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EU civic engagement

The use of digital tools and AI to promote citizen participation in EU policymaking

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EU civic engagement

The use of digital tools and AI to promote citizen participation in EU policymaking

There has been growing interest in applications of digital tools, especially using artificial intelligence (AI), to promote civic engagement in policymaking. At the same time, EU institutions and civil society are keen to strengthen democratic participation in EU policymaking, partly to make this process more accessible to citizens.

This study provides evidence for how digital participation tools can promote civic engagement in EU policymaking and the preconditions for doing so. Building on a comprehensive landscape analysis, the study clusters 94 distinct tools from around the world and selects 11 representative cases for in-depth empirical assessment. This approach distinguishes between theoretical potential and practical utility, identifying the preconditions for successful engagement and how tool functionalities can support this.

It also gives empirical insights into the current usage of digital tools, their associated advantages and limitations, and the trade-offs that need to be considered when conducting participatory processes. There is a specific focus on the current uses of AI in digital participation tools, alongside an assessment of its potential and risks.

Finally, the report outlines concrete policy options ranging from governance prerequisites to procedural considerations and technical alternatives. These options define the features and safeguards required to operationalise the link between citizens' voices and institutional action. If designed correctly, technology can enhance the responsiveness and effectiveness of the European legislative process, and the options offer guidance on how to achieve this.

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Executive summary

The democratic landscape of Europe has changed significantly over the past decades, creating substantial challenges to the established democratic mechanisms of the European Union (EU), including declining trust in political processes. This has prompted civil society organisations and policymakers to create and experiment with new mechanisms for citizens to engage with and shape democracy, e.g. through citizen participation in policy- and decision-making. The proliferation of digital technologies and their broad uptake in society has prompted exploration into using digital tools to enhance participatory processes – an exploration which has been reinvigorated by recent advances in artificial intelligence.

The aim of this study is to examine how digital tools are used in citizen participation processes and what underlying conditions are necessary for the successful implementation of digital participation tools, and to provide insights on and suggestions for how these tools could be used in the context of the EU policy cycle. A subsequent aim of the study is to provide an overview of the functionalities embedded in existing tools and to analyse what the experiences of using digital participation tools are in a general sense. A specific subtopic of this is to present the existing experiences of applying AI to digital participation tools, along with an assessment of the potential and risks.

The study combines a literature review, an empirical mapping of 94 digital tools, 11 in-depth use cases and an expert foresight exercise to understand how digital tools for citizen engagement function in socio-political and socio-technical realities. This approach moves from broad mapping to case-level analysis and then to forward-looking validation.

The focus of the study is deliberately narrow: how digital participation tools can be used to engage citizens in the EU policy cycle. This study employs the OECD's definition of citizen engagement and considers the OECD's principles for good participation, but the analysis emphasises interaction with EU institutions and the conditions under which contributions become democratically meaningful.

Insights from literature

Scholars have stated that the EU is well positioned to deploy citizen engagement and could meaningfully do so at any stage during the policy cycle. Hitherto, initiatives with digital participation tools for citizen engagement have shown promising results with regard to allowing citizens to be involved in EU policy work; however, the literature stresses the need for significant improvement in the areas of awareness, inclusiveness, accountability and quality of deliberation. According to scholars, the EU could benefit from increasing use of digital participation tools to engage citizens, but measures must be taken to ensure accountability mechanisms are properly integrated, as failure to do so could harm European citizens' trust in EU institutions.

While the literature on the use of AI in digital participation tool across the EU policy cycle is limited, the literature review highlights potential in the deployment of AI for translations, data analysis and the organising of large amounts of data. Even if AI comes with promises, it also brings risks of introducing bias, error propagation, increased demand for digital literacy and lack of transparency.

Current landscape of digital tools

The study conducted a comprehensive mapping of the current landscape of digital tools for engaging citizens. It identified 94 different digital engagement tools and shows how these tools particularly proliferated in the period since 2010. Based on a fine-grained review of these 94 tools, 10 functionality clusters are identified: Survey, wiki-survey, forum, simulation, result processing, petition, information provision, co-writing, whiteboard, and video-tele-conferencing. Generally, the digital participation tools surveyed contain a limited number of two to three functionalities, and the

mapping also shows that recent years have seen a growing tendency to incorporate AI features in digital engagement tools.

Evidence from use cases

The 11 selected use cases show the realities of embedding digital tools for citizen engagement in socio-political and socio-technical contexts and unveil the complexities and trade-offs at stake. It is quite evident that the success of digital tools cannot be achieved without considering the social and political realities surrounding the engagement process, which are determining for the process and its likelihood of success.

The functionalities of the tool are determining for the possible modes of interaction and the potential outputs, meaning that the tools are process-specific. On the other hand, the tools are topic agnostic, meaning that the same tool can be applied to any topic. In other words, the tool can be used to address any topic, but is determining for *how* the topic can be addressed. For this reason, the starting point for planning digitally mediated participation processes is still what output is sought after, which process can yield that output, and which tool can facilitate that process. Furthermore, the use cases show that digital tools impact accessibility to engagement processes. On the one hand, they increase accessibility by offering the possibility for citizens to engage without constraints of time or place, and potentially across multiple media. On the other hand, they also create barriers by requiring both general literacy and digital competences. It is particularly worth noting that the majority of current tools are text-heavy and rely on text input, which emphasise the importance of addressing the concerns relating to general literacy.

As such, both the literature and the use cases highlight that digital participation should not be seen as a loophole to participation or an inexpensive approach, but rather as an extension of existing efforts, ideally supplementing rather than replacing face-to-face processes. A general concern regarding digital participation tools is the trade-off between transparency and control over user access by having high requirements for user identification, and having lower barriers to entry but with lack of knowledge, control and transparency of participants.

The use cases highlight the importance of ensuring commitment and accountability from policymakers and civil servants intended as recipients of the process outcomes. When uptake from political institutions is limited or opaque and accountability mechanisms are lacking, the participating citizens are left unaware of whether and how their contributions have impacted policy, leading to frustration and disillusionment in the process and the democratic institutions. The use cases were generally instance-based processes, while the institutionalised cases suffered from low public awareness and very high qualification requirements, and lacked accountability mechanisms. Despite this, it is still conceivable, both from the literature and the use cases, that an institutionalised digital participation format could be both successful and impactful.

Role and risks of AI in citizen engagement

The use of AI embedded in digital engagement tools is still in its early phase, and AI has not yet shown an ability to radically change or improve citizen engagement. The majority of applications are, so far, back-end features such as clustering of data, automatic summarisation or machine translation. In time, this could mean more manageable large-scale deliberative, multilingual and qualitative processes, but for now the technology is not there. Examples of functioning and promising front-end AI applications include the use of generative AI for information provision.

Even so, there are also significant risks associated with deployment of AI in digital participation tools, including bias in data and models, 'hallucinations' and possibly inconsistent input data sources, opaque input processing, misrepresentation, and error propagation. The study thus stresses that AI in digital participation requires clear understanding of the abilities and limitations of AI systems and implementation of meaningful human oversight.

Conclusions on conditions for meaningful impact on EU policymaking

The synthesis of findings identifies several preconditions for digital tools to have a real impact on EU politics and policymaking. First, engagement processes must be clearly linked to decisions in the EU policy cycle, with transparent mandates, timelines, and feedback mechanisms describing how citizen input will be used. Second, institutional capacity – including staff, workflows and data infrastructures – must be adapted so that inputs are processed, synthesised and fed into political deliberation at the right time, rather than being treated as an add-on. Third, inclusive design and accessibility are essential to avoid reinforcing participation gaps and inequalities. The study underlines the importance of considering trade-offs between user transparency and ease of access. Fourth, commitment and accountability must cover both the tools themselves and institutional responses, including clear public reporting on how contributions influenced outcomes and justifications detailing how the inputs have been considered.

Policy options and political choices ahead

Politically, structured digital citizen participation can improve policymaking in the EU, but to institutionalise citizen engagement requires substantial work and commitment. The following policy options provide a roadmap for considerations and decisions needed to realise the ambitions on integrating digital tools for citizen engagement in the EU policymaking process:

- Policy option 1 considers the level of impact that citizen engagement should have on policymaking.
- Policy option 2 looks at how citizen participation in policymaking can be advanced within the EU.
- Policy option 3 deals with implementation of digital participation tools in the various stages of the policy cycle.
- Policy option 4 calls for promotion of quality standards and principles for citizen participation across EU institutions.
- Policy option 5 addresses institutional anchoring.
- Policy option 6 proposes three non-exclusive modes of participation for implementing digital tools for citizen engagement.
- Policy option 7 presents four distinct approaches to deciding on the scope of participation tools.
- Policy option 8 evaluates the 10 functionality clusters according to their strengths and weaknesses.
- Policy option 9 offers different approaches to the implementation and use of AI.
- Policy option 10 highlights necessary technical considerations.

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1. Introduction: An evaluation of digital tools for effective policy action

1.1. Setting the scene

Recent decades have seen significant changes to the democratic landscape of the European Union. The public sphere and thus the space for political discussions has moved online, with significant implications for expectations and participation. At the same time more traditional forms of political engagement, such as membership of political parties have long been in decline (Van Haute, 2025), creating a vacuum for engaging in and exerting influence on political development. Meanwhile, trust in the representative political institutions have also been declining (Valgarðsson et al., 2025). These developments have created impetus for policymakers and civil society organisations (CSOs) to create and experiment with new mechanisms for citizens to engage with and shape democracy. Across the EU efforts to explore new formats for citizen participation in policy- and decision-making have proliferated over the past decades.

Citizens' increasing use of digital media to consume news, find information and exchanging experiences and opinions, have long ago instigated exploring the use of digital tools to enhance participatory processes, lower access barriers and improve institutional responsiveness. An increasing number of digital tools currently claim to encourage citizens' democratic engagement by providing online consultations, feedback mechanisms and digital petitioning systems. However, the general implementation of such tools has been associated with persistent challenges relating to accessibility, inclusivity, transparency and, most critically, integration into formal political processes. This has also been the case for the EU's own efforts, which the European Court of Auditors have found to have inadequate outreach and limited feedback practices. This creates opacity about whether and how outputs have been utilized, resulting in frustration and cynicism among participants and proponents of civic participation (European Court of Auditors, 2019). In this regard, a previous STOA-study – on prospects for e-democracy in Europe – already identified various factors for successful digital participation, including a close and clear link between e-participation processes and a concrete formal decision-making process, clearly communicated expectations and contributions of participatory process outputs to the overall decision-making process, an effective mobilisation and engagement strategy tailored for different target groups, and the embedding of participatory processes in an institutional 'culture of participation´ (Korthagen et al., 2018).

The rise of artificial intelligence (AI) has renewed interest in how digital tools can encourage citizens to participate in democratic debate and policy development. However, the potential impact of AI functionalities on citizen engagement — including associated risks and trade-offs — remains an under-researched area requiring further investigation.

Building on these insights, this study analyses the conditions under which digital tools can successfully engage European citizens in the policy and legislative cycles of the EU institutions, including experiences with and potentials of using AI for these purposes.

The report unfolds in five parts, presenting the results of the study:

- **Chapter 1** provides an introduction and establishes the foundation of the study by defining its aims and scope.
- **Chapter 2** details the methodological research architecture, outlining the structure and design of the overall research approach.

- **Chapter 3** presents a synthesis of the research findings and results, combining insights from the functionalities of the 94 digital tools identified, the 11 in-depth use case studies of digital tools in application and the outcome of the expert foresight workshop.
- **Chapter 4** draws conclusions based on these findings.
- **Chapter 5** concludes the study by presenting concrete policy options for the operational use of digital tools for citizen engagement in the EU legislative process.

1.2. Aim and scope

While many forms of civic engagement exist and could meaningfully be investigated, the focus of this study is to investigate how citizens across the EU Member States can be increasingly engaged in the EU policy cycle through the deployment of digital participation tools.

To do this, the study examines how digital tools are used in citizen participation processes and what underlying conditions are necessary for the successful implementation of digital participation tools. The study will consider how these tools could be used in the context of EU policy cycles.

A subsequent aim of the study is to provide a comprehensive overview of the functionalities that exist across existing tools and to analyse what the experiences of using digital participation tools are in a general sense. A specific subtopic of this is to present the existing experiences of applying AI to digital participation tools, along with an assessment of the potentials and risks.

To provide a comprehensive overview, the study categorised a wide range of over 94 tools. These tools informed a clustered functionality typology. The overview was used to select 11 use cases for in-depth analysis. As use case studies unfolded, the functionality typology, was iteratively assessed, and the criteria for determining which tools were within the scope of the study gradually became more precise. Some tools were added and others removed during this process, meaning that the final list comprised 94 tools. Ultimately, tools were included if they were digital, had been explicitly developed for participatory processes, and/or had been verifiably utilised in a structured manner in a participatory process.

Moving beyond a simple inventory, the study assesses how digital functionalities can be operationalized to define the possibilities of digital tools for citizen participation. The overarching ambition is thus to identify options that are not only technologically sound but democratically meaningful, ensuring future digital tools deployed for citizen participation serve as a genuine bridge between EU citizens and EU decision-making.

For the purposes of this study, the definition of citizen participation will follow that of the OECD, according to which it includes "all the ways in which [citizens] can be involved in the policy cycle and in service design and delivery" (p. 13, OECD 2017 in OECD 2022).

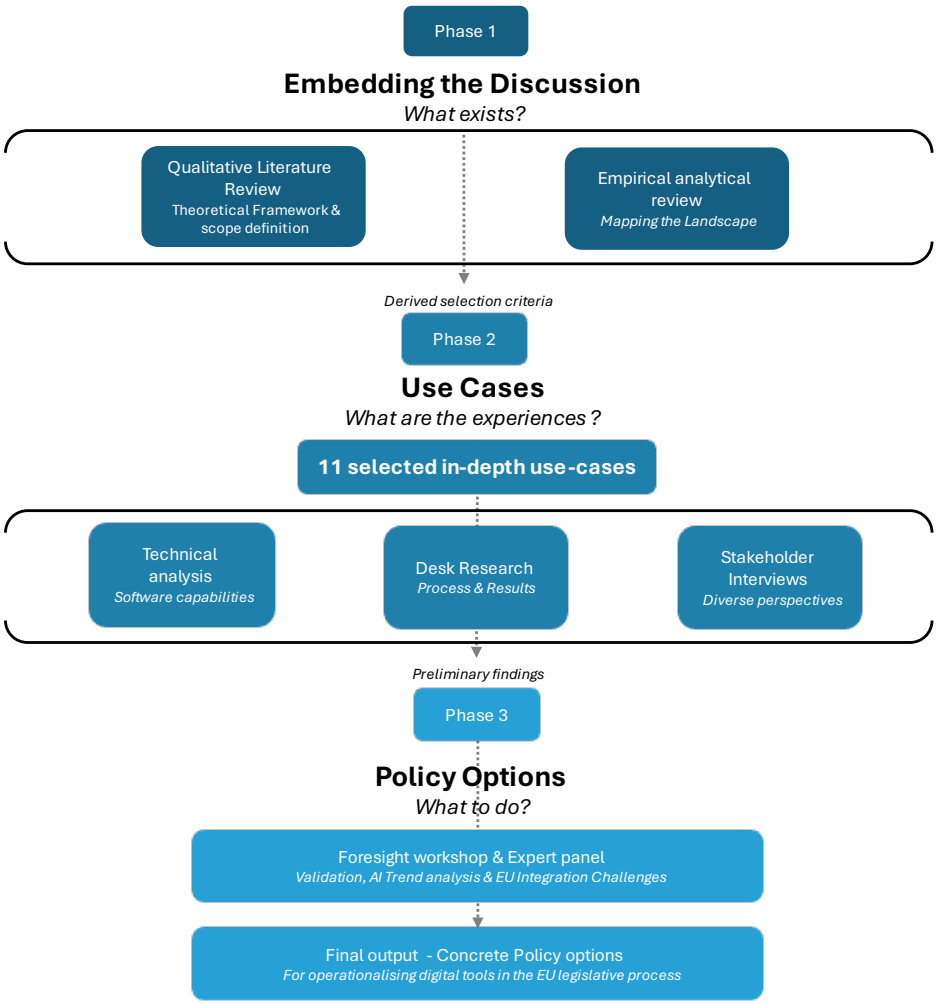
2. Methodological research architecture

To navigate the complex landscape of digital engagement tools and policy development, this study employs a structured, multi-stage research methodology. The methodology functioned like a funnel, starting with a literature review and a broad scan of available digital tools, moving on to a granular analysis of how they operate within political realities, resulting in preliminary findings which were tested in a foresight workshop where domain experts provided inputs to future trends in digital participation tools and AI's potential. Each phase of the study is elaborated further below:

2.1. Phase 1 – Embedding the discussion

The initial phase involved conducting a qualitative literature review alongside a structured, empirical-analytical review of the digital tools currently available. The qualitative literature review established the scope of the study by summarising the academic analyses on digital tools and citizen engagement in policy development.

Figure 1 – Methodological research architecture



Meanwhile, the empirical review focused on mapping the landscape of current digital participation tools[1], and from this developing a typology of functionalities.

2.2. Phase 2 – Use cases

In the second phase, the scope was narrowed down to eleven specific use cases. Based on the information in the list provided by phase 1, an initial sorting was carried out focusing on a set of criteria including origin of tool, geography and scope of process, utilization of AI, and phase in the policy cycle. This approach was used to ensure a diverse sample for practical evaluation. Each of the eleven use cases underwent a thorough investigation, including: 1) A technical analysis of the software capabilities, and 2) desktop research on the engagement process and results, and interviews were carried out with relevant stakeholders covering a wide range of interests and perspectives. The twofold analysis provided in-depth insights on the social and political context in which the digital tools were deployed. The approach ensured that the assessment was rigorous and highly comparable across the diverse set of digital tools.

2.3. Phase 3 – Expert validation and foresight

Finally, the preliminary findings from phases 1 and 2 were assessed and discussed with selected European experts in a virtual foresight workshop. Finally, a panel of selected European experts discussed and assessed the project's initial findings from phases 1 and 2, who subsequently conducted a trend analysis focusing on the potential of AI for citizen engagement. The workshop validated the preliminary findings and provided insights into potential future trends and challenges of integrating AI in digital tools for citizen engagement into the EU policy cycle.

[1] To manage the high volume of unstructured information, the study leveraged Artificial Intelligence to streamline data processing. AI models were employed to structure the data storage architecture and to conduct a preliminary analysis of 111 identified digital tools. However, to ensure methodological rigour, these results underwent a comprehensive validation by the experts of the project team. The research team critically reviewed the features of each tool and verified the final dataset, ensuring that the classification of functionalities remained firmly under researcher oversight.

3. Synthesis of the research results and findings

3.1. Review of literature and existing digital tools

The following section will present the results of the literature review concerning both citizen engagement in context of the EU institutions and policy cycle, as well as the literature on digital participation tools, and the potential that AI holds for these. In addition, it will present a review of existing tools and derived comprehensive list of functionalities encompassing all the tools surveyed.

3.1.1. EU policy cycle

The development of EU policies involves several stages, often referred to as the 'EU policy cycle'. However, competences, procedures and institutional balances vary between policy areas and types of legislative act. This means that national administrations, EU institutions, agencies and civil society actors interact differently at each stage of the EU's multilevel governance structure (Heidbreder & Brandsma, 2018). In order to be able to make comparisons across the use case studies and to compare them with the EU policy cycle, a generic policy cycle of five stages was developed to serve as a useful knowledge management framework for participatory processes and projects (cp. Table 1).

EU policy cycle and digital participation

Different scholars argue that each of these stages requires a different form of digital participation (e.g., Kavrakova, 2021; Alemanno, 2022). In the early phases, processes that enable citizens to raise issues or contribute ideas are most relevant (ibid.). During legislative decision-making, transparency mechanisms and structured digital dialogue with representatives become crucial (Neumann, Lang & Meng, 2025). In the final stages, when policies are implemented and reviewed, participation shifts towards citizen monitoring, crowdsourced reporting and evaluations that generate real-world feedback for the next policy cycle (Stephenson, 2023; Turbé et al., 2019).

The selection of specific digital engagement tools may differ by policy field and institutional setting, yet many tools can be adapted and reused across multiple stages. What matters most is not only the technical design of participation tools, but also how well they are embedded into the formal policy cycle and linked to accountability mechanisms (Listorti, Basyte-Ferrari, Acs, & Smits, 2020).

Applying the policy cycle in this way helps create transparency in political–administrative processes while also providing a shared frame of reference between the political–administrative system and stakeholders, including practitioners (Edelmann, 2023).

Table 1 – Policy cycle stages[2]

Policy cycle stage	Description
1 – Agenda setting	Formulate topics, framing issues, gather priorities
2a – Proposal development	Includes (co-creative) processes in which first policy drafts are formulated
2b – Consultation	Present information and opinions on proposed policy - Collect evidence, options, stakeholder views (including potential forms of lobbyism)

[2] Based on the publication OECD (2025) "Exploring New Frontiers in Citizen Participation in the Policy Cycle"; some stages have been added or further differentiated in reflection on various participation-based contributions.

3 – Decision	Decide on proposed policy - Increase transparency and citizen input during negotiations
4 – Implementation	Implement accepted policy - Ensure policies are applied inclusively and correctly
5 – Evaluating implemented policy	Assess effectiveness, collect experiences and identify reforms. This also relates to providing feedback on evaluations to accountable actors regarding the implemented policy, as well as potentially reassessing and revising the policy.

