interactivity of the format** were equally well rated (4.64/5 each), reflecting both the quality of the event's delivery and participants' appreciation of the participatory and deliberative elements of the programme.
- ➔ **Pre-event communication** also scored highly (4.50/5), suggesting that logistical and informational preparation ahead of the Lab was well received.
- ➔ **Event structure and content** received a positive score (4.43/5), though a small number of respondents indicated that the programme was occasionally ambitious in scope and that more time for in-depth discussion and deliberation would further strengthen future editions.
- ➔ **Venue, catering and logistics** received the lowest relative score (4.07/5), with several comments pointing to the limited capacity of the seminar room as the primary constraint. Respondents noted that the space

felt tight given the number of participants, and that a larger or more flexible venue would better serve the ambitions of the Living Lab format.

Overall, the feedback confirms that Living Lab 5 achieved its objectives and was perceived as a well-structured, intellectually stimulating, and highly relevant event.

Qualitative Feedback

In the open comment section, participants praised the event as “fantastic” and “insightful, engaging, and highly relevant to current debates on digital governance and democratic innovation,” highlighting the interdisciplinary perspectives and the effort to connect technological solutions with democratic values and public trust. The interactive workshop sessions and debate moments were consistently identified as the most energising elements of the programme.

Several practical recommendations emerged. Respondents suggested that more time be allocated for deliberation and debate, that the programme be kept focused to avoid overloading a single day, and that stricter time management be applied to keep sessions on track. The venue was noted as a limitation by multiple participants, with calls for a more spacious setting in future editions. One respondent also proposed including a social event in the evening — such as a local sightseeing tour or closing dinner — to strengthen connections among participants and project partners.

One respondent underlined the importance of extending discussions to cover the long-term governance risks of digital participation systems and the measurement of democratic impact beyond platform engagement metrics.

These valuable insights will be carefully taken into account in the planning of future Living Labs to ensure an even more dynamic, inclusive, and user-centred experience.

5. Conclusion

In conclusion, Living Lab 5 successfully shifted the focus from the mechanics of digital tools to the broader societal, technological, and regulatory ecosystem necessary for a flourishing digital democracy. The lab underscored that for a platform like INNOVADE to be effective, it must be structurally resilient, legally compliant, and institutionally integrated.

Main Findings

- ➔ **Interlocked Barriers:** Technical fixes alone are insufficient. Access, digital skills, and trust are **interdependent barriers**; for instance, location (where physical “totems” are placed) is a stronger determinant of participation than specific app features.
- ➔ **The Regulatory “Red Line”:** The app must navigate **seven regulatory domains**, most notably the **AI Act**, which classifies AI used to influence voting behaviour as high-risk.
- ➔ **Citizen Expectations vs. Institutional Reality:** There is a persistent tension between citizens’ “commercial-app” expectations for speed and the inherent complexity of public governance.
- ➔ **Social Vulnerabilities:** The rise of political bots, deepfakes, and biased Large Language Models (LLMs) necessitates the creation of European digital alternatives that prioritize transparent ranking logic.
- ➔ **Governance Consensus:** Participants identified strategic integration (embedding participation into long-term budgets) as the highest priority, while highlighting a critical lack of sustainable business models for civic-tech once project funding ends.

Strategic Action Points

- ➔ Terminological and UX Refinement:
- ➔ Shift from “e-voting” to “opinion mapping/polling” to manage expectations regarding the legal force of results.
- ➔ Remove public ranking dashboards to prevent “monitoring anxiety” and move toward private “civic journey” profiles or collective rewards.
- ➔ Technical Resilience:
- ➔ Ensure the platform is mobile-first, functional on 3G connections, and supports offline preparation of contributions to accommodate rural users.
- ➔ Implement AI-assisted clustering at the citizen proposal phase so the municipality receives already-grouped ideas, reducing administrative burden.
- ➔ Legal and Identity Frameworks:
- ➔ Support a spectrum of identity verification from the EU Digital Identity Wallet to manual in-person town hall assistance.
- ➔ Ensure data analytics remain aggregated to prevent the classification of users (e.g., “frequent objector”) based on their political metadata.
- ➔ Policy Advocacy:
- ➔ Rebrand project insights into actionable recommendations for a “European Democracy Shield” policy brief targeting EU, national, and local policymakers.
- ➔ Assess the integration of Liquid Democracy features to address democratic fatigue by allowing citizens to delegate their input to trusted actors.



Group picture from Living Lab #5, Leuven

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