3.1.2. The landscape of EU digital participation

The constitutional foundation and the strategic evolution of citizen engagement

Citizen engagement has become a central principle of governance within the European Union (EU). The EU vision of engagement is not only instrumental—producing better policies—but also constitutive of democratic legitimacy, by embedding participatory practices within the Union's governance framework (European Commission, 2023). The White Paper on European Governance (2001) first emphasized that policies "should no longer be decided at the top," highlighting openness, transparency, and citizen participation as conditions for democratic legitimacy (European Commission, 2001). These ideals were later operationalized through the "Better Regulation" agenda, where public consultations, impact assessments, and online participation platforms such as "Have Your Say" became institutionalized features of policymaking (European Commission, 2015).

Since the Treaty of Lisbon was signed in 2007 and came into effect in 2009, participatory democracy has been codified as a constitutional principle of the Union, anchored in Article 11 of the Treaty on European Union (TEU). This legal foundation establishes mechanisms such as civil dialogue, mandatory consultations in legislative preparation, and the European Citizens' Initiative (ECI), whereby citizens may request the European Commission to propose new legislation provided certain thresholds are met (European Union, 2007).

Official EU documents consistently frame citizen engagement as essential for several purposes. First, engagement strengthens the legitimacy of EU institutions and fosters trust in decision-making (European Parliament, 2017). Second, it is seen as improving the quality of policies by incorporating citizens' lived experiences and local knowledge, which may identify issues otherwise overlooked by top-down processes (European Commission, 2020). Third, it supports transparency and accountability by ensuring that citizens are informed and able to scrutinize policymaking. Finally, inclusiveness and diversity are emphasized, with a focus on ensuring participation across all MS and demographic groups (European Commission, 2022).

Certain themes consistently dominate scholarly debates on deliberative democracy within the EU. The literature generally reflects a gradual progression from experimental pilot initiatives towards partial institutionalisation. However, persistent challenges concerning the impact, legitimacy and representativeness of deliberative processes remain. Review studies consistently emphasise the democratic nature of EU-level mini-publics (groups of citizens selected at random to reflect demographic diversity in terms of age, gender, education, geographical area of residence, etc.) and their limited policy uptake, which is influenced by institutional 'filtering' and technocratic framing. At the same time, they emphasise how design features, such as selection, mandate and facilitation, shape outcomes and broader acceptance. (CEPS, 2020; et al.).

From experimental innovation to systemic institutionalisation

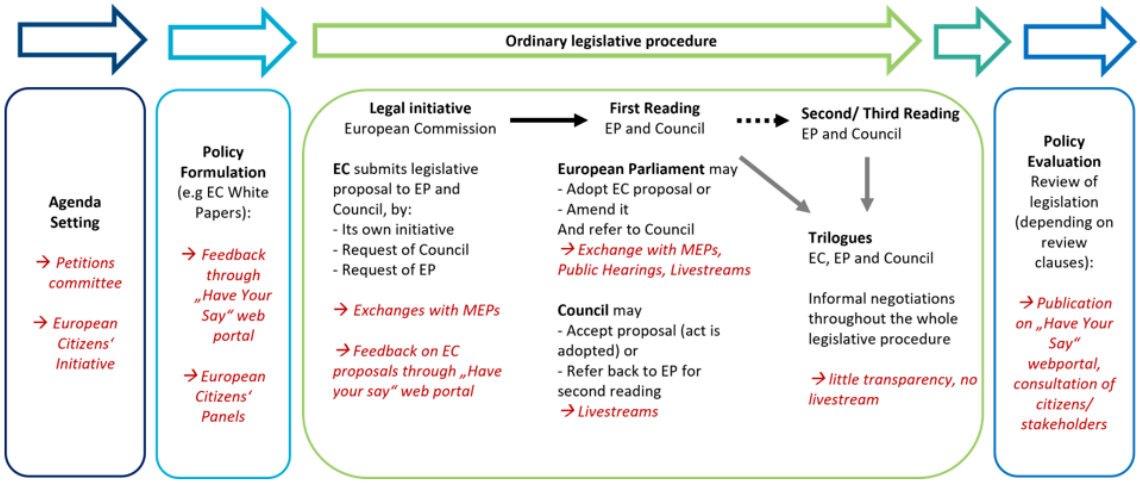
Citizen engagement has long been a priority for the EU, with multiple dedicated Horizon programmes developing participatory methods and governance mechanisms, e.g., Science with and For Society Programme under Horizon2020 (European Commission, 2020). Few initiatives launched

under these schemes have, however, once funding ceased, resulted in institutional development (Rosén & Fröslev, 2023). This includes digital participation efforts. In short, the EU is strong at spearheading innovation, but its mechanisms to capture and institutionalise the results can be improved.

The EU has deployed several initiatives and digital tools to support its strategy of engaging citizens in policy development. The following list presents some of the initiatives through which the EU has most recently engaged citizens:

- The European Commission "Have Your Say" Portal is a digital platform for roadmaps, impact assessments, draft acts, and evaluations. It is the only institutionalized digital platform where citizens' input can formally connect to EU parliamentary processes. Inputs feed directly into the Commission's legislative proposals, which then go to the Parliament and Council. It serves to provide transparency and evidence base for parliamentary scrutiny.
- The Conference on the Future of Europe (2021–2022) was the most ambitious EU-wide citizen participation exercise. Citizens proposed, debated, and voted on ideas that fed into plenary debates with MEPs and national parliamentarians. The process included in online platform on which any European could make proposals that could inform the citizen deliberations.
- Subsequently, several European Citizens' Panels (ECPs) have been held, both in the previous electoral cycle and in the current, in which the European Commission's work programme requires each Commissioner to host one ECP. The ECPs also include a component of digital participation of the wider public, however limited in scope and relevance.
- The Citizens' Engagement Platform (CEP) is an offshoot of the Conference on the Future of Europe, building on the same Decidim platform, and features the same combination of wiki-survey and real-time machine translation. It is a dedicated space for citizens to engage and debate on EU policies and is to some extent integrated with the ECPs.
- The European Citizens' Initiative (ECI) is an online petition system through which citizens can propose legislative initiatives by collecting at least one million signatures across EU member states. If the initiative is deemed admissible, it is examined by the Commission and debated in the European Parliament and may trigger legislative proposals.
- The European Parliament Petitions Portal (e-Petitions) enables citizens to submit and track petitions digitally. Petitions are examined by the Parliament's Committee on Petitions (PETI) and debated in Parliament.

Figure 2 – Current occurrence of citizen participation within the EU policy cycle



As shown in Figure 2, there are currently different opportunities for citizens to engage with the EU policy cycle at different stages. European Citizens' Initiative and Have Your Say (Public Consultation and Feedback) are both institutionalised, while the European Citizens' Panels are initiated by the present Commission. Even so, the European Court of Auditors, the EU's own auditing institution, has criticized existing initiatives highlighting inadequate outreach and limited feedback practices in Commission consultations, emphasising that contributions are not always traceable to decisions (European Court of Auditors, 2019). This is emphasised by the fact that few Europeans are aware of the participatory mechanisms of the European institutions (Eurobarometer, 2025)

The fragmentation of the transnational public sphere

Scholars generally agree that the development of a European public sphere through digital participation faces structural obstacles: most publics, media systems and party politics remain rooted in the national sphere, meaning cross-border debate tends to fragment rather than converge fully.

Researchers also find that transnationalism and mobility correlate with stronger European identification and participation, suggesting that those who engage may differ systematically from national profiles. Methodologically, studies highlight language and information retrieval bias in multilingual settings (even technical choices such as search and ranking can privilege certain languages over others) so platforms require deliberate mitigation strategies. This requires quality machine translation with post-editing for important content, balanced ranking and multilingual moderation standards (Mazzoni, et al., 2018). The significant improvement in translation quality in recent years raises hopes that digital engagement tools, platforms and websites will become more inclusive, rendering language barriers less of a challenge.

Socio-technical barriers: Addressing the multi-level digital divide

In literature different concerns over inclusion, accessibility, and the digital divide are presented, highlighting that online participation often attracts the already engaged, digitally literate segments of the population, producing skewed samples and "participation inequality." Research further distinguishes first-level divides (connectivity and devices), second-level divides (skills, language, usability), and third-level divides (who benefits from participation), showing that even when access is available, outcomes remain unequal. Also, not all Member States have equal digital infrastructures or cultures of participation.

Ensuring multilingual interfaces, equal access, and outreach to underrepresented groups remains a persistent obstacle—especially in a multilingual, transnational setting like the EU where translation quality, reading level, and jargon all influence who can meaningfully contribute. Scholars also underline that accessibility must be designed in (e.g., conforming to WCAG/EN 301 549; mobile-first; low-bandwidth modes; screen-reader compatibility) and paired with assisted-digital options (help desks, facilitation, public access points) to avoid excluding older adults, people with disabilities, low-income users, and rural populations.

Scholars warn that platform choices can amplify algorithmic and moderation biases, discourage participation through harassment risks, and privilege loud voices over representative ones unless clear rules, safe-space norms, and proactive moderation are in place. Finally, the literature stresses that representativeness and impact transparency are crucial: without targeted recruitment (e.g., stratified outreach, mixed online/offline methods), clear feedback loops, and published participation metrics, digital participation can entrench a situation where already empowered groups gain even more voice while others disengage, otherwise known as a "Matthew effect".

3.1.3. Legal and normative framework for participation

While a full legal review lies beyond the scope of this study, a comprehensive assessment is a fundamental prerequisite for integrating digital participation into EU procedures. Any digital add-on tool must undergo a rigorous evaluation to ensure compliance with EU treaties and secondary legislation. Specifically, this analysis must address:

- Fundamental Rights: Ensuring strict adherence to principles of equality, non-discrimination, and accessibility for all EU citizens.
- Operational integrity: Establishing safeguards for General Data Protection Regulation (GDPR), platform security against manipulation, and clear legal liability in cases of misuse.
- Procedural compatibility: Verifying that digital innovations do not conflict with the established integrity of parliamentary workflows.

Legally, the foundation for citizen participation is anchored in Articles 10 and 11 TEU. Article 10 (3) TEU states that "every citizen shall have the right to participate in the democratic life of the Union" and that decisions must be taken "as openly and as closely as possible to the citizen". Consequently, EU policy does not view citizen engagement merely as a procedural option, but as a normative necessity for legitimacy. "Good" engagement is officially defined by specific standards defined in the "Better Regulations Guideline" (European Commission, 2021) and "Deliberative Standards" (European Commission, 2024):

- Inclusivity & Diversity: Participation must reflect the Union's linguistic, geographic, and socio-economic diversity to counter the dominance of well-resourced interest groups.
- Transparency & Feedback: Citizens must understand the scope of their influence (managing expectations) and receive clear feedback on how their input was used ("closing the loop").
- Early Involvement: Engagement should occur at the formative stage of the policy cycle to allow for meaningful impact rather than mere validation of pre-determined decisions.

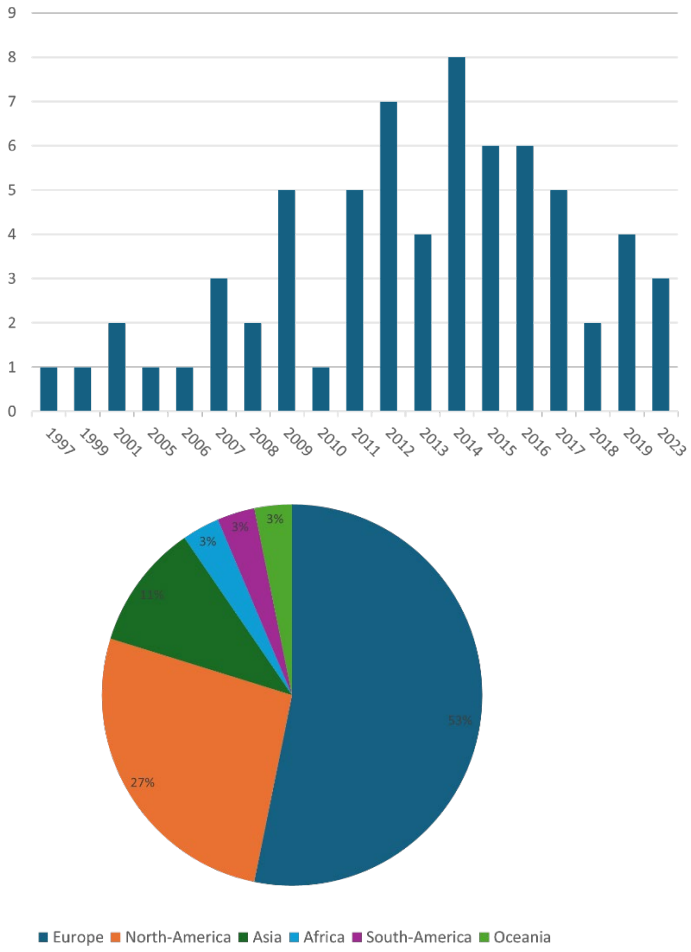
EU institutions operate within strict legal and practical boundaries based on the mandate. Firstly, citizen participation is explicitly defined as supplementary to, rather than a substitute for, representative democracy; citizen input does not automatically result in legislative outcomes (Alemanno, 2022; Article 11 TEU). Secondly, significant implementation gaps remain. Although

recent initiatives such as the Commission's Corporate Guidance on Citizen Engagement (2023) and anti-SLAPP measures (Strategic Lawsuits Against Public Participation) aim to bolster participation, the level of investment often falls short of political rhetoric. Persistent challenges include resource constraints — specifically time, budget and staff — and the risk of 'participation fatigue', whereby input is collected but not effectively utilised in final policy decisions (Wesselink et al., 2011; European Civic Forum, 2024).

3.1.4. A global overview of developed tools

In an initial review of available digital tools 116 tools were identified. After careful evaluation, 94 tools were identified to qualify as tools either build explicitly for digital participation or having demonstrably been used as such. It can be observed from Figure 3 that Europe and North America have led the movement of developing digital participation tools. In terms of geographical scope, Europe accounted for 53% of the tools, followed by North America (24%) and Asia (9%). As can also be seen from Figure 3, digital participation tools have been around for quite some time, but the figure also shows that among the 94 tools included, the majority have been developed since 2011 (though it should be noted that the year of initiation of 27 tools is undetermined).

Figure 3 – Chronological development of tools and geographical scope



Functionalities of tools

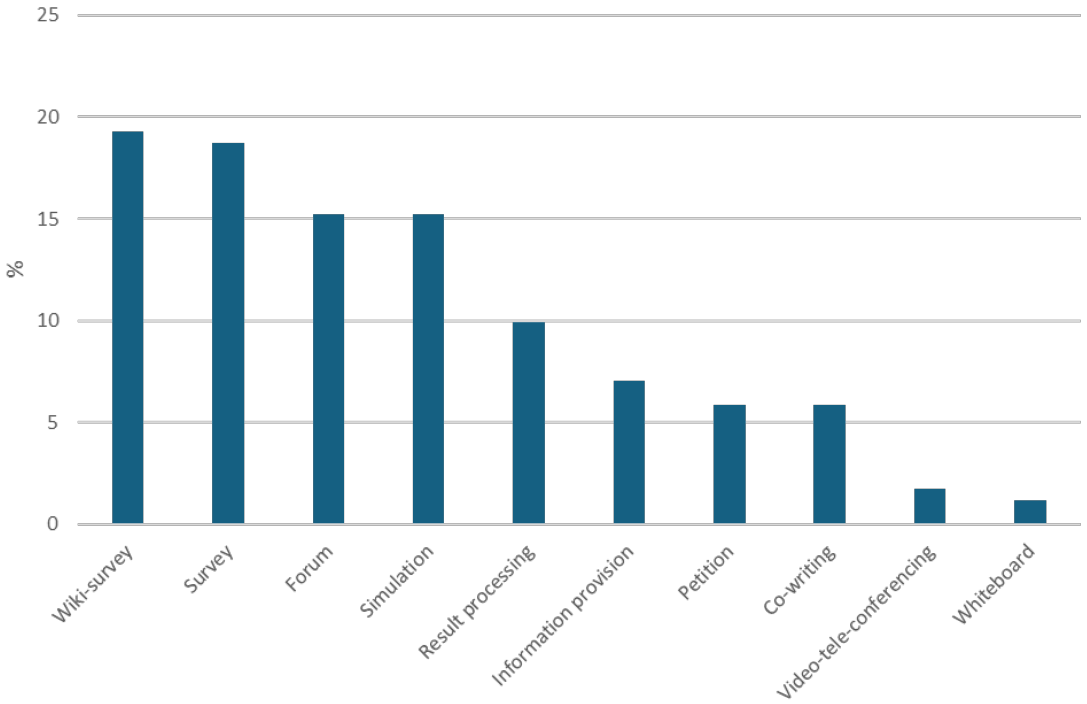
Based on an alternating approach, a list of functionalities was gradually derived by reviewing the individual features built into the 94 tools. As such, features are understood as a specific input or output mechanism, such as multiple-choice questions in a survey, participatory budgeting in a simulation – in this context a micro-level. The macro-level of this is the digital engagement tool.

Functionalities are thus to be understood the meso-level thematic clusters of features based on their purposes and roles in facilitating citizen engagement. This definition allows for a categorization based on the mode of interaction rather than technical features alone, but also independently of the purpose of the process. Accordingly, the following functionalities were defined, each listed with non-exhaustive examples of associated features:

- **Survey**: The gathering of qualitative and quantitative data through the deployment of open and/or closed questions. This also entails the mechanism of voting.
- Questionnaire, free text answering, voting, polls.
- **Wiki-survey**: Written interactions between users centred around proposals or suggestions, that participants can set forth and comment on.
- Proposals, endorsement, comments, clustering.
- **Forum**: Online platforms for debate and Q&A. Can have elements of moderation, either asynchronous or synchronous.
- Live chat, subchannels, voting on replies, moderation, uploading files.
- **Simulation**: The simulation of complex activities, often involving trade-off decisions.
- Budget allocation trade-offs, maps, scenarios.
- **Result processing**: Handling of data in synchronous or asynchronous manner.
- Graphs, visualisations, summaries, analysis.
- **Petition**: The presentation of proposal and ability to support proposals
- Upload of proposal, signing, commenting, progress indication
- **Information provision**: The translation and presentation of information and knowledge to participants in multiple modalities.
- Visualisations, videos, search functions, text summary,
- **Co-writing**: Structured process for collective drafting of policy
- Editing text, collaborative writing, annotation,
- **Whiteboard**: Facilitation style mimicking traditional whiteboards
- Post-its, freehand drawing, mind-maps, connectors,
- **Video-tele-conferencing**: Communication using online connections with audio and/or visual support
- Chat, translation, screen sharing, recording, subtitles,

Figure 4 shows the relative distribution of the allocated functionalities among the identified and reviewed engagement tools. Tools can potentially contain more than one functionality (the overall number of allocated functionalities is n = 171, representing an average of 1.8 functionalities per tool).

Figure 4 – Distribution of allocated functionalities to identified and reviewed digital engagement tools



3.1.5. Digital engagement tools and assessment criteria

The literature review along with the review of digital tools highlights some general remarks on the assessment of digital engagement tools and themes to take into consideration. The highlighted themes are complimentary to the OECD principles for good participation (OECD, 2022).

Overall, literature reflects on the benefits and challenges of digital engagement tools makes it clear that developers frequently show how these tools can contribute – or already contribute – to strengthening citizen engagement. However, there are also clear indications that digital tools face considerable technical, organisational and operational challenges. Key issues arise particularly around simplifying or capturing complex procedures and information contexts, the proprietary nature of the software, and effectively reaching target user groups. The following section presents key themes and considerations related to how to assess functionalities of digital engagement tools.

Accessibility and user-friendliness

A more user-centric approach to tool development is increasingly recognised as a priority across the European Union. In their joint European Declaration on Digital Rights and Principles (2023), the European Parliament, the Council and the Commission affirm that digital technologies should stimulate citizen engagement and bridge the gap between people and institutions. This institutional commitment recognises ICT as a vital tool for making decision-making processes more transparent and inclusive, particularly when combined with offline engagement (European Union, 2023). In principle, advances in online deliberation and e-voting are not just framed as technical upgrades, but also as a means of making European democracy more accessible and inclusive for a digitally native population.

Studies on digital participation in the EU have noted that existing platforms, such as 'Have Your Say', the European Citizens' Initiative and online consultations, are often too complex and poorly promoted. They are also inconsistent in terms of uptake (Shin et al., 2024; Coelho et al., 2022;

Neumann et al., 2025). These findings have fuelled calls for simplification, a more user-friendly design and, above all, visible feedback loops to demonstrate how citizens' contributions shape outcomes. Furthermore, scholars stress that e-participation will only be meaningful if it is embedded in the decision-making process. For this to happen, uptake by the Commission, Parliament, or Council is essential to establish legitimacy (Bunea, 2025; Soloveva, 2025; Seubert, 2024). Otherwise, digital initiatives risk becoming merely symbolic ("window dressing"). Another key issue is the digital divide. Without effective strategies to bridge the digital divide across geography, age and socio-economic status, inequalities in digital skills, infrastructure and access will persist, and digital democracy will risk reinforcing exclusion rather than broadening participation (Gomes et al., 2025; Morte-Nadal et al., 2025; Mao et al., 2025).

Traceability and trust

The literature review shows that participation builds trust only when citizens can see how their arguments are synthesised and weighed. When people can trace a clear line from their input to its consideration and the outcome, the gains in legitimacy are more durable than those from feedback collection alone. Publishing participation metrics (who took part, how inputs were processed and where they ended up) improves perceived fairness and uptake. Reviews of participation tools in various contexts echo this, stating that these governance and technology "plumbing" choices (not just front-end features) shape legitimacy and impact. Designing platforms with traceability in mind (rather than just reach) may be viewed as the difference between consultation and accountable participation (Gastil, 2021).

The EU's own auditing institution has highlighted inadequate outreach and limited feedback practices in Commission consultations, emphasising that contributions are not always traceable to decisions, which fosters cynicism (European Court of Auditors, 2019). Current EU 'Better Regulation' rules already require 12-week consultations and summary reports explaining how feedback was used. The 2023 Better Regulation Toolbox further clarifies good practice in providing feedback (European Commission, 2021, 2021b, 2023). However, compliance and depth vary by file.

Comparative evidence from the OECD indicates that transparency regarding the impact of decisions — publishing what was considered, what changed, and why — correlates with higher perceived fairness and trust, particularly when combined with representative or deliberative methods rather than open comment alone. The OECD's recent guidance emphasises public 'statements of reasons', clear ownership within institutions, and regular reporting on the adoption of citizen recommendations (OECD, 2020).

Manipulation and the spread of disinformation undermine trust in online democratic forums, highlighting the need for robust fact-checking, moderation and transparent governance (Di Porto et al., 2024; Romberg et al., 2024). Robust platform stewardship, involving transparent rules of procedure for moderation and admissibility, safeguards against undue lobbying and periodic public impact reports, can sustain trust and justify continuity.

Integrity

The desk-research shows that both enthusiasm for digital tools and a realistic acknowledgement that design flaws, inequalities, security risks and inadequate institutional integration limit their potential is reflected in the literature. While AI-enhanced platforms may improve usability and accessibility, they also present new challenges regarding legitimacy. A central theme that emerges across the literature is that citizens will only engage if they believe their input is valuable. Without visible institutional responsiveness, digital participation could exacerbate cynicism and widen the democratic gap rather than narrow it. Therefore, any tool, model or platform for digital participation must demonstrate not only robust functionality, but also sincere political intent and a sense of inclusion.

3.1.6. AI integration in digital participation tools

Reviewing the 94 tools showed that tools developed more recently, particularly during the past three years, have a relatively higher likelihood of incorporating AI. This review of identified tools reflects existing literature on AI in relation to participatory and democratic processes well. In recent years, multiple research strands have focused on AI-assisted participation, ranging from opinion clustering and translation to chatbots, spam filtering, and automated summarisation. These approaches show promise in handling large-scale input and enhancing connectivity. There is widespread optimism that AI can amplify the impact of digital participation by reducing language and volume barriers through machine translation, clustering, summarisation and assisted moderation, thereby widening access beyond those who are already engaged (Shin et al., 2024; OECD, 2020).

However, AI also raises new questions about bias, transparency, and accountability in how citizen voices are filtered and presented (Arana-Catania et al., 2021; Di Porto et al., 2024; Romberg et al., 2024). There are also concerns that fraud, manipulation and irregularities persist, demanding strict oversight and independent security guarantees (Lahdil et al., 2024; Bono et al., 2025). AI may introduce risks of bias, over-blocking and error propagation. Current best practice emphasises 'human-in-the-loop' with transparent process and model governance. And while empirical studies of multilingual deliberation show that machine translation can increase inclusion they do not do so by default. The same tools can both alter meanings and power dynamics and reproduce linguistic and socio-technical inequalities e.g., if the AI-models favour high-resource languages and digitally savvy users. Design mitigations include quality estimation, post-editing for salient contributions, and hybrid synchronous/asynchronous workflows. This is also why accessibility and multilingual design, including compliance with EU accessibility norms must be incorporated from the outset rather than being added later (European Commission, 2023).

AI could help to structure large amounts of input data, for example by mapping arguments, discovering topics and detecting duplicates. It could also support dialogue at scale. However, the literature stresses the importance of 'human-in-the-loop' safeguards, transparent model governance and clear appeals to prevent bias, over-blocking or agenda drift (OECD, 2020; Shin et al., 2024). Ultimately, credibility depends on visible uptake. Although AI can link comments to concrete provisions, generate traceable response matrices and produce more informative synopsis reports, institutions still need to explain what has changed and why in line with Better Regulation expectations. Technology augments accountability, it does not replace it (European Commission, 2021a, 2021b; European Court of Auditors, 2019). The transnational challenge remains that, while multilingual AI lowers entry costs across Member States, semantic shifts and uneven mobilisation mean that professional facilitation, post-editing of salient content and hybrid designs (EU-level plus national/local nodes) are required to prevent the creation of a one-way European public sphere (Auel & Tiemann, 2020; Mazzoni et al., 2018). Finally, some scholars find that the establishment of AI-enabled participation as a service embedded in the policy cycle is required for durable institutionalisation. This service should have mandates, budgets, ownership, open data/APIs and service-level KPIs on reach, representativeness, turnaround and demonstrable influence on text, rather than being treated as a succession of pilots (European Commission, 2023; Alemanno, 2020; Vogiatzis, 2021).

3.2. Consolidating insights from use case studies

Building upon the insights gained in Phase 1, this section presents the results from Phases 2 and 3 (cp. Methodology, Figure 1). Table 2 represents the eleven use cases that were investigated, with the digital tool used, the thematic focus of the engagement, the time period it took place, the scope of process, and the functionalities used in the digital tool. While each study focuses on a single application of a digital tool, it is important to acknowledge that these tools are versatile and can be applied to a wide range of topics and stages in the policy cycle.

Table 2 – Overview of the 11 selected use cases

Tool	Case	Publication period	Scope of process	Functionalities used
European Citizens' Initiative	Cohesion policy for the equality of the regions and sustainability of regional cultures	2025	EU-wide	Petition
Stanford Online Deliberation Platform	Information integrity	2024	Taiwan, national	Video-tele-conference, result processing
Consider.it	Housing Affordability and Liveability Agenda	2015-2018	USA, Seattle, local	Forum, survey, wiki-survey
Decidim	Conference on the Future of Europe	2021 - present	EU-wide	Wiki-survey
Public Consultations and feedback	Euratom Research and Training Programme 2026-2027	2025	EU-wide	Survey
Ethelo	City budget 2024	2023	Canada, Prince George, local	Simulation, survey
Panoramic AI	the Citizens' Convention on End-of-Life Care	2022-2023	France, national	Information provision
GoVocal	Vienna Climate Team	2022	Austria, Vienna, local	Petition, survey
Consul	SammenOmAarhus.dk	2023-2024	Denmark, Aarhus – Gl. Egå, local	Simulation, petition
Cap Collectif	Grand Débat National	2019	France, national	Survey, information provision, forum
DeliberAIde	Social-planning conferences	2024	Germany, District of Siegen-Wittgenstein, local	Result processing

3.2.1. Tools are process specific but purpose-agnostic

Most tools have a limited scope in terms of their intended use and capabilities and thus only possess either one or few functionalities. This emphasises the importance of matching tools and processes, and means that a combination of tools may be required for more complex processes.

Digital tools have underlying conditions for their functionalities, even within the same cluster of functionalities, that is determined during the technical development, which impact the processes and results that can be achieved. This also means that understanding how the different functionalities of a tool can impact, limit or support the purpose of the engagement activity requires expertise in participatory processes and digital participation tools. It is important to consider the fundamental conditions that each tool brings to the table. As can be seen from the use cases, tools have underlying premises that impact how results are generated. Both Ethelo and Consul belong to the functionality cluster of "simulation", and both work with participatory budget, but their way conceptualising and realising this are different. There is a significant difference between deploying a tool that relies on majority decisions, as in the case of Consul for SammenOmAarhus.dk in Gl. Egå, and a tool that relies on decisions of least resistance, as in the case of the annual city budget consultation using Ethelo in Prince George. Both use cases are examples of participatory budgeting, but the digital tools chosen to have different inherent value propositions, and the processes mandate very different uses of the results.

Digital engagement tools are not versatile in terms of the process that they can support well, however, most tools are agnostic about the purpose they are deployed for, as it is rather a question of choosing a tool that can provide the process and format of answers that fits with the desired information. A central concern when it comes to digital tools is to make sure that thought is given to the export format, i.e. in which way or shape should the results of participants engaging with the platform come out? While some features look great and are intuitive when used within a tool, transferring them to a processing tool can be difficult, e.g., whiteboard tools that imitates the use of sticky notes are great for online group work, but the intuitive, flexible user-face of a whiteboard can be challenging to transfer meaningfully to a word-processing program. Thus, care should be taken in designing a process where the output within the tool is either a result by itself or can with few obstacles be transferred to a different format. This requires stringent considerations on how data should be processed and on setting up the data collection process from participants accordingly.

A general point is that the export function in a digital participation tool is not important for the interaction modality experienced by the participants, but it is very important for the subsequent data processing and thus the process flow. Where a well-designed export functionality will enable a seamless flow between stages, a poor and inflexible export functionality will create a lot of extra data cleaning and transformation, and frustration for those operating at the back-end of the platform. This is relevant for citizen engagement processes that rely solely on the use of digital tools and for processes that combine digital tools with in-person activities.

3.2.2. Preconditions and sociopolitical context

While it may seem obvious, it is important to remember that the successful use of a digital tool for public participation depends entirely on the infrastructure supporting the process. Even the best tool cannot resolve structural or procedural issues.

Some citizen engagement processes are intended to encourage consideration of new approaches, while others focus on consulting citizens on specific suggestions or topics. While it is important to acknowledge what is possible and describe the mandate given to participants, it is also important to consider how the functionalities and features of a digital tool will restrict what can be done and thus impose limitations on how engagement is enacted. Citizen engagement processes risk being perceived as superficial if there is no clear connection between the engagement's objective, the process design and the chosen methods, including the tool's features and functionalities.

Participation never happens in isolation; it is always embedded in the reality in which it exists. Therefore, when choosing the right digital tool, it is important to consider not only the tool's functionalities, but also the current societal reality and the objectives of the engagement process.

Participants enter processes with preconceived perceptions anchored by their own experiences, which they use to make sense of the participatory process and the topic under discussion. This point is illustrated by the case of Grand Débat National in France deploying Cap Collectif, which mainly were used for providing information, questionnaires with closed questions and uploading of proposal. Groups distrusting the current political institutions in France initiated their own citizen engagement process and chose to use an independent instance of the Cap Collectif tool to control their process. They opted for open questions and possibilities for dialogue and discussion, and aim to create a space where the debate was not framed by institutions, they had little trust in. This also indicates that institutional credibility and perceived trustworthiness is affects willingness to participate. This case highlights that there are some fundamental preconditions that needs to be in place, if the deployment of digital tools for citizen engagement is to be successful which lays outside of the choice of digital engagement tool.

Additionally, the use cases emphasize the important role that effective outreach, awareness raising and recruitment plays. As was demonstrated in the literature review and the use cases, the EU's own participation offerings suffer from lack of awareness impacting the legitimacy of the process. While digital participation is sometimes presented as an inexpensive or less resource intensive form of participation, the literature and the use cases show this not to be the case. Instead, resources tend to be needed for other purposes, such as extended recruitment efforts.

Lastly, citizen engagement can serve many different purposes, from creating consensus on a topic, to uncovering the diversity of opinion present in a society or social group or gaining insights of quantitative measures. What is crucial regardless of the purpose, is to ensure responsiveness and accountability in how results are processed and handled. The results of the use cases show a significant lack of responsiveness and accountability to participants regarding the impact of their input on policy. In several cases, what is highlighted from engagement using digital tools is more focused on the numbers of contributions and participants as well as statistics on participant composition and less on the actual outcomes or the impact on policy development. Representativeness, high numbers of participants and contributions can be legitimating factors for the outputs, but what justifies the participation process is meaningful results and impact on decisions.

3.2.3. Tools determine depth of interaction and engagement

The use cases show that the digital tools have an impact on the depth of interaction that can be provided in citizen participation. Roughly speaking, depth of engagement can be conceived on a continuum from, on one end, reflexive and very immediate input with little contextual knowledge provided and limited time to answer and therefor to reflect on the wider implications of the question, to, on the other end, reflected and nuanced input grounded in curated knowledge and resulting from interaction modalities with room for deeper reflection on the implications of answers.

This continuum should not be considered as a normative rank-ordering. Surveys for instance would be found at the reflexive end of the spectrum and is after all a well-established and very useful practice. Rather the continuum should be used to illustrate that processes at different points on the continuum yield different results, which provide different insights and should thus be treated differently. Surveys and petitions would be positioned at the reflexive end of the continuum, while wiki-survey, forum and whiteboards are closer to the middle. Simulation, co-writing and video-tele-conferencing are closer to the reflected end of the continuum.

Important considerations are that the functionalities toward the more reflected end of the spectrum tends to be more qualitative in nature, and thus entail more resources for processing, and are thus often less scalable, while those at the reflective end will more typically be quantitative and require less resources for processing and is more easily scalable. There is thus a tendency that deeper interaction modalities are more resources intensive, but it yields rich and nuanced outputs, whereas

more reflexive modalities are requiring less resources, but yield more immediate, less nuanced, embedded and contextualized answers.

It is important to understand the differences between providing opportunities for citizens to deliberate and merely consulting citizens. Use cases related to the EU's institutionalised citizen engagement mechanisms — Public Consultation and Feedback and European Citizen Initiative (ECI) — prioritise the collection of broad feedback, but has very limit, if any, space for deliberation. ECI have procedures that ensures transparency throughout the petition process on the platform, but the following process from petition to policy is both opaque and burdensome. In addition, the barrier to entry is very high, as creating successful initiatives requires the mobilisation of cross-national interests and a national infrastructure for collecting signatures. This means that the ECI has essentially become a mechanism for organized interests, as very few ordinary citizens have the resources needed. This pattern is also seen with Public Consultation and Feedback, that have limited reach and use among ordinary citizens. While the processes intended to be open to all of society, they are in reality predominantly used by organised interests and organisations with the time and resources to deal with the procedural mechanisms.

When digital tools offer asynchronous interaction options, it is crucial that participants' contributions are not just collected, but that they also experience responsiveness to their contribution. This can either be during the collection of data through the digital tools or as a follow-up after the data collection. As in the case of Seattle's engagement on affordable housing using Consider.it, the city employees were encouraged to engage with the citizens in the online forum. This required both thematic knowledge and allocated resources to be done properly and was therefore difficult to practice. It is important to strike a balance, as too much engagement from public institutions can be experienced as attempt to steer and interfere with the dialogues taking place or even as censoring citizens' opinions.

3.2.4. Combining digital tools and face-to-face processes

Several cases combined face-to-face with online processes. This served different purposes, e.g., it enabled individuals with limited digital skills to participate and ensured open access for all citizens, particularly in cases where the face-to-face process was based on random selection, as it was the case of Vienna using GoVocal in combination with different face-to-face processes, some using random selected. However, it also introduced the risk of misalignment between the two processes. For example, the physical process might start with the definition of a narrower work theme, while the online platform continues with a broader theme. This makes it difficult to reconcile the two streams at the end. A hybrid, parallel format introduces the complexity of determining an equitable way of weighing analogue and digital outputs. This is a question that rose during the deployment of Consider.it in Seattle during their city engagement on affordable housing, where 1.100 users contributed on the platform, but more than 198 community meetings were held, 600 hours were spent by participants in focus groups and more than 10,000 households were canvassed. How to weigh the inputs gathered using combined methods? Closely integrating the face-to-face and digital processes is important to ensure legitimacy and transparency in each process. Another issue was the transition between physical and digital spaces. Clear procedures are needed in advance to determine exactly how process materials should transition between these stages.

A lot of measures to ensure accountability, transparency and integrity are also dependent on the conditions for the engagement processes which are always based on the decisions taken independently of the platform. Although participants only interact with the digital tool, the decisions around its use often become visible through how it is set up and what is communicated within and around the process. And while the tool in itself might contain a specific feature, the institutions can have decided against using it, as Vienna did when deploying GoVocal, and decided against possibilities for citizens to comment on proposals, as the demand for moderation was deemed too high.

An increasing number of digital tools are available for use in processes combining face-to-face engagement with online activities. While online participation does seem to be increasing in both availability and popularity, the growing interest among the European population in creating physical spaces for community, as discussed during the foresight workshop, should be considered when planning the future deployment of digital tools for participation.

Including digital tools in participatory processes increases the complexity of process design, as it will require both expertise within engagement and participation processes on how digital tools impact interaction and engagement. This is particularly relevant to consider when dealing with engagement processes that need institutional connection, as it will require additional personnel in house to have both expertise areas sufficiently covered to ensure successful implementation and use of digital tools in civic engagement processes.

3.2.5. User identification

To avoid the influence of illegitimate actors and ensure transparency of digital engagement processes, it is necessary to ensure accountability mechanisms for the identification of participants. In France, the deployment of Cap Collectif during Grand Débat National, participants were only required to use a valid e-mail and their postcode, which creates a low barrier to entry, while in the case of Consul in Gl. Egå in Århus Kommune, the participants were invited through public mail and had to use their publicly provided eID to gain access, which can for some be experiences as a hinderance. Those are just two examples of how user identification can be implemented in real life, but the highlight a fundamental issue that is common to most digital development, which is the trade-off between easy access and security measures. In context of digital participation tools, this is most pronounced in relation to the question of identity and access management (IAM). Ensuring e.g., that only selected participants have access or that people can only participate once entails identity verification mechanisms that heightens the complexity of both the sign-up and sign-in process. This means that participants with lower digital literacy either do not succeed in accessing the platform or will to spend disproportionate time accessing it. But more generally the heightened barrier to entry means that some participants will abandon participating because accessing the tool is considered exceedingly difficult.

Some of the use cases investigated rely on the use of digital identification of participants, regardless of them being open of closed processes, and while the use of digital identification is increasingly becoming available, its potential for EU-wide application raises questions. While some Member States, such as Estonia, Denmark, and Finland already have highly developed digital ID infrastructures integrated with public services, others rely on less standardized solutions or remain dependent on fragmented private sector authentication. This uneven landscape raises concerns about interoperability, mutual recognition and equal access across the Union. The EU has made steps in this direction through the eIDAS Regulation (Regulation (EU) No 910/2014) and the forthcoming European Digital Identity Wallet, but implementation is not yet harmonized and political sensitivities about sovereignty and data protection remain significant (Inza, 2025).

3.2.6. Inclusiveness and accessibility

As an overarching note it is important to keep in mind that EU has legal requirements to support accessibility in the shape of the Web Accessibility Directive and for usability that sets conditions for the choices of digital tools in citizen engagement.

Most tools rely heavily on text, either as information for participants or as their output. This requires a high level of literacy, which can be a barrier to entry for some potential participants. Some tools use visualisations, which can be difficult for participants with visual impairments, as aid resources are not necessarily geared to handle this. It is therefore important to consider how different disabilities and impairments might be accommodated, often requiring multifaceted engagement to

provide appropriate opportunities for all citizens to participate. Digital participation enables flexible participation, e.g., for people who cannot travel, or who have irregular, unpredictable or busy schedules, which was one of the reasonings provided by Seattle in their affordable housing engagement process, to deploy several different kinds of ways for the citizens to engage, among them digitally through Consider.it. Digital participation excludes certain groups and thus should not stand alone, and further efforts will be required if the ambition is to facilitate processes with demographic representativeness.

Furthermore, digital literacy is an inherent requirement of all participant-oriented digital tools for public participation. In a few cases, such as DeliberAIde, digital tools are implemented without requiring direct interaction with participants. While sign-up and sign-in features can create a barrier for people with low digital literacy, the way in which the platform is navigated must also be considered. It is important to strike a balance between guiding participants in the use of the tool and not making them feel overly 'nudged' to behave in a certain way.

As a general consideration it is clear from looking across the literature and the use cases that different groups will experience different barriers to accessing participatory processes. Thus, it is important to consider which population a process is intended to reach, and which barriers different parts of that population might face, e.g., only online processes will create barriers to people without internet access or compatible devices.

3.2.7. Internal organising, commitment and accountability

Some public institutions have successfully committed to citizen engagement, such as Prince George using Ethelo to consult the citizens of the city on the upcoming budget or Aarhus Kommune that is deploying Consul to engage local communities, such as Gl. Egå, in idea generation and budgeting for local projects. However, these instances are not without their own issues.

From initial discussions about where a process might fit organisationally, to deciding where digital tools should be hosted and which departments should be involved, many interests are at stake, even within the same organisation, so it can be difficult to reach a consensus. During execution, some departments may not feel obligated to answer questions on online platforms or consider the results, as they were not involved in the process. Furthermore, implementing results can also be difficult as their realisation may span multiple departments and require a high degree of internal collaboration. Therefore, it is important to allocate sufficient financial and personnel resources to mitigate obstacles.

High degrees of commitment to citizen engagement processes does not necessarily entail that accountability mechanisms are secured, which can in some cases be seen in the lack of transparency in how results are handled. While it is easy to account for the input received through the designated digital tools, the process from closing the citizen engagement process to handling the results in political institutions is opaque and has very limited accountability mechanisms in place. This has been the scene with public institutions such as EU having ECI and Public Feedback and Consultation, but also in France using Cap Collectif, or with Consider.it in Seattle. The intention of commitment does to directly translate into accountability.

The use cases that while some instances do represent institutionalized participation, in most cases participatory processes are implemented on an instance-base. If citizen engagement is to be institutionalised in the EU policy cycle, it requires a durable shift from pilots to services, which could potentially be anchored in the EU's existing legal framework—most notably Articles 10(3) and 11 TEU on participatory democracy and, for the Parliament, Article 227 of the Treaty on the Functioning of the European Union (TFEU) on the right to petition—which together support treating digital participation as a standing public service rather than a time-limited project. Practically, this means integrating digital engagement tools into the legislative cycle (e.g., roadmaps and impact

assessments) and attaching clear feedback obligations so citizen inputs can be traced to tangible effects on files. Similarly, compliance must be designed in from the outset, including the GDPR, accessibility (EN 301 549), records management with auditable trails, and open standards to enable interoperability between several Directorate Generals (DG).

Institutionalisation requires a permanent mandate, a dedicated budget line, and an accountable owning unit with service-level KPIs—for example, reach, representativeness, influence on text, and turnaround times for feedback—rather than ad hoc project teams. Institutionalisation depends on embedding the results of the citizen engagement processes directly into existing Better Regulation routines. This means linking citizen input to concrete policy steps, such as roadmaps, impact assessments, and committee work. Crucially, institutions must provide public "statements of reasons" that explain exactly how their input influenced the options or why it was rejected.

3.2.8. AI and features

Insights from the literature review, case studies and foresight workshop clearly show that AI usage in participatory processes is still in its early days. The vast majority of tools encountered in the empirical study and selected for the case studies do not utilize AI, and those that do mostly employ it as a back-end feature rather than something participants experience or have direct interaction with. The results thus show that citizen participation on EU-wide scale could potentially benefit from AI as some features have shown promising use, but also that AI has not yet revolutionised or changed how citizen participation is organized and carried out.

From the foresight workshop, it is also evident that the implementation and use of AI by EU institutions will immerse itself into the current political discussions on technological sovereignty and geopolitics. Lack of transparency in ownership of the digital tools and rights to data could be met with resistance to participation by citizens. Furthermore, the fear of surveillance and manipulation based on data gathered through participation in EU-facilitated citizen engagement processes could be a barrier of entry for a number of EU citizens.

Beyond the surrounding socio-technical considerations, the current opportunities for use of AI-integration in digital tools comes with trade-offs that are not insignificant when taking into consideration the insights from the present study. The following section will present implemented AI-features and some potential features along with their potential in citizen engagement and their associated risks.

Conversation transcription: One promising usages of AI is the use of Natural Language Processing and GenAI which has enabled more accessible and reliable automated transcription, such as in the cases of Stanford Online Deliberation Platform and DeliberAIde. While participants might not directly interact with the tool, it does have a significant impact on lowering a hitherto resource intensive task for moderators and notetakers. The real time transcription of dialogue can be a valuable source of knowledge for the following analysis of results while also creating potential for removal of human bias in notetaking. Some persistent challenges of AI-supported transcription include dialects, accents and topic-specific wording. Furthermore, with face-to-face engagement activities the background noise of other participants can interfere with the quality of the recording.

Result processing: Different algorithms have been used in different ways to process results, ranging from bridge building algorithms, writing of proposals, conversations summaries and to other ways for analysis of qualitative and quantitative results. The use of computational algorithms, such as deployed in Ethelo, has been around for a long time and is well-established and used, and contains a high degree of transparency, while generative AI, such as deployed in DeliberAIde, that is used to synthesis the AI-supported transcriptions, has a limited knowledge foundation but drawing on the widespread knowledge of GenAI in general, it can contain some of the same risks with low transparency in how results are derived and challenges related to bias in the underlying technology.

Translation: A challenge for conducting EU-wide citizen engagement processes are the differences in language across the countries, and each of the Member States have their own – and some multiple – official languages. The idea of having real time translation opens up new opportunities across the EU to have other forms of processes than hitherto have been possible. Real time translation of speech and texts does pose a risk relating to accuracy in information as even minor changes in wording can change the meaning or intent of a sentence. Translation of speech and text using AI technologies could potentially broaden the access to participation, as both information availability increases, and inter-language dialogue becomes possible. While the automatic translation of text is already widespread across EU institutions and experiences from there can be drawn, there are still no success stories of real time automatic speech translation in citizen engagement processes.

Information curation: Access to knowledge, both during citizen participation process and for the wider society upon completion, is fundamental in ensuring legitimacy, integrity and transparency of the process. Both instances have limited evidence base. But as the use case study of Panoramic AI showed, the use of GenAI for communication on results seems promising. The use of GenAI comes with risks and the implications needs careful considerations.

Linking AI features and good practice

In the following, the use and potential uses of AI in digital participation tools will be assessed against the OECD *Principles for Good Participation* (OECD, 2022). While the impacts of AI on the principles for good participation will vary between cases and between which AI technology is applied, some general considerations were found across the study.

Table 3 – Impacts on OECD principles for 'good participation'

Positive potentials	Risks
Transparency	Transparency
Inclusiveness and accessibility	Process integrity (bias & black box)
Information	Privacy
	Resources

On the positive side, AI has the potential to be an enabling technology when it comes to information provision. Knowledge curation applications like Panoramic AI, which can make finding verified information easier for participants, while also providing opportunity for language tailored to different population groups, thus overcoming the issue around providing information in formats that accommodates different (dis)abilities. The same application could also have a positive impact on process transparency, because all information pertaining to the process can be integrated into such a system, including summaries from discussions, recordings of plenary sessions and expert interviews etc. This can both be made available to the participants to revisit information, but also to the surrounding society to make the process including the discussions and the information provided available to the wider public, thus increasing the transparency of the engagement.

While online digital tools enable the potential to reach more people and doing so independently of time and space, on the more speculative side, AI has the potential to enable *deliberative* participation at scale. One of the inhibiting factors of deliberative participation is the cost of transporting people, venue hire, catering, accommodation and moderation. While the first factors were partially overcome with advances in teleconferencing systems and novel applications of these during the COVID pandemic, group moderation remained a major cost, because good deliberative processes require smaller groups and corresponding number of moderators. But tools like Stanford

Online Deliberation Platform (SODP) promise to enable participation at scale via automatic moderation. While such a tool has been tested and the concepts validated, as the technology stands now it does not constitute a full replacement for human facilitators. Unlike human moderators, who probe statements and facilitate deep reasoning, the SODP focuses on speaker management and toxicity detection. This technical difference results in a fundamental disparity in output: SODP typically produces automated summaries or synthesised 'consensus' statements based on initial inputs. While efficient, these algorithmic approximations lack the agency of human-facilitated consensus, in which participants actively co-create the outcome. Ultimately, an AI-synthesised statement differs from a collective voice developed by the participants themselves in that it remains a machine-led synthesis rather than a result truly owned by the participants.

Integrating AI into citizen engagement introduces several critical risks that must be managed to preserve the integrity of democratic processes. One such risk is the potential impact on transparency: processing data via AI can create an opaque "black box" effect, obscuring the link between raw citizen input and final analysis. This lack of traceability can undermine the perceived legitimacy of the process among participants and decision-makers alike. Furthermore, automated summaries lack social nuance, so human oversight is essential to ensure that the context of conversations is accurately represented.

Introducing AI also poses risks to the integrity of the process through algorithmic bias, which can stem from training data or model weights and is often difficult to detect. As current AI lacks a broad understanding of context, using it to summarise qualitative results can be reductive, since the machine cannot weigh the substantive importance of arguments to the same extent as a human moderator. Additionally, while technologies like Retrieval Augmented Generation (RAG) can increase accessibility, they introduce inconsistencies in the information provided. Since Large Language Models (LLMs) are stochastic, they may provide different participants with different information. This places a higher burden on users' analytical literacy and potentially reinforces existing barriers to participation.

Finally, privacy remains a central concern as AI-supported processes often prioritise data maximisation. This increases the risk of collecting sensitive personal data, particularly when using proprietary solutions where data storage and model training practices are unclear. Robust anonymisation mechanisms and rigorous reviews of privacy policies are required to mitigate these risks. Without these safeguards, the shift towards AI-mediated deliberation could compromise the democratic values it aims to enhance.

4. Conclusion

This study examined the necessary conditions for the successful use of digital participation tools in the EU policy cycle by reviewing literature on engagement in the EU policy cycle and digital participation, analysing 94 existing digital engagement tools, conducting 11 selected use case studies and hosting a foresight workshop. The aim was to identify options that are technologically sound and democratically meaningful, and that serve as a genuine bridge between EU citizens and the EU decision-making processes.

The literature review highlights that EU does have a strong foundation for realising their ambitions for integrating digital tools for citizen engagement for policy development, however the literature also identifies several challenges that need to be addressed. Some of these are at institutional level, others concern socio-technical trade-offs. The literature further emphasises the importance of securing transparency and accountability mechanisms, as failure to provide a clear link between citizens input and policy development can lead to erosion of public trust in EU institutions.

The analysis of the digital tool landscape revealed that digital engagement tools have been around for a long time but have proliferated over the past decade and a half. Based on this analysis, 10 meso-level functionalities were derived, each constituting a thematic cluster of input and output mechanisms: survey, wiki-survey, forum, simulation, result processing, petition, information provision, co-writing, whiteboard, and video-tele-conferencing. While each digital tool can contain more than one functionality, most have a limited number of two to three functionalities.

Analysis of the eleven use cases generally aligned with the literature and what was identified by the digital tool landscape analysis, but it did also bring out several other interesting findings. Digital participation tools enable a limited number of processes and can thus be considered to be process-specific; however, the tools are generally agnostic to theme, policy cycle phase and purpose. This means that what the tool conditions is *how* a topic can be addressed but not which topic or when in the policy cycle it can be addressed. For this reason, the starting point for planning digitally mediated participation processes is still what output is sought after, which process can yield that output and then which tool can facilitate that process. The use of digital participation tools should not be considered a loophole to citizen engagement but should be seen as an extension of existing citizen engagement efforts, supplementing rather than replacing to face-to-face participation. Accountability and commitment on part of decision makers and institutions are a sine qua non and cannot be fixed solely with the implementation and use of digital participation tools, as organizational and structural challenges will persist to interfere with its potential to succeed. While digital participation is sometimes seen as a way to create broader reach, digital participation tools bring other types of barriers to participation, which could risk exacerbating inequalities, particularly for those with limited digital literacy, but also to others. It follows that each participation format creates different barriers, which necessitates targeted inclusion strategies. Most use cases were instance-based processes with varying degree of institutional integration, while the institutionalized cases suffered from low public awareness and very high requirements for qualification. However, it is still conceivable that an institutionalized digital citizen engagement format could be both successful and impactful.

The uptake of AI features in citizen engagement is still in its early phases. Both the literature and the use cases indicate that AI is not set to revolutionize citizen engagement in the near future. The majority of AI applications in participation tools is as back-end features, with the most development seen in processing of large amounts of data, for example through clustering, automatic summarization, or machine translation to overcome language barriers. This could in the future mean more manageable large scale deliberative, multi-lingual and qualitative processes, but at present the technology is still too immature, though the latter appears to hold the most immediate potential.

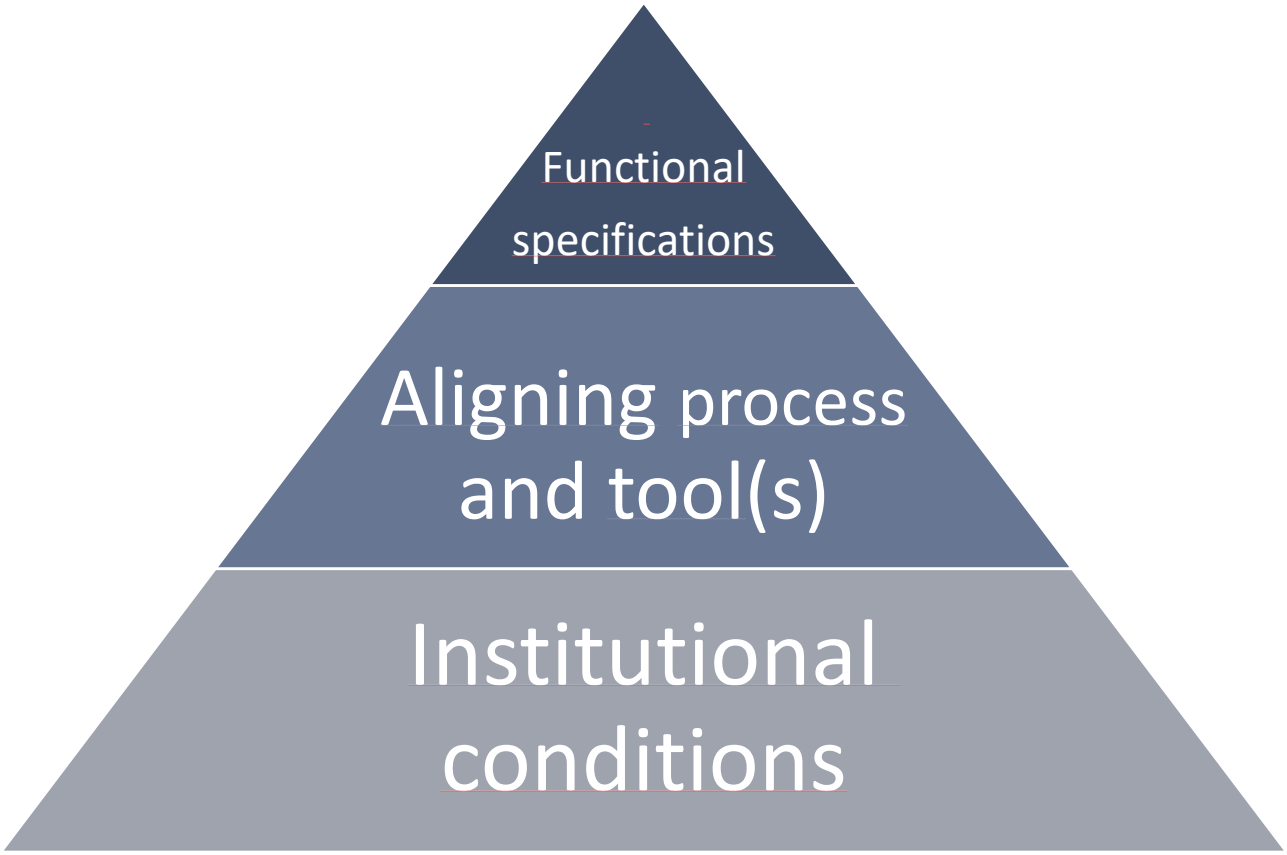
One prominent exception is in knowledge provision, where generative AI is combined with a RAG-setup to provide tailored, flexible and multi-media knowledge and information. Applying AI functionalities to digital participation tools and processes entails a number of risks, both to the output and the process itself. Application should be made with clear understanding of abilities and limitations of AI systems and implementation of meaningful human oversight, in order to ensure that the process is both transparent and retains integrity. General risks associated with applying AI to participation processes concern bias, 'hallucinations' and other issues cause by the stochastic nature of LLMs, misrepresentation, and error propagation.

Drawing on insights from this study, it is evident that an EU-wide digital engagement tool is feasible, but it would require careful consideration to ensure alignment between the EU's strategy for citizen engagement and its policy cycle. Clearly, there is no single solution that the EU can implement to cover all forms of engagement at all stages of the policy cycle or for all purposes. The success of a digital tool depends heavily on coherence between its intended purpose, its desired outcome, its functionalities and a strong institutional link that provides both commitment, accountability and clear process uptake procedures.

5. Policy options for digital citizen participation

The policy options presented here will take a progressive approach. The initial options will set out the high-level preconditions that form the basis for effective citizen participation. This will be followed by a set of process-based options, then a set of more specific technical options. Conceptually, the initial policy options are complementary rather than mutually exclusive, whereas the more concrete options are distinct.

Figure 5 – Importance of policy options – towards a digital infrastructure for civic engagement in EU policymaking



5.1.1. Institutional conditions for meaningful citizen participation

As is clear from both the literature review and the use cases, institutional conditions such as commitment, accountability and clear path from citizen input to institutional treatment and output are prerequisite to meaningful, digital participation. Thus, these institutional considerations precede the actual choice of tool and functionalities and other more tangible decisions and are thus vital for ensuring successful implementation of digital tools for citizen participation in the EU policy cycle. These considerations concern what the uptake and impact of the participation process should be, who should receive and act upon the output, which governance structures are necessary to support the process, questions about when in the policy cycle the participation should take place and whether it should be institutionalized or run on an instance base.

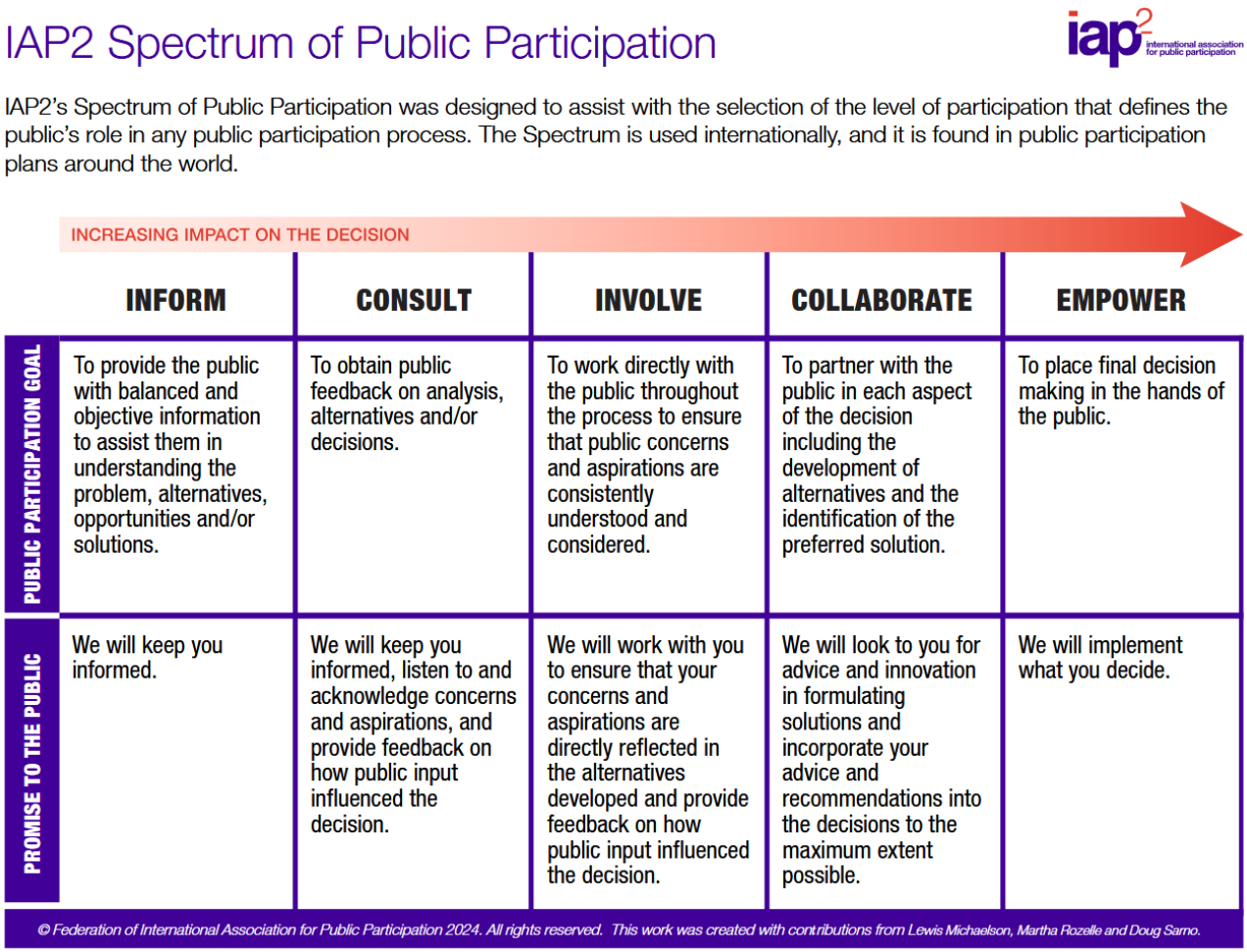
Policy Option 1: Determine citizens' mandate and level of impact on policymaking

No tool or method can make citizen engagement work if the governance structures to implement it are not in place. This goes for both digital and face-to-face participation. Across the conducted case studies interviewees highlight this as the main condition for meaningful citizen participation.

From the point of view of citizens, participation does not make sense if the results have no impact on the policy making process. If they do not, citizens are likely to protest, and the process will do more damage than good to the public perception of the democratic quality of EU policy making. The extent of that impact is a matter for careful consideration and specification, so that expectations can be both managed and met.

Concretely, provisions for detailed descriptions of the mandate given to the citizen participation process and the ways in which results will be discussed by policy makers (both politicians and civil servants) and reflected in policies in the making, should be introduced and specified before a process commences. This would ensure the commitment from policy makers to make use of the results and through increased transparency and predictability strengthen the citizens' trust in the process.

Figure 6 – Spectrum of public participation (IAP2)



The role of citizen participation can vary from time to time, depending on both practical circumstances and the willingness of policy makers to empower the citizens, as illustrated by the International Association of Public Participation (an adaptation of Sherry Arnstein's "Ladder of Citizens Participation" from 1969, Figure 6 pictured above).

Policy Option 2: Advance citizen participation in EU policymaking

Several EU policies have already been adopted that make provisions for citizen participation. These range from constitutional mandates in Articles 10 and 11 of the Treaty of the European Union (TEU) and the right to petition in Article 227 of the Treaty on the Functioning of the European Union (TFEU), to the operational frameworks established by the White Paper on European Governance and the Better Regulation Guidelines. Although these provisions have successfully introduced mechanisms such as the 'Have Your Say' portal (now called Public Consultation and Feedback) and the European Citizens' Initiative (ECI), there is still significant scope to further institutionalise citizen participation practices and ensure their consistent integration into the formal legislative process. The following strategic measures are proposed to strengthen the democratic impact and operational consistency of existing provisions:

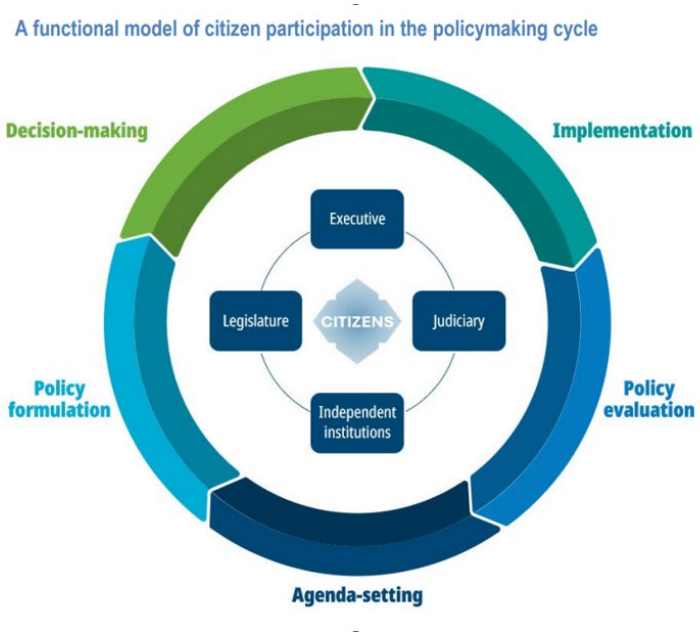
- Refining normative frameworks: Future policy instruments should utilise precise, prescriptive language to define the weight of citizen input within the legislative cycle. This will entail transitioning from discretionary consultation to a framework of institutional accountability.
- Establishing permanent deliberative structures: Rather than relying on one-off pilot initiatives, the Union could benefit from establishing standing participation mechanisms within the European Parliament to facilitate continuous, structured dialogue between citizens and legislators.
- Strengthening the European Democracy Shield: Promoting citizen engagement should be a strategic priority of the European Democracy Shield, strengthening democratic resilience and mitigating the influence of disinformation.
- Regulatory alignment in governance: Clear and enforceable provisions for public participation should be embedded in the Governance Regulation, which is currently being revised, to ensure that all institutions adhere to high-quality deliberative standards.

Policy Option 3: Introduction of citizen participation in different phases of the policy cycle

Citizen participation can meaningfully contribute to policy making in different ways and stages of the policy cycle. From the early phases of agenda setting; over assessing draft policy proposals; to evaluating implemented legislation.

Different methodological approaches match different stages in the policy cycle. It makes little sense, for example, to make use of agenda setting methods if a legal initiative has already been taken. It could be considered to introduce citizen participation mechanisms and methods in multiple key phases of the policy cycle; as part of Agenda Setting, between a Legal initiative is taken and First Reading in the European Parliament and Council, and as part of the Policy Evaluation.

Figure 7 – Functional model of citizen participation in the policy cycle, OECD (2025)



Policy Option 4: Promote and adopt quality standards for citizen participation

Quality standards, principles and best practices have already been developed by professionals in the field of citizen participation. One such set of standards is the OECD's good practice principles for citizen participation (OECD, 2020), which are often referred to in EU policy documents. These include the representativeness of participating citizens and informed deliberations between them. While the European Citizens' Panels are already in line with the OECD Good Practice Principles for Citizen Participation (OECD, 2020), other mechanisms could do more to be so, for example by strengthening representativeness, inclusiveness, accessibility and informed deliberation.

As mentioned in Policy Option 2, EU policies have already been adopted to make provisions for citizen participation. However, more can be done to promote quality standards and increase the likelihood that they will be meaningful and achieve the desired impact. A trend towards demands for higher standards was also identified in the foresight workshop.

Policy Option 5: Inter-institutional anchoring

As described above, a clear connection to policymaking is pivotal for any participation process, in the form of an explicit mandate and associated commitment. When integrating a digital participatory tool into the EU policy cycle, a central question is whether the tool and the processes it is used for should be anchored in one or more of the institutions involved in the ordinary legislative procedure.

Generally, there is a trade-off between having a broad mandate with inter-institutional legitimacy and flexibility across the policy cycle, and an increased level of coordination and politicisation of the process.

With multi-institutional anchoring, a mandate across the three main bodies of the ordinary legislative procedure would confer broad legitimacy and flexibility across institutions and the different steps of the procedure. In theory, such inter-institutional anchoring would also provide a participatory process with an unequivocal status and legitimacy across institutions. However, a multi-institutional setup may be weakened through negotiations between institutions with different views on the most appropriate mandate for the process. A mandate based on a compromise between three institutions may therefore be less effective, with a less clear impact on the policy cycle. Conversely, a setup

within one institution could provide a clearer and potentially more direct mandate, albeit with a narrower scope. For example, it would only inform one institution's position and limit the stages of the policy cycle to which it could be applied.

Furthermore, anchoring a tool across institutions would require greater cross-institutional coordination, potentially slowing down decision-making and development. While this could be addressed through a cross-institutional operational setup, such as a dedicated office, team or working group, the tool(s) and its applications would still be subject to an added layer of politicisation. However, a multi-institutional setup prevents institutions from developing competing tools that become redundant.

5.1.2. Aligning processes and tools

As the study shows, digital tools are generally process-specific and rather inflexible in terms of modes of interaction and the nature of the results they can generate. However, they are topic-agnostic, meaning they do not determine what can be discussed, but rather how it can be discussed. This also means that the same digital tool can be applied at various stages of the policy cycle. Therefore, decisions regarding digital participation tools should initially focus on the intended use of the results of the citizen engagement process, the most suitable type of results, and the most appropriate process and mode of interaction to generate them.

Policy Option 6: Modes of participation

The format of participation influences every aspect of the process and its results. Consequently, the choice of whether to run citizen participation processes as purely online, hybrid or digital support of face-to-face processes, requires careful consideration. Each has strengths and weaknesses, and they are not necessarily mutually exclusive, and different modes can be chosen for different processes.

One way to participate is to use *digital tools for fully online engagement processes*. This makes the process accessible to many people, regardless of time or place, which can lower the barriers to participation. Fully online engagement processes risk repeatedly excluding the same groups, as their inability to participate is coupled to their digital skills, literacy, and internet or device access, but also their familiarity with institutions and perceived difficulty in accessing the process. When the results are mainly quantitative, they provide no insight into underlying causes or in-depth knowledge, which is not desirable for some purposes. When digital tools are used to gather qualitative insights, the quantity of results can be unmanageable and difficult to process, meaning that fully online engagement processes are mostly favourable when quantitative results are desired, or a smaller target group is to be reached though, as noted below, AI has the potential to change this. To ensure the success of digital tools in fully online engagement, dedicated efforts must be made to recruit participants and communicate with them before, during and after the process. As the OECD also points out, fully digital participation does not imply lower costs (p. 51, OECD, 2022). Even if processes are fully online, substantial human effort is often required throughout for tasks such as recruitment, technical support, moderation, providing expertise and facilitation. In addition, technical development, setup and maintenance can be resource consuming as well.

A second mode of participation involves *using digital tools to support face-to-face participation*. Digital tools can provide functionalities that can benefit face-to-face engagement. These digital tools can function in two ways: they can either work in the background, so participants do not interact with them, or they can be incorporated into participants' interaction with the process. Background digital tools should be considered carefully, as they can impact the validity and transparency of the process, and their use should be clearly communicated to participants. When incorporating digital tools into the process, the purpose should be considered, bearing in mind that the functionality of the tools is inflexible, and their use should therefore be clearly linked to the face-to-face activities in which they are embedded. They also influence interactions between

participants, so care should be taken not to hinder these interactions. With this kind of deployment, it will not be possible to achieve the same level of reach as with fully online processes, as the use is constrained to physically present participants.

A final mode of participation *combines digital tools for online engagement alongside or in sequence* with face-to-face participation, providing rich citizen engagement. Face-to-face participation creates spaces for constructive deliberation, providing in-depth knowledge of a topic, but it will often have a more limited reach. However, combining face-to-face participation with an online process can provide quantitative results from a greater volume of participants. This will enrich the results and input for the EU, providing a more solid foundation of knowledge and enabling a mixed methods approach. To ensure the successful use of digital tools in a hybrid engagement process, transparency is crucial regarding how the different activities are connected. If the hybrid process comprises successive dependent activities, there must be procedures in place to make transparent how the results of the different activities are interlinked and used in subsequent activities. While the hybrid mode of participation provides the greatest flexibility and potentially the greatest inclusivity, it is also the most expensive solution, all other things being equal.

Policy Option 7: Focus on the scope of participation tools

While deciding which functionalities to incorporate is important, a more fundamental question is what purposes the tool should serve and the degree of flexibility this requires. The tools surveyed in this study incorporate different amounts of functionality, and while a tool with more options might seem like the obvious choice at face value, the choice is more complex as each option involves trade-offs between different parameters. Generally, functionalities increase development complexity and thus price, as well as the complexity of correctly applying the system, thereby requiring higher staff skills. However, it also enables greater flexibility in the modes of interaction.

There are four distinct strategic approaches to tool architecture that can help to navigate the inherent trade-offs between system complexity and engagement flexibility. The implications of each approach for institutional resources and the citizen experience differ.

It is important to note that the observations about tool development below will not be relevant for off-the-shelf tools, but the remaining observations are still relevant. These observations also apply if a tool is commissioned for development by an external contractor.

Approach 1: A tool with narrow scope

This option involves developing a tool with one or two functionalities, thereby limiting the potential applications of the tool to a smaller set of interaction modalities. This option could involve applying the tool within a more standardised participatory methodology, either as a fixed part of a policy cycle or as a standardised step in a hybrid participatory process consisting of multiple steps.

While having one digital tool with a narrow scope could be used to create standardised processes requiring less technical expertise and fewer competencies for developing new participatory methods, the limited number of functionalities would make the digital tool inflexible in terms of the interaction modality it enables and the outcomes it can deliver. There will be limited possibilities for tailoring the digital tool to specific needs, and processes may end up being forced to fit the tool's functionalities rather than citizen engagement processes being designed with independent purposes or interaction modalities. A tool with a narrow scope would be easier to develop and maintain, which would likely reduce costs. Additionally, both the user interface and the system's back end can be kept comparatively simple, improving the user experience. It will also support clearer purpose definition, making the purpose and use of the tool easier to communicate.

Approach 2: One tool with multiple functionalities

The second option is to develop a tool comprising a variety of functionalities, which would enable greater flexibility in terms of processes and data collection. At face value, a system with multiple functionalities would be preferable since it would allow for a greater variety of processes. However,

more functionalities add complexity to development, administration, setup and the user interface, as well as to defining the tool's purpose.

Nevertheless, a digital tool with multiple and diverse functionalities offers significant advantages in terms of flexibility, supporting a wider range of processes and interaction modalities. This allows participatory initiatives to be tailored to different contexts and purposes. This flexibility can facilitate rich, interactive forms of engagement and provide citizens with a single-entry point through which they can access different stages of the same process, or potentially different processes.

However, increased functionality also brings substantial policy and operational challenges. Greater flexibility means less standardisation of processes, so they will need to be redesigned for each use. This leads to higher costs and additional negotiation over how the tool is applied. A more complex system places greater demands on staff competencies to ensure correct and effective use, requiring specialised expertise in participatory methodologies and technological implementation domains. Development and maintenance are more complex, involving greater configuration effort, ongoing upkeep and a high level of institutional commitment. Integrating functionalities and exporting data may also present challenges, while the user interface risks becoming complex and difficult to navigate if not carefully managed. These trade-offs must be considered when pursuing multifunctional digital platforms to balance adaptability, sustainability and usability.

Approach 3: A modular tool

This option involves developing a tool that is designed to be modular by default. This means that initially, the tool will have few functionalities, but more will be added over time. Although this approach has some of the same advantages as a tool with multiple functionalities, it involves a more iterative development timeline. This means the tool can be delivered sooner, albeit with limited functionality initially.

A modular approach to digital tool design offers significant strategic advantages, combining flexibility with long-term adaptability. Modular systems can accommodate a wide range of processes and respond to emergent needs while enabling development to occur in stages through the incremental addition of functionality. When implemented effectively, this approach can support the longevity of tools and provide a single-entry point for citizens to engage with EU policy processes. However, modularity also introduces important risks and constraints. Increased flexibility may necessitate redesigning or renegotiating processes as new modules are introduced. The development priorities for subsequent modules are subject to negotiation, and early design decisions can limit future options. Export configuration can become highly complex and administrative setup challenging. The biggest development risk is that the technology and infrastructure that the tools is developed on becomes obsolete, unsupported or incompatible with necessary security updates, thus compatibility becomes crucial. From a user perspective, the gradual accumulation of functionalities can fragment the user interface, creating a less seamless user journey. Continuous change can also generate confusion and reduce user trust and engagement. These considerations highlight the need for robust governance, clear design principles and careful change management when adopting a modular system strategy.

Approach 4: A setup with multiple separate tools

The final approach involves creating a suite of specialised tools, each designed for a specific purpose and deployed according to the context of the engagement. This strategy provides a high degree of flexibility, as it allows practitioners to select the most suitable functionality for the unique requirements of a given policy process. Using distinct platforms means that each tool can have a simple, intuitive user interface focused on a single task, such as collaborative drafting, priority voting or spatial mapping. This makes it easier for organisers to communicate clear objectives and a coherent narrative for individual engagements. Furthermore, this approach enables a phased

development cycle, allowing institutions to invest in one tool at a time for targeted implementation and refinement, avoiding the risks associated with large-scale system overhauls.

However, this architecture presents significant organisational and technical challenges. From an institutional perspective, this is the most expensive strategy in the long term, as each tool requires its own development, maintenance and security updates. Administration also becomes increasingly complex as staff must possess the competencies to manage multiple systems and understand which tool to select for specific participatory methodologies. For citizens, the user journey often becomes fragmented, and moving between different platforms within a single process increases the 'technical tax' on participants, raising the risk of confusion and users dropping out. Additionally, linking and aggregating results across disparate databases can present a substantial technical hurdle, making it difficult to provide a holistic view of the input gathered. While this approach offers the highest methodological precision, it ultimately requires continuous expert assessment and a high level of institutional commitment to manage the resulting ecosystem of tools.

Policy Option 8: Functionalities

Following the categorisation of functionalities presented in the study, this section provides non-exhaustive examples of how each category could be used by the EU to engage citizens in policy. However, as previously mentioned, the outcome depends solely on choosing the right method for the desired purpose. Below is an overview of the different functionalities, showcasing conditions where it will perform well and conditions it is less suitable for, as well as key considerations. A summarized overview can be found in Table 17: Assessment of functionalities (Appendix C: Overview of assessment of functionalities).

Survey can be used to consult citizens. Depending on whether the questions are open or closed, citizens will have an opportunity to express themselves. Closed questions will limit the citizens' agency, whereas open questions will be experienced as providing a greater opportunity to provide more elaborate input. The big advantage of surveys is that it can be used to reach high numbers of people at comparatively low cost, both because this is a mature functionality in the sense that digital surveys have been around for a long time, so the formats are well-established and simple to develop, and because beyond developing a good questionnaire the other major cost is recruitment. Surveys can be used for small- and large-scale engagement processes. They can foster engagement that is not bound by time and place constraints. On the other hand, survey respondents tend to provide spontaneous answers by reflex, both because they are typically not situated, and because they have less nuanced context and shorter time to reflect on the implications of the questions. Surveys are traditionally text-based, which excludes citizens with low literacy skills, and thus it is important to consider accessibility, e.g., by integrating audible questions and the opportunity to provide input orally.

Good for: reaching high numbers of participants, understanding how a population is distributed on one or more questions, engagement independently of time and place, cost-effective.
Not good for: nuanced, informed and reflected answers, nuanced understanding of positions.
To be aware of: Accessibility for people with low general literacy.

Wiki-survey are used to foster asynchronous engagement with written interactions between citizens, centred around proposals or suggestions. Wiki-surveys are good for presenting a broad variety of positions, getting comments and inputs on these as well as indications on participants' preferences, and are often integrated with deliberative processes where the proposals are developed, but can also be used independently. Like with surveys participation can be at scale and independent of time and place. It does entail a need for moderating the debate to ensure a constructive and respectful tone and ensuring that proposals and suggestions are within scope, which is significantly more difficult if employed as a stand-alone. For wiki-surveys it is important to have a clear view of whether participation is open to all or a select group, and thus which identity

and access management requirements to put in place. Wiki-surveys require a medium level of digital literacy, but are text based, so less accessible for people with low literacy.
Good for: reaching high numbers of participants, engagement independently of time and place, idea generation and testing proposals.
Not good for: Unsupervised processes, generating common understanding or consensus, informed answers.
To be aware of: Accessibility, identity and access management.

Forum can facilitate free, topic focused interaction between participants. It can create opportunities for engagement that are not bound by time or place. Machine translation can further increase the possibility of interaction across language barriers, albeit at the cost of lower accuracy. Identifying users increases transparency but also increases the barrier to entry. As a text-based format, it can present an additional barrier to entry for groups with limited literacy. Forums are best suited for small scale engagement and will require active moderation. The conversation on forums can be harder to frame and facilitate, i.e. keeping the participants on track and within scope. This also means that forums are not well-suited to create a specific output or result (except cases where the conversation is an output in itself). It is thus more well-suited to have participants exchange views and get acquainted. However, getting people to actively use a forum is difficult, given the competition from other digital platforms that are integrated into their daily lives. For this reason, the purpose of the forum should be very clear, situated in a process that the participants find relevant, and participants should be continuously motivated to use it.
Good for: Small-scale asynchronous interaction, exchange of views and getting acquainted, short term or in-between interactions.
Not good for: Deliberation, generating concrete results or outputs
To be aware of: Accessibility for people with low general literacy, requires active moderation, competition for attention and activity.

Simulation can make complex processes more approachable, which can increase participants' engagement. Simulation functionalities are good as visual process facilitators, e.g., showing trade-off implications or physical contexts. However, simulation can often be more digitally complex and require a certain level of digital competency. Simulation can be used for both small- and large-scale processes. However, simulations provide limited opportunities for interaction between participants. Simulations require careful consideration of how results are used and thus process facilitation, both when embedded in broader processes and as stand-alone, as results are rarely self-evident.
Good for: Visualizing trade-offs, contextualization.
Not good for: Participant interaction
To be aware of: Ensure clear definition of results a priori, requires careful process facilitation.

Result processing can be used to show intermediate results immediately to participants but will also often be a back-end feature. It can help manage, process and analyse large amount of both quantitative and qualitative data. Furthermore, it can be used to create outcomes that are easy to process for the receiver. Result processing requires careful human oversight to verify results, especially when using automated means such as transcription, summarization of conversations and analysis of both quantitative and qualitative outputs. For the sake of transparency, it should always be communicated clearly if automated results processing has or is intended to be used.
Good for: Summarizing and analysing data, generating immediate results overview, showing statements or topics with consensus and/or dissensus.
Not good for: Stand-alone analysis and summarization, participant interaction.
To be aware of: Requires meaningful human oversight in order to maintain process transparency and legitimacy

Petitions can be used to create organised support for a cause with high levels of transparency. In addition, it is necessary to establish appropriate thresholds that balance legitimacy of a petition with

proportionality and impact. Once the threshold has been met, transparency of the further process is of great importance. To be meaningful it is necessary to implement formalized institutional anchoring and procedural practices for accountability. Petitions constitute a limited form of participation since citizens' agency is limited to the binary choice of agreeing and signing to the statement or not. It is also limited in the sense that qualification thresholds are often high, meaning that individual citizens cannot rally sufficient support, leaving it an impact opportunity for organized interests.
Good for: Institutionalized and formalized processes, organized interests, obtaining high legitimacy.
Not good for: Interaction, expressing opinions, shaping of agenda, small scale engagement, nuanced understandings.
To be aware of: Meaningful and balanced thresholds are hard to establish, requires formalized mandate and procedures.

Information provision can make information widely available to citizens using multiple formats and concerns one way communication. Information provision is a crucial step in many citizen engagement processes, to ensure that participants take part on an informed basis, but also that they have a shared knowledge base as vantage point, and thus care should be taken to ensure that information is provided in formats that are accessible to all participants. The use of AI for knowledge curation and machine translation can further increase the accessibility and inclusiveness but entails risks of accuracy and fragmented knowledge base among participants. In addition, the democratizing potential is also limited, given that effective use of this functionality still relies on the participants' competencies. With different technologies it can also be made interactive and personalized to foster more adaptive experiences. Information provision functionalities can also improve process legitimacy by opening processes to a broader public. Accessibility is a key consideration, which should be addressed using multi-media formats.
Good for: Creating conditions for informed participation, creating process transparency, accessibility.
Not good for: Generating results or outputs.
To be aware of: Ensure information formats that create equal access to information, risk of fragmented knowledge base, not in itself a democratizing functionality.

Co-writing can provide citizens with an opportunity to interact and collaborate on text products. Demands for participant identification will increase transparency on contributions. Co-writing can be used for both synchronous and asynchronous processes but should be limited in scale given the complexity of the text production. It requires facilitation and clear rules and procedures for adoption of text, which increases process complexity. Given the textual nature of co-writing process design should ensure ways of reducing barriers to entry for people with limited literacy.
Good for: Smaller groups, generating text with full-group support, detailed and nuanced outputs, focused topics
Not good for: Large scale interaction, broad debates, stand-alone process, people with limited literacy.
To be aware of: Clear rules and procedures for adoption of text, requires process facilitation and moderation

Whiteboard can be used to provide structure in a more visually facilitated manner, which citizens can interact with and on. The processes can be both synchronous and asynchronous. Citizens will require a certain level of digital competencies to participate which can be a barrier to entry, but the move away from text-based interaction can widen the inclusion of participating groups. It can be difficult to export results from whiteboards and additionally make use of the results for analysis. While whiteboard functionalities can be used on their own, they are often integrated in a broader process.
Good for: Smaller groups, visual facilitation, multi-media content.

Not good for: Large scale interaction.
To be aware of: Requires very careful consideration of how outputs are to be used and processed subsequently.

Video-tele-conferencing can facilitate citizens' interaction confined to time constraints but with the absence of location constraints and is the only functionality which allows for deliberative interaction between participants. Citizens will be required to have a certain level of digital skills and additionally have access to proper devices, software and internet. If used in a transnational context, language will be an important parameter to consider. Video-tele-conferencing can create space for deliberation between citizens, which can be scaled. While automatic facilitation systems do exist, they currently cannot fulfil the same functionality as a skilled facilitator. Thus, if deliberation is sought after personnel costs for facilitators are still a factor. In either case, it can be used for both small- and large-scale processes. While video-tele-conferencing allows for deliberation, it does not allow for the same personal relation-building as in-person encounters. While these systems facilitate deliberation, they have limited capacity for results generation in themselves and are thus often coupled with other systems.
Good for: Flexible group size, deliberation, presentations, Q&A
Not good for: Building personal relations, asynchronous participation, large scale focused deliberation.
To be aware of: Typically requires combination of tools to generate or capture outputs and results, it is often treated as less committing than physical meetings resulting in absentees and participant multi-tasking.

Policy Option 9: Approaches to AI

As the study details, applying AI to participatory processes is still a developing field. Although some uses have been tried and tested, these are predominantly back-end features and have only led to modest innovations in participatory processes, as AI has primarily been applied to established methodologies and processes. As shown above, while there are applications of different AI technologies that hold potential, these also pose various risks, necessitating careful consideration of how and when to implement them. As AI technology has not yet matured to the point where it can seamlessly balance efficiency and democratic integrity, its implementation requires rigorous, case-by-case analysis of inherent risks and trade-offs. Policy officers must carefully consider the potential increase in engagement alongside significant concerns regarding algorithmic bias, the 'black box' nature of automated analysis and the potential loss of nuanced human oversight. Consequently, any move towards integrating AI must be preceded by a thorough evaluation of whether the technological benefits outweigh the risks to transparency and institutional legitimacy.

This being said, some applications already show value, while others show potential further down the line. The use of generative AI with RAG setups, as presented above, has been tried and demonstrated value for information provision. The use of AI for analysing large quantities of data, particularly qualitative data, also holds great potential and methodologies are being developed to retain process transparency and result accountability, though care should be taken to address risks of hallucinations and other stochastically induced errors also meaning that human oversight is still indispensable. In the longer term, it is conceivable that multi-modal LLM systems will develop to a point where these can be applied as meaningful facilitators of deliberative processes, though this is considerably more speculative. For all applications it goes that, just like regular functionalities, AI functionalities will condition the mode of interaction and the results that are generated – they are not 1:1 replacements of other processes.

Given this, three approaches can be taken to applying AI in digital participation tools. An early adopter approach would entail developing and exploring opportunities and would require both investments and a willingness to fail. A second approach would be to apply what is there, reducing risk of development of both tools and processes, and gradually adopt new AI functionalities as they

are developed. A third option is to hold back, let others develop and experiment, and wait until major issues have been revealed and solved and uses have become validated.

5.1.3. Functional specifications

Some technical considerations are needed regardless of which approach is decided, as their relevance address technical aspects that goes beyond functionalities, AI, process definition and institutional conditions, but their decisions are nevertheless important for the successful implementation of digital participation tools in EU.

Policy Option 10: Technical aspects

Device compatibility

There are several ways to approach the issue of device compatibility. The choice will also be informed by the kind of process-based approach that is chosen. For fully online engagement and hybrid processes, the choice will impact the success of the initiative. The most prevalent devices used for citizen participation are web applications and mobile apps, with some web applications being available in mobile-adapted versions. Webpages enable more modes and deeper forms of interaction, whereas mobile apps provide more flexibility but offer reduced depth, providing more superficial engagement. Therefore, the choice of device will determine the possible modes of interaction. Additionally, consideration should be given to the browsers and operating systems with which the tool should be compatible, including interoperability with alternatives to the most prominent browsers and mobile operating systems. The interoperability of the system is also determining for equity of access to the process.

User identification

Regardless of processual set-up, functionalities and other choices, the question of user identification is crucial to consider. Digital tools face an inherent trade-off between participation accessibility and democratic legitimacy and transparency, with user verification requirements inversely correlating with participation rates but directly correlating with institutional trust. Some EU Member States have provided their citizens with Electronic Identification, Authentication and Trust Services (eIDAs) making user identification easy and streamlined but also creates a higher barrier of entry and can lead to questions on proportionality which could rise concerns about surveillance. Lowering the threshold for user identification will give rise to concerns about possibilities for one citizen to participate more than one, for external interests to interfere in the processes and overall create questions about the validity and representativeness of participant composition and thus of the generalizability of results.

Data security and compliance

How data is handled when digital engagement tools are deployed in EU policy work must be compliant with EU regulations, such as the GDPR. There are ways to increase insurance on compliance, (1) choosing EU-based hosting and data residency, (2) putting in place appropriate Data Processing Agreements (DPAs), (3) tailoring privacy notices to the concrete deployments, and (4) ensuring effective procedures for data subject rights, security, and breach response. Here it is also important to note that integration of third-party services increases need for extended security and data protection impact assessments. Third party services here could e.g., be video players or maps for interaction, but could also be functionalities.

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7. Appendices

7.1. Appendix A – General analyses on all tools

Table 4 – Overview of 94 tools

Tool	Year	Geographical origin	Short description (web-crawled; extracts from vendor & other sources)
76engage	2016	Canada	Platform that strengthens the bonds between citizens and public institutions through meaningful public engagement
adhocracy+	2019	Germany	Platform that offers a wide range of functions that allow you to easily carry out participation projects
Airesis	2012	Italy	Open-source platform that promotes e-democracy by offering numerous organizational and methodological tools for communicating, collaborating, and participating in direct democracy
AllOurIdeas	2010	USA	Platform to co-create and develop collaborative initiatives and policy
AppCivist (CITRIS)	2017	USA	Platform for democratic assembly and collective action
Assembl	2014	France	Massive collective intelligence is the capacity to mobilize communities on a large scale (hundreds and thousands of participants) around key stakes and challenges to co-create new solutions in a short space of time
Avaaz	2007	USA	Global web movement to bring people-powered politics to decision-making
Bang the Table (EngagementHQ)	2006	Australia	Suite of listening, information, analysis, reporting and relationship management features to enable mix and match precisely the right online tools for community engagement objectives
Better Reykjavík	(unclear)	Iceland	Platforms for crowdsourcing citizen ideas and proposals for city development and decision-making.
BiPart	(unclear)	Italy	Company offering services and projects to engage the public in decision-making
BRZ eDem	2019	Austria	Virtual reality technology to get citizens involved on a new e-participation platform
Cap Collectif	2014	France	Comprehensive and versatile collective intelligence platform
Central Electoral Register (ZeWaeR)	2018	Austria	The Register not only contains the voter lists of all Austrian municipalities but also allows to sign nation-wide public initiatives both online (with a qualified electronic signature) and at any Austrian municipality
Chongqing Online Discussion Platform	(unclear)	China	Digital participation platform built for village-level opinion-sharing, discussion, and decision-making
Citizen OS	2014	Estonia	Open-source platform for collaborative decisions and e-democracy applications
Citizen Space (Delib)	2001	UK	Government-grade consultation platform used by councils and ministries
Citizink	(unclear)	Spain	Participation platform created with open-source technologies
Civic Action Teams	(unclear)	South Africa	Closing feedback loops and building accountability in communities

CivicBudget	(unclear)	Europe	Open-source participative platform enabling any organization, public or private, to launch a consultation process; e.g., for funds in public budget
Civis	(unclear)	India	Platform that enables citizens to understand and share feedback with the government on laws and policy decisions
Civocracy	2015	Germany & France	Fixing the relationship between citizens and their government using digital citizen participation
CoBudget	2014	UK	Makes it easy for organizations and groups to allocate funds collaboratively and transparently
Cocoriko	2012	Canada	Public participation platform to increase citizen engagement
Community Remarks	(unclear)	USA	Engage residents with mapping and commenting
Consider.it	2012	USA	Web-based discussion-system / forum that elevates community opinions. Civil and organized discussion even when hundreds of stakeholders participate; promotes civil and efficient online dialogue by visually summarising the opinions of the community and the rationale behind them. The platform helps to focus discussions, even with a large number of participants. It has been used in a variety of contexts
Consul	2015	Spain	Citizen participation tool for an open, transparent and democratic government; including open up spaces for debate; gather and evaluate Citizen Proposals; make collective decisions through voting; organize a process of participatory budgeting; and collaboratively draft laws or regulations
ConsultVox	(unclear)	France	Co-constructing territories by mobilizing citizen intelligence; online toolbox of citizen participation, to consult and involve all audiences in local projects; including questionnaire, call for ideas, participatory budgeting, participatory map, citizen alert, round tables and connected posters
coUrbanize	2013	USA	Community engagement platform that helps residents, real estate developers, city planners, and municipalities build better cities together
Dear South Africa (DearSA)	2017	South Africa	Non-profit platform which enables the public to co-shape all government policies, amendments and proposals; creates awareness of draft policy amendments at municipal and provinces
DebateGraph	2009	USA	Web-platform for visualizing and sharing networks of thought – and opening reasoning and action to collaborative learning and iterative improvement
DECID	(unclear)	France	Opinion-sharing platform
Decidim	2016	Spain	Construction of technology, methodologies, practices, standards, actions, narratives, and values, in a free, open, collaborative and reflective way; free open-source participatory democracy for cities and organizations
Decision 21	2015	Czech Republic	Online platform for civic participation
Delib (Citizen Space; Dialogue; Suite)	2001	UK	Digital consultation and engagement provider offering platforms - like Citizen Space - to support public consultations for government and institutions; building consensus via ideas, comments and ratings in a shared space. Manage closed conversations with defined groups of stakeholders, or open up a public debate
Deliberaide	2023	Germany	A purpose-driven startup at the intersection of democracy and emerging technologies; it is a "deliberative tech" or "government technology" company, focused on revitalising public participation through AI-powered tools; grounded in the belief that continuous, inclusive dialogue — not debate and periodic voting — should shape decisions in our societies

DemocraciaOS	2012	Argentina	Online space for deliberation and voting on political proposals; stimulate better arguments and come to better rulings
DemocracyOS	2012	Argentina	Open-source software for online deliberations which seeks to restore robust public debate. It is designed to maximise interaction and debate, defy information hoarding, and enable collective intelligence with an effective impact on the political system
Discuto	2013	Austria	Online collaboration, discussion & consensus. For institutions, organisations & groups.; Collect ideas, open decision-making processes by gathering mass opinions and feedback. Discuss and solve controversial topics; focused conversations and highlight key areas before making informed decisions. Manage processes and stay EU compliant
Eligo Voting	2005	Italy	Beyond online voting solutions, it promotes wider accessibility for citizens, ensuring internet access is optimized for participation
Ethelo	2011	Canada	Web platform or business intelligence tool built to help groups, communities or organization to find effective decisions quickly and fairly
European Citizens' Initiative	2012	Europe	Initiative to help shape the EU by calling on the European Commission to propose new laws. Once an initiative has reached 1 million signatures, the Commission will decide on what action to take
European Parliament Petitions Portal (PETI)	2011	Europe	To ensure opportunities to communicate with Parliament and express right to petition for European citizens and residents; enshrined both in the Treaty and in the Charter of Fundamental Rights
FixMyStreet	2007	UK	Report, view, or discuss local problems
Fluicity (Efalia Engage)	2015	France	A community engagement software for public and private entities
Fora	2016	USA	Human-Led + AI-Supported Listening
Fredrikstad Demokrati portalen	2009	Norway	Tool focussed to include especially the less politically active segments of society and had a special focus on young people, older persons and immigrants. The municipality decided on the topic and the size of the budget, allowing citizens to design different suggestions for the proposed project and vote electronically on the topic
GoVocal	2015	Belgium	Initiative focussed on making public decision-making more inclusive, participatory, and responsive
Granicus	1999	USA	Govtech suite for digital participation & communications (meetings, webcasting, service portals, mass messaging).
Have your say	2017	Europe	Tool focussed to share views on new EU policies and existing laws
Hromadski Project	2013	Ukraine	Solution for participatory budgeting activities; Available as SaaS or self-hosted
iD City	(unclear)	France	Platform for participatory democracy
IdeaScale	2009	USA	Tool focussed on helping organizations to capture, evaluate, and implement ideas. The platform streamlines collaboration, surfaces top ideas, and transforms them into measurable results—all in one centralized system
Insights	2019	Israel	Civic engagement tool, powered by algorithms
Join.gov.tw	(unclear)	Taiwan	Collection of offered digital administrative services regarding information & exchange
Konveio	2016	USA	Tool that turns regular PDFs into social documents for draft reviews, interactive reports, digital workshops or immersive guides and training materials
LiquidFeedback	2009	Germany	Tool focussed on decisions making processes

Loomio	2011	New Zealand	Tool focussed on making decisions together, tool helps to align, take action, strengthening trust and collaboration
Mapotic	(unclear)	Czech Republic	Map-based tool to build structure, visualise data and let people interact. Use maps to get missions fulfilled
Message Board for Leaders	(unclear)	China	A digital platform for the public to message Chinese leaders, operated by People's Daily Online
MetroQuest	1997	Canada	A public involvement software for planning projects. Engage people, gain insight, and build community support
MixedInk	2009	USA	Software enabling large groups of people to create text that expresses a collective opinion, such as a mission statement, editorial, political platform, open letter or product review
Mon Avis Citoyen	2016	France	Tool that allows citizens in France to give his opinion on his city, to rate it, to make proposals for his city and/or district.
Munipolis	(unclear)	Czech Republic	Communication gateway for municipalities; Informative SMS messages, e-mails, and push notifications about events, improvements, and changes in towns Delivery of important news about the epidemic, power outages, fees, etc. Voice messages for visually impaired citizens; simple reporting for various issues
Neighborland	2011	USA	A public engagement platform designed for government agencies, place-makers, and civic organizations. Focus on the empowering of residents to shape the development of their neighbourhoods; helped to improve the way civic organizations collaborated with their communities (operated 2011–2023)
Novoville	2016	UK	Platform to help local government interact with residents, including social-media-based consultation processes
Open Town Hall	2007	USA	Tool to supplement public hearings with surveys, forums, and online meetings
OpenStad	2017	Netherlands	Open-source participation modules
Panoramic AI (Make.org)	(unclear)	France	Tool focussed on fostering meaningful public debate that transcends superficial exchanges; a citizen-friendly platform designed to enhance understanding of intricate topics debated in the political arena. By simplifying complex information, it empowers both individuals and organisations to engage deeply with issues
Parti Town Hall	(unclear)	South-Korea	Discussion platform for all-inclusive events and meetings
Participace 21	(unclear)	Czech Republic	Participatory engagement platform for towns, villages, schools, and non-profits
Participate.Online + Envirolytical	2000	USA	Tool to support stakeholder relationship management best practices
Party Citizens Dialogue	2018	South Korea	Citizen dialogue platform that creates change through questions and conversations
PlaceSpeak	2011	Canada	Location-based consultation platform that ties input to place via address verification
Pocitové mapy	(unclear)	Czech Republic	Map-based surveys with sentiment visualization
Pol.is	2014	USA	A real-time system for gathering, analysing and understanding what large groups of people think in their own words, enabled by advanced statistics and machine learning
Polco	2014	USA	Community engagement and survey platform with dashboards and AI assistant

PolicySynth	2023	USA	Tool focussed to intertwine human insights and artificial intelligence to grapple with complex policy dilemmas. A platform where policymakers, citizens, and AI can engage in a collective discourse. This collaborative interaction is expected to not only expedite decision-making processes but also augment their quality, paving the way for more inventive and efficacious policy resolutions
Presupuesto Participativo	(unclear)	Argentina	Tool focussed on participatory budgeting
Public Budget Platform	(unclear)	Ukraine	Tool focussed on participatory budgeting
PublicInput	2014	USA	Tool that connects organizations with the communities they serve
Purpoz	2019	France	Platform where lawmakers and citizens co-create legislative proposals; to help organizations develop a true culture of civic engagement and participation
Rahvaalgatus.ee	(unclear)	Estonia	Engagement platform with binding triggers for popular proposals to go before government, locally and nationally
Rousseau	2016	Italy	Tool focussed on election processes (Italian and European parliaments, regional and municipal councils)
Slido	2012	Slovakia	Audience interaction tool for meetings, events and conferences; offers interactive Q&A, live polls and insights about audiences
Social Pinpoint	2013	Australia	Flexible suite of digital tools to enhance community and stakeholder engagement
Stanford Online Deliberation Platform	2020	USA	A video discussion platform designed for small group discussions. The platform is designed to facilitate a structured and equitable conversation with better opportunity for participants to speak up
Stanford Participatory Budgeting Platform	2021	USA	A platform for running online participatory budgeting elections; allows cities, municipalities, states and foundations and other organizations to run a participatory budgeting election in which people can vote on the budget
Stig	2015	France	Application that allows citizens to work together to build consensus at the national and local level
Talk to the City	2023	Taiwan	Open-source AI tool that enhances collective decision-making by analyzing democratic input while preserving the diversity and nuance of individual opinions. It equips decision-makers to understand and act upon public concerns
Tielt KiesMee	2019	Belgium	Initiative that aims at involving citizens with the drafting of the multi-annual policy plan; an online budget platform on which the citizen can review extensively documented policy areas
Ushahidi	2008	Kenya	Tool that empowers people through citizen-generated data to develop solutions that strengthen communities
VoxVote	(unclear)	Netherlands	Mobile Voting tool for speakers or teacher
vTaiwan	2014	Taiwan	An open collaboration platform that promotes dialogue between government and citizens, enabling everyone to participate in the public policy formation process
Your Priorities	2008	Iceland	A non-profit based web application to help groups speak with one voice

Table 5 – Defined functions-clusters, associated functionalities and features[3]

Functionality	Description of functionality
Survey	The gathering of qualitative of quantitative data through the deployment of open and/or closed questions. This also entails the mechanism of voting.
Wiki-survey	The use of qualitative questions to gather insights using a structure manner
Forum	Online platforms for debate and Q&A. Can have elements of moderation, either asynchronous or synchronous.
Simulation	The simulation of complex activities, often involving trade-off decisions, such as budgeting or urban planning.
Result processing	Handling of data in synchronous or asynchronous manner
Petition	The presentation of proposal and ability to support proposals
Information provision	The (technical/social/cultural) translation and presentation of information
Co-writing	Structured process for collective drafting of policy
Whiteboard	Facilitation style mimicking traditional whiteboards, e.g., digital post its, brainstorming
Video-tele-conferencing	Communication using online connections with audio and/or visual support

[3] To provide some analytical detail regarding what tools do, we distinguished and defined the following analytical concepts to facilitate the workflow of characterising identified tools: (1) Function: Initial demarcation of what tools can do, based on the initial review of individual tools, (2) Function cluster: Combination of individual functionalities in various meta-groups, based on existing commonalities, (3) Feature: A specific implementation or operationalisation of a defined function, (4) Functionality (final): Based on additional tool review and revised definitional demarcation regarding tool functionality, the final labelling of what identified tools concretely realise in relation to civic engagement.

7.2. Appendix B – Use cases analysis

7.2.1. European Citizens Initiative

Context and process

The participatory mechanism "European Citizens' Initiative (ECI)" was introduced by the Treaty of Lisbon in 2007 and revised in 2019 to enhance direct citizen participation in the European Union's policymaking. It allows EU citizens to collectively call on the European Commission to propose legislation on issues that matter to them, provided the initiative gathers at least one million signatures from at least seven different member states within 12 months. This transnational participatory tool enables citizens to influence EU policy directly across borders, fostering greater engagement and democratic legitimacy at the EU level.

The recent ECI on ECI "Cohesion policy for the equality of the regions and sustainability of regional cultures" (ECI(2019)000007) serves as an example to highlight obstacles that occur with the ECI. It was submitted to the European Commission (EC) on 4 March 2025 after obtaining 1 269 351 validated statements of support from EU citizens and having reached the necessary thresholds in eight countries. The initiative calls for the EU's cohesion policy to pay special attention to regions characterized by distinct national, ethnic, cultural, religious, or linguistic identities, including geographic areas that lack administrative competencies. It aims to prevent economic backlogs in these regions, sustain their development, and preserve their unique economic, social, and territorial cohesion. The initiative requests that these regions have equal opportunities to access EU funds, ensuring that the characteristics of the regions remain unchanged while supporting their economic development and sustaining the EU's cultural diversity. On 3 September 2025, the EC declined to take legislative action following the above-mentioned ECI. It concluded in a Communication that while some proposals fall outside of EU competence, as they would interfere with the existing constitutional setup of the concerned member states, others are already covered under the current Cohesion policy. Consequently, no new legislation will be proposed in response to this ECI. However, the Commission ensured that it would continue to foster non-discriminatory access to Union funding.

Technical analysis of tool

Table 6 – European Citizen Initiative - Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2012 (Regulation effective 2020); Geographic Scope: European Union (27 member states); Active Deployments: 1 (official EU mechanism)
Technical Set-up	Web-based, member state integration

Input and Output Features / Functionalities	registration of the initiative, secure online collection of statements of support with real-time progress tracking toward the 1 million threshold, automated threshold monitoring across Member States, export of statements for national certification, and final submission to the European Commission
Platform / Device Compatibility	Central Online Collection System (OCS)
Participant Verification	collection of personal identity elements (e.g., name, address, date of birth, nationality), post-collection verification by member states
Data Hosting / Protection Policies	European Commission under joint controllership with initiative organizers in compliance with GDPR and EU data protection rules
License model / Terms of Use	EU institutional (public service)
AI Implementation	None

Findings

The European Citizens' Initiative (ECI) has a clear objective and purpose, through its explicit mandate to collect one million validated statements from at least seven Member States within 12 months, culminating in a guaranteed Commission response and public hearing, as demonstrated by the cohesion policy initiative's proceedings in 2025. The potential for impact is also quite significant taking into consideration that submissions that meets the threshold can become new EU legislation. Nevertheless, significant shortcomings persist in commitment and accountability, as the absence of binding follow-up mechanisms—beyond periodic Commission reports—permits the executive to unilaterally determine legislative action, fostering disillusionment among participants and maybe leading to maladministration complaints via the European Ombudsman. Transparency is robust in public registration, real-time threshold monitoring, and hearings, yet decisions on initiative admissibility and follow-up remain opaque, undermining procedural openness. Inclusiveness and accessibility are constrained by administrative complexities, digital divides, and substantial resource requirements borne primarily by non-governmental organizers, which hinder equitable participation from disadvantaged or less-resourced groups despite the tool's transnational design. Integrity and privacy standards are maintained through rigorous national verification processes and GDPR compliance. However, the use of the single OCS hinders monitoring, outreach efforts, and systematic accountability measures of the initiators. This is one reason why the number of ECIs has dropped in the last year and made it less attractive.

7.2.2. Stanford Online Deliberation Platform (SODP)

Context and process

In 2023 Taiwan's Ministry of Digital Affairs (moda) partnered with the Collective Intelligence Project to conduct thematically delimited alignment assemblies. The second of these processes focused on information integrity and the potentials for using AI to enhance this.

The assembly was carried out on 23rd March 2024 and involved 447 representatively selected citizens plus a sample of 50 citizens recruited specifically because they were digital industry professionals. The process was conducted on the Stanford Online Deliberation Platform, which is designed around the methodology of Deliberative Polling®, where participants answer a questionnaire, then go through a series of deliberative sessions, where they are also presented with factual information pertaining to the topic, pose questions to experts and answer the same questionnaire to compare developments in attitudes. The online platform is centred on this methodology but makes use of automated 'facilitation' of the deliberation hosted on a separate tele-conferencing system. In addition, the conversations are recorded, transcribed and automatically summarized, first within and secondly across groups. At the end of the process the results produced are thus a summary of the most frequently discussed themes, along with a paired sample test of the questionnaires. To improve equal access to the process equipment and broadband connection was provided for the selected participants that did not have one or the other. In addition, an open test site was set up so participants could test their equipment at any time, and dedicated support timeslots were communicated, for those who needed technical assistance. Technical support was also provided during the assembly itself.

The process was championed by the Minister at the time, Audrey Tang, and, executed by the AI Evaluation Center of Taiwan's Industrial Technology Research Institute supported by Stanford Deliberative Democracy Lab and The Yang Ming Chiao Tung University of Science and Technology.

Technical analysis of tool

Table 7 – Stanford Online Deliberation Platform – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2019 (online version); Geographic Scope: Primarily USA, some international projects; Active Deployments: Project-based (5-10 major events annually)
Technical Set-up	Video conferencing integration, custom survey tools, custom speaker management and toxicity detection tools.
Input and Output Features / Functionalities	Survey, result processing (group recording, automatic transcription, automatic discussion summaries) Integration with video tele-conferencing systems (automatic speaker management, toxicity detection)
Platform / Device Compatibility	Desktop-focused; Mobile with reduced features
Participant Verification	Done as part of the recruitment process, participation by invitation only.
Data Hosting / Protection Policies	Operates under academic research ethics frameworks with IRB approval for each project. Data protection follows university standards and research ethics. Data hosted on US servers.
License model / Terms of Use	Proprietary tool and research methodology (Deliberative Polling®)
AI Implementation	Speaker management, toxicity detection, transcription, summarization of conversations.

Findings

The Stanford Online Deliberation Platform (SODP) is a notable experiment in large-scale deliberation, enabling almost 450 participants to engage in deliberation simultaneously. While it effectively broadens reach, the findings suggest that its automated facilitation is basic compared to human-led processes, as it focuses primarily on speaker management and toxicity detection rather than facilitating in-depth, structured or output centred interaction. As such, it is not a fully-fledged alternative to human facilitated deliberative processes, as the possible outputs of the process are very limited. The main benefit of using AI in this context is that it automates the time-consuming tasks of recording, transcribing and summarising large amounts of qualitative data. The drawback is that the process itself becomes opaquer, given the automation of transcribing and summarizing. Even if summaries are available, the sheer amount of data makes it inaccessible.

The impact of the alignment assembly was quite significant, both as input to a legislative procedure on digital fraud, but also as a framing for high-level conversations between the then Minister of Digital Affairs and representatives of major international technology companies, such as Microsoft and OpenAI. This level of impact was ensured through a close collaboration between the executing partners and the ministry, as well as buy-in from the Minister and senior ministry officials, which meant that there was both commitment and accountability from the institutional system and senior decision-makers.

7.2.3. Consider.it

Context and process

In October 2014, the city of Seattle began an initiative to overcome the challenges the city experienced related to affordable housing. In October 2015 the city began a multi-faceted engagement protocol to engage the city and its citizens in tackling the issues related to the housing crisis. Under the name of "HALA" (Housing Affordability and Livability Agenda), several engagement activities took place, including focus groups, an online participation portal, community meetups and canvassing. HALA should support the city's goal of creating 50,000 more units of housing before 2025 and 20,000 units of affordable housing. The online engagement platform, Consider.it, was among other used to collect feedback from citizens on new zoning principles for the city and for feedback on principles for housing affordability. Consider.it was deployed to allow citizens to participate without being bound by time and place constraints. Each user had the ability to be anonymous or provide some information on age, zip code, housing type they lived in, renting/owning and ethnicity. Consider.it was chosen based on its ability to maintain a civil conversation among participants as there was a fear that conversations on social media platforms could be polarized. The people from Consider.it assisted and consulted with the employees at the Department of Neighbourhoods on how to frame the content for the platform to heighten the user-friendliness of the platform. The city chose to upload content consisting of statements to the Consider.it platform along with links to further information and relevant knowledge. The citizens could vote on their agreement to statements using a sliding scale and make comments to – using a pro/con format. Employees at The Department of Neighbourhoods were able to interact and respond to comments made by the citizens through the platform. All voting and comments provided through the platform were visible to all participants and visitors of the website in real time. This demographic information provided by the users could be used to filter the visualization of the polling on the platform. More than 1,100 registered users contributed on the online platform. The other engagement activities of HALA included 198 community engagement meetings,

volunteers spent 600 hours participating in focus groups, and 10,000 households were canvassed. The HALA initiative came to an end in March 2019 when the City Council voted to implement the Mandatory Housing Affordability legislation.

Technical analysis of tool

Table 8 – Consider.it – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2010; Geographic Scope: Primarily USA, some international; Active Deployments: 100+ organizations
Technical Set-up	Ruby on Rails, React, PostgreSQL
Input and Output Features / Functionalities	Pro/con list & positioning on an opinion slider; generate visualizations showing opinion distributions, most influential points, and areas of agreement across different viewpoints.
Platform / Device Compatibility	Website
Participant Verification	Optional
Data Hosting / Protection Policies	Not clear for the case
License model / Terms of Use	Open source (MIT), SaaS available
AI Implementation	None

Findings

Consider.it was part of consultation and feedback within a larger process, so it is difficult to distinguish the platform as independent from the other activities that took part of the process. The legitimacy and transparency therefore also lay in how the overall process has been communicated, planned and executed.

The use of consider.it as a part of a larger engagement process, made it possible for the citizens to participate independently of time and place constraints. However, the use of an online platform with a low number of participants compared to the other engagement elements in the process, does call for considerations of how to take the input into account compared to the output of the other activities. Related to participants, it is also worth noting that the participants must possess some level of digital literacy to access and use the platform, and relying primarily on text contribution, there is also a demand for literacy in general.

The possibility for optional identification and providing of personal information does benefit the inclusiveness of potential participants to engage in the process, whom might otherwise have abstained from expressing their opinion on a topic that is sensitive and potentially very personal. However, the

inclusiveness that comes from the optional identification is a trade off against transparency about participants which can open the process to vested interests and manipulation, thereby impacting the integrity of the process.

The use of consider.it does not provide any features that makes it transparent how the results will be utilized nor how it relates to the other activities taking place as part of the HALA process. This means that efforts must be place in the process outside of the platform to ensure such transparency, integrity and accountability.

Efforts were made to make information in the platform accessible for participants, both through the framing of the statements presented in the platform and by providing links to additional knowledge and information. Furthermore, the efforts by the employees at the Department of Neighbourhoods to engage in dialogue with participants both function to provide clarity on questions but also give participants the reassurance that their comments were actively being listened to. It is resource demanding to have employees be active through a several month-long process and the employees with expertise in running such process might not possess the relevant topic knowledge and expertise, which could require potentially more employees to become involved.

7.2.4. Decidim

Context and process

In March 2021 the European Parliament, the European Commission and the Council of the European Union launched the Conference on the Future of Europe (CoFoE), an EU-wide citizen engagement initiative consisting of four thematic panels, national events, a conference plenary and a digital platform, which ran until 2022. Four European Citizens' panels were carried out, with each a specific focus, and an open public platform with each of the same four foci was made available for the wider public. In addition, national events and national citizens' panels were organized, along with a conference plenary.

In the preparation for CoFoE the Joint Research Center of the European Commission surveyed 15 different digital engagement tools. From this list the open-source tool Decidim was chosen to provide the digital support for the CoFoE. The Decidim platform that was set up during CoFoE has been kept operative in the wake of CoFoE, and is now also utilized in context of the European Citizens' Panels, which are the next generation of European-wide citizen engagement on key policy areas, where each EU Commissioner has been tasked with organizing a panel within their remit.

Technical analysis of the tool

Table 9 – Decidim – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2016; Geographic Scope: Global (strong in Europe, Latin America); Active Deployments: 400+ organizations
Technical Set-up	Ruby on Rails, PostgreSQL, GraphQL

Input and Output Features / Functionalities	Participatory features through modular components: surveys, wiki-survey, co-writing, simulation (map-based interaction, participatory budgeting), forum, information provision (blogs, calendar, event overview, upload of documents and video), and offline/online meeting integration.
Platform / Device Compatibility	Web application, optimized for desktop, can be accessed via mobile, but not optimized.
Participant Verification	Multiple verification methods configurable per instance, with several modules available from the community, from open participation to government ID verification and much more. The platform pioneered innovative approaches like SMS verification, census integration, and face-to-face verification codes.
Data Hosting / Protection Policies	Given its open-source nature, it can be set up and hosted on own servers. Each instance maintains independent data control with no centralized data collection. Implements privacy-by-design principles with strong GDPR compliance. The platform's "Decidim Social Contract" establishes data sovereignty principles.
License model / Terms of Use	AGPL-3.0 (free open source)
AI Implementation	Limited built-in AI features, reflecting community concerns about algorithmic governance. Some instances experiment with machine translation and text analysis, but core platform avoids AI-driven decision-making.

Findings

The digital platform, built on the Decidim platform, was to play a part in the panels and as an open space for all Europeans to contribute their ideas. The initial ambition was to utilize the platform as the main medium for the panel members to develop their ideas and establish a connection between the panel and the surrounding society. However, while the platform did feature automatic translation, the deliberative nature of the panels made the platform too inflexible to be integrated in the real-time process of shaping a textual output. As a result, the platform ended up playing no major part in the panels themselves. The platform was also made available for the broader public to provide input to the conference, through a wiki-survey format. The outputs of this part of the platform were presented to the participants of the panels, but since the panels' discussions were framed while the online platform wasn't the platform outputs rarely matched the discussions of the panel. In addition, the platform output was presented during the conference plenaries. In the wake of CoFoE the platform has kept operating and is now tied to the European Citizens' Panels. The panels are still not making direct use of the Decidim platform, but platform and panel deliberations are now thematically aligned, and there are ongoing considerations of integration.

While the CoFoE process on paper had the advantage of clear commitment from the three central European institutions, this also meant that the very process of organizing and framing the process was politicized, and it made the accountability less direct and again politicized, since instead of one clear receiving organization, there were three, with each their priorities and agendas.

7.2.5. Public Consultations and Feedback/Have Your Say

Context and process

Public Consultations and Feedback (formerly "Have Your Say") is the European Commission's single, centralized portal for citizens and stakeholders to contribute input on EU initiatives, laws, and policies. The process itself is designed to maximize transparency and inclusiveness: anyone with an interest can participate online, contributing feedback that is directly linked to legislative planning, impact assessments, and ongoing policy development. The digital tool is fully integrated with the Commission's Better Regulation agenda, enabling clear information flows, open publication of feedback, multi-language support, and transparent reporting on how public views inform official decision-making. The tool's structure ensures traceability of consultations through each phase (from call for evidence to decision), public accountability, and adherence to GDPR and EU accessibility standards.

As one example, the Public Consultations and Feedback platform was used to gathering stakeholder input on the Euratom Research and Training Programme 2026-2027 to inform the legislative proposal COM (2025) 594 submitted on 3 March 2025 and the subsequent draft working programme. These consultations built on the interim evaluation of the 2021-2025 programme and input from the Euratom Scientific and Technical Committee, targeting citizens, civil society, researchers, industry, and Member States to shape priorities in nuclear safety, radiation protection, waste management, fusion energy, education, and training. The process linked feedback directly to impact assessments, with the Council adopting the extension via Regulation 2025/1304 on 23 June 2025, enabling calls expected late 2025 or early 2026 after Member State discussions.

Technical analysis of tool

Table 10 – Public Consultations and Feedback – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2016 (rebranded 2023); Geographic Scope: European; Active Deployments: 1 (European Commission)
Technical Set-up	EU institutional infrastructure
Input and Output Features / Functionalities	Feedback submission (text, papers, studies), Document access & timelines, Multilingual e-translation
Platform / Device Compatibility	Centralized web portal (have-your-say.ec.europa.eu), Better Regulation integration, Real-time contribution publication
Participant Verification	Optional EU Login, Self-ID (citizen/organization), Country recording
Data Hosting / Protection Policies	European Commission
License model / Terms of Use	Public service (no fees)

AI Implementation	Limited AI deployment reflects institutional caution. Some text analysis for summarizing large consultations, but human analysis remains primary for policy input.

Findings

Concerning the public consultations for the Euratom Research and Training Programme 2026-2027 Have your Say make complex policy processes accessible for citizens. It clearly links public feedback to the Commission's proposal development, interim evaluations, and Council adoption and enhances policy legitimacy through structured stakeholder integration. Furthermore, the platform fulfils the OECD Guidelines for Citizen Participation Processes concerning objective, clarity, and impact. Commitment and accountability are supported by published synopsis reports alongside Better Regulation evaluations, though varying visibility of specific changes can limit perceived impact. Transparency is a core strength, with open recruitment, real-time contribution publication, participant demographics (e.g., categories, geography), and procedural timelines fostering trust in the Euratom consultation process. Inclusiveness and accessibility benefit from multilingual support (85% of consultations in all languages), accessible formats, and broad targeting of EU citizens, businesses, experts, and disadvantaged groups via outreach, yet digital divides and awareness gaps persist for non-experts.

The platform significantly advances transparency and public accountability by publishing all feedback and responses, with the gool to foster citizen trust. Digital accessibility and multilingual design facilitate broader engagement but do not fully overcome the exclusion of digitally marginalized groups. Continuous efforts to mitigate risks of digital manipulation and misinformation are essential to preserve legitimacy. Effective public engagement requires ongoing improvements in communication and outreach, which should also be applied to the Public Consultations and Feedback tool.

7.2.6. Ethelo

Context and process

In 2023 the City of Prince George launched their annual initiative to consult the citizens in the upcoming year's budget by gathering their input and feedback. The process combined five satisfaction surveys with a total of 1350 responses collected, one budget survey with 620 verified participants, and the gathering of nearly 200 comments on social media, and three physical open meetings with a total of 46 citizens participating. The budget survey was conducted using the online platform Ethelo in the period of October 3rd–31st 2023.

In the Ethelo platform, which uses computational algorithms to calculate decisions that have the biggest support, the citizens used either an average, predefined property tax funding or can use their own actual property tax funding to provide their input for the budget. The participants are presented with the previous year's budget, and can increase, decrease or maintain spending within a plus/minus 15% margin. Participants use a sliding scale to indicate their answer. They could either allocate the spendings to stay within the previous year's budget or increase budget whereby property taxes would increase accordingly. Along with each of the 13 budget categories were also questions about the importance of each category for the participant. Further

information and insights on each category could be found through links provided on the website. The participants could in real time see their results compared to the sum of all other results.

The city released a report on November 14th 2023 presenting the results of the responses gather through all the different activities. The results from the budget calculation showed that the citizens wanted to keep the spending the same as the previous year in 8 out of 13 categories. On January 24th 2024 the City Council voted and passed a 6.78% tax levy.

Technical analysis of tool

Table 11 – Ethelo – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2010; Geographic Scope: Primarily North America, expanding internationally; Active Deployments: 300+ organizations
Technical Set-up	Proprietary algorithms, cloud-based
Input and Output Features / Functionalities	Enables participants to express preferences across multiple criteria with sliding scales, budget allocation tools, and constraint acknowledgment. The platform's optimization engine processes these inputs to identify scenarios maximizing collective satisfaction while meeting defined constraints.
Platform / Device Compatibility	Website
Participant Verification	Flexible verification options from open participation to integrated authentication. Most deployments use email verification with optional demographic verification for representative sampling.
Data Hosting / Protection Policies	Platform allows granular privacy configuration per deployment.
License model / Terms of Use	SaaS (subscription-based)
AI Implementation	Computational algorithms broadly supported solutions. Machine learning improves preference prediction and scenario optimization.

Findings

The use of a predefined standard for property tax and the absences of need for creating a profile makes the online engagement accessible and lowers the barrier of entry thus increasing the pool of possible participants. Participants can voluntarily provide personal information such as which neighbourhood they live in, years they have lived in town and such. The accessibility and ease of use does come with the trade-off that it is difficult to account for the demographic of the participants and how well they are representative of the city's population.

The topic of a city budget can be very complex to understand, but with the use of property tax, visualisations and introductory text to all categories and links to additional information, the participants can make realistic suggestions that the city council can find useful in their budget negotiations, however it could be argued that the narrow limits within the participants can adapt the budget could be considered as a limitation to the legitimacy of the process. This is considerations regarding how to design a set-up that do provide valuable insights against giving participants the room to freely express themselves.

The measures taken by the city to ensure transparency of the process entails the communication of a clear mandate, results visible to society in real time, and a report being published on the activities of the process shortly after the process has come to an end. It is however not transparent how the different elements of the engagement process are connected and for what specific purposes the results of each activity are used for.

The objective of the process is declared as a means for consulting the citizens in order to include their point of view in the debate on the upcoming years' budget, and the result of the budget negotiations is communicated on the city's website along with references to the citizen consultation on budget. The efforts to ensure accountability, transparency and integrity of the process is mainly put in place by communication and actions taking place outside of the online platform, which in itself does not necessarily provide means for those values.

7.2.7. Panoramic AI

Context and process

In late 2022, French President Emmanuel Macron commissioned the Economic, Social and Environmental Council (CESE) to organise a citizens' convention on the legal framework for end-of-life care. Running from December 2022 to April 2023, the convention involved citizens who were selected to be representative of the population as a whole. They were tasked with deliberating on palliative care and end-of-life legislation.

Panoramic AI was deployed as a pilot project with two objectives: firstly, to provide a transparent interface through which the public, journalists and parliamentarians could engage with the complex deliberations of the convention; and secondly, to explore the potential of generative AI to facilitate communication between a small-scale deliberative body and wider society. By synthesising transcripts and recommendations, the tool aimed to make the convention's findings more accessible to the public. The longer-term ambition was to explore the potentials of integrating a RAG-based generative AI system as a knowledge and information base for deliberative processes, to create symmetric access to the process information and knowledge for participants as well as the surrounding society, to increase transparency and thus legitimacy.

Technical analysis of the tool

Table 12 – Panoramic AI – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	
Technical Set-up	Based on Mistral open-source model with a custom RAG setup tailored to each instance.

Input and Output Features / Functionalities	Information provision (Mistral LLM with RAG setup enabling access to information about a process, the knowledge provided to the process including papers and presentations, the deliberative process, the results of the process and more).
Platform / Device Compatibility	Web application equally accessible on desktop and mobile devices.
Participant Verification	None – open to all.
Data Hosting / Protection Policies	Data is hosted on French servers, interactions with the system is anonymized and kept for analysis of system usage and to understand what types of interactions users have and about what.
License model / Terms of Use	SaaS, primarily used in context of broader process
AI Implementation	AI forms the core platform capability, including features like text analysis, sentiment analysis, automated categorization, bias Detection, and translation. Multiple LLMs work in ensemble for robustness. Custom fine-tuning for government terminology and policy domains.

Findings

Deploying Panoramic AI during the French Citizens' Convention on End-of-Life Care demonstrated a potential of Retrieval-Augmented Generation (RAG) systems to open up participatory processes to a wider public. Acting as a knowledge curation portal, the tool most obviously addresses the information provision by enabling a single portal for information provision. Along the same lines it improves process transparency by enabling citizens, journalists and parliamentarians to navigate information, knowledge, deliberations and results, but it can also improve inclusiveness and accessibility by enabling the provision of information tailored to different groups and through different media.

However, the use of generative AI poses risks to integrity, as the stochastic nature of large language models means that different users may receive different outputs, which could result in a fragmented evidence base, thus careful setup of the RAG system is necessary. While the system significantly improves operational efficiency by automating thematic summaries and mapping recommendations, a 'human-in-the-loop' approach is required to preserve the nuanced social context of deliberations without algorithmic distortion. Ultimately, this pilot shows that, AI can provide a more intuitive interface for public scrutiny, provided that meaningful human oversight is put in place to prevent bias and ensure all participants have access to consistent, verified information.

7.2.8. GoVocal/CitizensLab

Context and process

Guided by the European Strategic Energy Technology Plan (SET Plan), the City of Vienna launched the Smart City Wien initiative in 2011. The initiative financed by the Austrian Climate and Energy Fund brought together multiple stakeholders from inside and outside the municipal administration, who drafted the visionary concepts and packages of measures that were to become the original Smart City Wien Framework Strategy of 2014 (updated in June 2019). "Digitalisation" and "Participation" were incorporated as new thematic fields into the updated Strategy.
The Vienna Climate Team initiative is part of that Smart City Wien initiative with the aim of transforming Vienna into a more sustainable urban living environment. Within the "Vienna Climate Team" participatory project, the City of Vienna is looking for the best ideas to improve the climate in the neighbourhoods.
The goal of this ongoing project is to include citizen engagement in the decision-making process of the authorities. Based on a tendering process, the City's authorities decided to realize this project with the GoVocal tool. The GoVocal platform allows for citizen engagement in the steps of policy formulation, as citizens can come up with their own proposals. The Vienna Climate Team is looking for ideas that promote climate-friendly mobility, make use of renewable energies and thus contribute to the energy transition, make public space climate-resilient or support sustainability in everyday life, for example by raising awareness and reducing waste.
The process of the Vienna Climate Team consists of multiple stages. In a first step, all Viennese citizens can submit their ideas online - via the GoVocal platform which is integrated into the website of the City of Vienna - by mailing in an idea postcard or in person at the "action days" in the districts. In a second step, experts from the City of Vienna examine the proposals for their feasibility and effectiveness using a catalogue of criteria. Then, the experts will develop the evaluated ideas into project outlines together with the idea contributors in workshops. As last step, a randomly drawn representative group of residents decides on the winning projects, which will be implemented by the City of Vienna within 2 years.
Throughout the whole process, feedback is possible from the participants to decision-makers through the engagement tool. Participants may also be informed why their idea was not selected. However, the GoVocal platform does not offer the possibility for participants to discuss their ideas because the administrative effort to monitor these discussions would be too high. Citizens need a "City of Vienna" account to participate via the GoVocal platform.

Technical analysis of the tool

Table 13 – GoVocal– Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2015 (rebranded 2024); Geographic Scope: Global (strong in EU, North America); Active Deployments: 300+ local governments
Technical Set-up	React, Node.js, PostgreSQL, AWS

Input and Output Features / Functionalities	Submission of project proposal, information on ongoing and finished projects, information on different steps / timeline within a specific project
Platform / Device Compatibility	GoVocal tool adapted into the City of Vienna Website (https://mitgestalten.wien.gv.at/de-DE/)
Participant Verification	Registration via personal account on City of Vienna Website
Data Hosting / Protection Policies	Data residency options available for different regions.
License model / Terms of Use	SaaS (tiered pricing)
AI Implementation	Increasingly incorporates AI for insight generation while maintaining human oversight. Natural language processing identifies themes and sentiment patterns.

Findings

The objective was to actively engage residents in a collaborative and inclusive effort to shape a sustainable climate future together. With its participatory project, Vienna aims to strengthen social justice and democracy on its path toward systemic climate protection. To ensure that all of Vienna's social groups can participate in this significant endeavour, Vienna combines online and offline engagement. The tool chosen offered to residents to propose their ideas, cast votes and participate in each phase of the project.

The tool has been selected through an EU wide tender procedure and adapted to the needs of the Vienna Climate Team initiative. The tool ensures a tight feedback process close to the decision makers and makes the legislative process more transparent. Participants can follow every step of the decision-making process, be in contact with politicians, and get feedback on their own ideas. Throughout the process the politicians are encouraged to consider the proposals made by the residents. Proposals from the offline participation as well as feedback to proposals are integrated by the Coordination Team into the online tool. Direct exchange between participants on the GoVocal website, e.g., through chat / comments on ideas, is not possible due to high moderation workload. The tool is evaluated on a regular basis which helps ameliorating the whole co-creating process. The evaluation from 2022/23 has shown that people wish to be more involved in the assessment phase of the submitted ideas. This has been realized in the next project round of the Vienna Climate Initiative.

7.2.9. Consul

Context and process

The joint council of Gl. Egå were granted 500.000 dkr from "Oplandspuljen" a municipality pool to support the development of the surrounding area of Aarhus for initiatives that would renew and transform the city's village pond. The village pond is the only publicly owned place in the town, beyond the church, and thus therefore also function as a central meeting point of the city, and the joint council hosts a yearly harvest festival that begins at the village

pond, but the area had not been renewed since the 80's and 90's, and the area did therefore not really present itself as a local meeting place or a place for activities.

As part of the conditions of receiving money from Oplandspuljen, it is mandatory to follow a methodological approach for participatory budgeting developed by Aarhus Kommune. The approach is known under the name of "deltagerbudget" (participatory budget). The process consists of seven steps: 1) Preparatory work, 2) Release of platform, 3) Collection of proposals, 4) Going through proposals, 5) Voting, 6) Announcement of winners, and 7) Realisation. Step 2–6 are all digitally supported by the designated platform "sammenomaarhus.dk" which uses the Consul software.

From the beginning 100.000 dkr were designated for a renewal of the stone dike in the village pond. The remaining 400.000 dkr were reserved for funding for proposals that were voted on by citizens through the platform. The joint council of Gl. Egå and Aarhus Kommune initiated step 2 of the process on October 16th, 2023. Citizens within a designated area belonging to Gl. Egå were invited to participate through mail on Digital Post[4]. To enter the platform citizens had to sign in using their MitID[5]. If a citizen was exempt from MitID, they could contact a municipal employee for assistance. Proposals could be submitted until November 23rd, 2023. The joint council of Gl. Egå and Aarhus Kommune went over the proposal, clustered similar proposals, investigated necessity for potential permissions and compliance with legislation and laws and estimation for cost of realisations from November 24th, 2023, until March 10th, 2024. All verified proposals were uploaded to the platform, and citizens were invited using Digital Post, and in the period of March 11th–24th 2024 citizens could login using MitID to vote. The participants voted by ranking proposals until there was either no money left to distribute, or they did not want to vote for more options. On March 25th, 2024, results were counted and calculated. Results were presented on the website on March 26th, 2024. Approximately 20% of citizen in Gammel Egå participated in the online engagement. The seventh and final step of the process has been done in close collaboration between Århus Kommune and the joint council of Gl. Egå, where among other activities, close neighbours to the village pond were consulted in the placement of the winning proposals. In the spring of 2025, the joint council of Gl. Egå hosted an inauguration of the village pond with almost all winning proposals realised and plans for how the to reach full implementation of the final elements.

Throughout the process there has been a close collaboration between the municipality, the joint council, public and private institutions and the citizens of Gl. Egå. Before the webpage was launched 100.000 dkr were designated for a concrete project in the village pond – namely the renewal of the stone dike. The remaining 400.000 dkr were reserved for funding of initiatives through the platform.

[4] Digital Post is a publicly owned solution where public institutions in Denmark can contact citizens in safe manners

[5] MitID is the Danish version for an eID

Technical analysis of the tool

Table 14 – Consul – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2015; Geographic Scope: Global (strong in Spain, Latin America); Active Deployments: 135+ institutions
Technical Set-up	Ruby on Rails, PostgreSQL, Redis
Input and Output Features / Functionalities	Upload of proposals, voting, participatory budgeting by allocation of sum,
Platform / Device Compatibility	Website
Participant Verification	MitID
Data Hosting / Protection Policies	Institution maintains independent data control.
License model / Terms of Use	AGPL-3.0 (free open source)
AI Implementation	None

Findings

The objective of the process – to spend the money on initiatives for renewing the village pond - is clearly linked to the set-up that the Consul software provides. The decision regarding the distribution of the money can be directly delegated to the participants following a system where the proposal with the most votes receives money from the budget first, and the proposal on second place within the remaining budget gets funding as well, and so forth, until all the budget is used. This thus however mean that some proposal with high number of votes might not be realised as the remaining budget is not sufficient. The approach does provide transparency in the decision-making process, and it is easy to ensure the accountability to follow the decisions made, as results are available to the public.

The process contains both online and offline elements, where the offline elements, the preparation, step 1 where an amount of the budget was allocated outside the use of the platform, and step 4, working with the proposals to cluster similar proposals, discarding of non-realisable proposals, and estimation of prices for realisable proposal is done, are not immediate transparent to the public. While it is not the case for this instance in Gl. Egå, it could potentially be troublesome if the implementation and realisation phase encounters issues, e.g., regarding staying within budget.

7.2.10. Cap Collectif

Context and process

An increasing social and political movement by the Yellow Vests in France, prompted the French President Emmanuel Macron to initiate the largest public participation exercise ever in France, Grand Debat National (GND), in December 2018. The purpose of the process was to allow the French to discuss matters that were central to them and their lives. The process was formalised on 13th of January and launched just two days later on January 15th, 2019. The engagement process ended on March 15th, 2019. GDN concerned the following four overarching themes of *'Democracy and Citizenship', 'Fiscality and Public Spending', 'Ecological Transition'* and *'Organisation of the State and Public Services'*. The process had five independent guarantors appointed by different institutions. However, recommendations by the guarantors were not mandatory for the steering committee of GDN to follow.

The processes consisted of multiple formats for engagement: a) local meetings that could be hosted by anyone, either entirely by themselves or relying on materials provided by the GDN, a total of 10.134 meetings were hosted, estimated to have reached 500.000 citizens, b) submissions to municipalities in the form of "registries of grievances", which was an initiative initiated prior the announcement of GDN, but was welcomed by the Government and Steering Committee of GDN, and around half of municipalities implemented this format and it generated contributions from an estimated 160,000 people, c) GDN-facilitated regional citizen conferences for selected citizens based on demographic characteristics, and placed to ensure geographical coverage of both mainland France and overseas territories, accumulating to 21 conferences with 1404 participants, d) neighbourhood stands that gathered insights through a scheduled itinerary with 107 stops engaging about 5000 citizens, e) through the GND online platform, launched on January 21st, run by the French start-up Cap Collectif, where participation upon registration with a valid email and post code, could poll closed question questionnaires and upload their own proposals and it was additionally used for self-organized local meetings to be announced on. 1,9 million contributions were made through the platform, where 70% were as answers to the questionnaires and 30% were uploaded proposals.

Some of the engagement numbers are estimations as it was not mandatory for the self-organized events to announce themselves through the GDN platform and additionally it was not mandatory for the self-organized events to take account of participants and their demographic composition. A general critique of GND has been the legitimacy of the process and its accountability mechanisms. A response to the process, was the Yellow Vests initiation of their own public engagement activities which also used Cap Collectif.

Technical analysis of tool

Table 15 – Cap Collectif – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2014; Geographic Scope: Primarily France, expanding EU; Active Deployments: 150+ organizations
Technical Set-up	Symfony (PHP), React, Elasticsearch

Input and Output Features / Functionalities	Focusses on managing complex, multi-phase consultations with sophisticated workflow tools. Features include proposal development, amendments, source management, and detailed analysis tools for processing large-scale public input.
Platform / Device Compatibility	Website
Participant Verification	Email and postcode
Data Hosting / Protection Policies	GDPR compliance with specific attention to French data protection requirements. Platform certified for government use.
License model / Terms of Use	SaaS with open-source components
AI Implementation	None at moment of use case

Findings

There has been little said about the intentions behind the collection of the tremendous amount of input and insights, as no official recipient was declared upfront and with an objective that mainly focused on creating a space for discussion and dialogue, there have been very little mandate given to the participants and it thus become difficult to ensure accountability. The emergence of the yellow vests' own debate also shows that there was a clear dissatisfaction with the premise of the process, which made citizen refrain from participating. The unclear boundaries of the involved organizers, covering the president, guarantors and public institutions, thus constitute a problem for the integrity and legitimacy of the process. The lack of accountability and knowledge on participants' composition, makes it difficult to assess if all demographic groups have been reached through the activities. These issues relating to integrity, accountability and transparency seem to indicate that for an open process, as most activities under GDN were, were to be successful, it is a prerequisite that participants have trust in the process and the organizers in order to be willing to participate.

Except for the citizen conferences, all other activities under GDN, were open for all Frenchs to participate in, however, all these activities are also the ones with the most limited potential impact and a general lack of transparency in participant composition and in the quality of input. The self-organized events had the opportunity to use the material available on the platform to structure and plan their events, but as it was volunteer to do so, it is difficult to account for the quality of the events. On the online platform the questionnaires only contained closed questions, which also meant limited possibilities for deliberation and dialogue. The neighbourhood stand and "registries of grievances" also solely provided one-way communication from individuals. In general, the events, except for citizen conferences, lacked ability to create dialogue and room for deliberation. The citizens conferences format provided both accountability for participant composition and room for deliberation. It remains unclear if there has been any connection or mutual influence between the online and offline engagement activities.

Assessing the success of any of the engagement activities is further complicated by the fact that each of the activities generate different formats of outputs and varies in volume.

7.2.11. DeliberAIde

Context and process

The objective of this project was to reach a fairer, bottom-up based and targeted distribution of resources coming from the federal government foreseen for the district of Siegen-Wittgenstein. Instead of treating every area equally, the municipality sought to identify where resources were most urgently required and design projects that respond directly to citizens' needs. Therefore, the district builds bottom-up processes by combining the use of digital tools and local voices. The DeliberAIde platform uses speech-to-text and anonymization models to record and anonymously transcribe discussions. It uses Large Language Models and image generation models for summarization, visualization, analysis of discussions and the creation of comprehensive documentation materials and reports.

In 2024, the district organized ten "participatory social-planning conferences" in ten of its eleven municipalities. The purpose of these events was twofold: firstly, to identify local needs and problems, and secondly, to strengthen cooperation and networking between residents and the district administration. Each event gathered between 30 and 90 participants around three discussion tables, bringing together citizens, municipal employees, local politicians, care service providers, youth workers, and other community representatives. The conferences gave citizens the chance to articulate both the problems they face and share the resources they already have. DeliberAIde simultaneously recorded and transcribed conversations while anonymizing all data. After discussions, transcripts were available immediately for analysis. Meaning, the participants were strongly motivated to be honest and to stick to their moral principles.

During the conferences, a laptop was placed on each table, with the group's consent. The organizers asked for everyone for consent and explained how the AI works. Also, they explained orally that afterwards, the audio is erased. According to the organizers, this part was very important to clarify, because in Germany, data security is a very sensitive issue. In the version that the district used, participants did not interact directly with DeliberAIde; the users were facilitators and moderators, who ran it on a laptop or tablet. For participants, the only interaction is giving consent for recording.

Technical analysis of the tool

Table 16 – DeliberAIde – Overview technical analysis

Analytical dimension	Description
Platform Concept and Overview	Established: 2024; Geographic Scope: Research deployments (US, EU); Active Deployments: 15-20 pilot projects
Technical Set-up	GPT-4, Claude, custom models, Python/React

Input and Output Features / Functionalities	Provides AI-facilitated discussion spaces where participants engage with both humans and AI facilitators. The platform generates real-time discussion summaries, identifies emerging consensus, and highlights productive disagreements.
Platform / Device Compatibility	Web-based platform optimized for desktop deliberation sessions. Mobile support limited due to complex interface requirements for AI-mediated discussions.
Participant Verification	Research-focused verification primarily for ensuring participant consent and demographic data collection rather than identity verification.
Data Hosting / Protection Policies	Operates under university IRB approval with strict research ethics. GDPR compliance for EU deployments with emphasis on participant protection in AI research.
License model / Terms of Use	Research collaboration (not commercial)
AI Implementation	Large Language Models - speech-to-text and anonymization models to record and anonymously transcribe discussions - and image generation models

Findings

The district's feedback on DeliberAIde uses participatory planning and AI to strengthen participation — People Powered highlights several process-design insights. First, shifting from an unselective allocation —which distributes funding equally regardless of context—to need-based planning made it possible to direct resources toward communities facing the most urgent challenges. The district also found that hybrid participation formats, combining face-to-face engagement with AI-supported digital tools, enhanced citizen involvement and improved the quality and completeness of captured insights. Moreover, the district noted that personal stories from residents added nuance and urgency to statistical data, strengthening the evidence base for decision making. Importantly, the insights gathered through this process translated directly into concrete proposals for mobility, childcare, and healthcare, demonstrating alignment with the OECD's expectation that participatory processes produce actionable results that feed into policy development.

The feedback also identified several AI-specific benefits and challenges. Concerns about data protection—especially given Germany's stringent privacy expectations—highlighted the importance of Integrity and Transparency, as participants must understand how AI systems handle, store, and anonymise their contributions. Issues in transcribing regional dialects and managing noisy environments revealed limitations related to Adequate Resources, as tools must be sufficiently robust and well-supported to meet the linguistic and contextual needs of participants. At the same time, the district emphasised that AI-generated transcripts reduced facilitator bias, broadened inclusivity, and enhanced transparency by ensuring that citizen contributions were accurately documented and traceable. The challenge of information overload underscored the need for effective mechanisms to filter and prioritise input. Finally, the significant time and resource savings achieved through automated documentation allowed staff to focus on dialogue and engagement during events.

7.3. Appendix C – Overview of assessment of functionalities

Table 17 – Assessment of functionalities

Functionalities	Performs well for	Less suitable for	Key considerations
Survey	Large-scale participation, opinion mapping, cost-efficient engagement	Nuanced, reflective input Informed deliberation	Accessibility for low-literacy participants
Wiki-survey	Idea generation, testing proposals, preference indication at scale	Unsupervised processes, consensus-building	Accessibility, identity and access management
Forum	Small-scale asynchronous exchange of views	Deliberation, concrete outputs	Active moderation, accessibility, attention competition
Simulation	Visualising trade-offs, contextualisation	Participant interaction	Clear definition of results, process facilitation
Result processing	Data summarisation and analysis, intermediate result overviews	Stand-alone analysis, participant interaction	Human oversight, transparency and legitimacy
Petition	Formalised, institutionalised participation Obtaining high legitimacy	Interaction, opinion expression, shaping of agenda, small scale, nuanced understandings	Balanced thresholds, formal mandate and procedures
Information provision	Enabling informed participation, process transparency, accessibility, transparency	Result or output generation	Equal access to information formats

Co-writing	Small groups, detailed and nuanced text outputs, narrow theme	Large-scale interaction, broad debates	Clear rules, facilitation and moderation
Whiteboard	Visual facilitation, multimedia content, small groups	Large-scale interaction	Subsequent use and processing of outputs, flow of input to be carefully designed
Video-tele-conferencing	Deliberation, presentations, Q&A, flexible group sizes	Asynchronous participation, relationship-building, generating outputs on their own	Combination with other tools, participant commitment

There has been growing interest in applications of digital tools, especially using artificial intelligence (AI) to promote civic engagement in policymaking. At the same time, EU institutions and civil society are keen to strengthen democratic participation in EU policymaking, partly to make this process more accessible to citizens.

This study provides evidence for how digital participation tools can promote civic engagement in EU policymaking and the preconditions for doing so. Building on a comprehensive landscape analysis, the study clusters 94 distinct tools from around the world and selects 11 representative cases for in-depth empirical assessment. This approach distinguishes between theoretical potential and practical utility, identifying the preconditions for successful engagement and how tool functionalities can support this.

It also gives empirical insights into the current usage of digital tools, their associated advantages and limitations, and the trade-offs that need to be considered when conducting participatory processes. There is a specific focus on the current uses of AI in digital participation tools, alongside an assessment of its potential and risks.

Finally, the report outlines concrete policy options ranging from governance prerequisites to procedural considerations and technical alternatives. These options define the features and safeguards required to operationalise the link between citizens' voices and institutional action. If designed correctly, technology can enhance the responsiveness and effectiveness of the European legislative process, and the options offer guidance on how to achieve this.

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