European Commission

Joint Research Centre

Futures of EU democracy: a foresight exploration of challenges, opportunities and tensions

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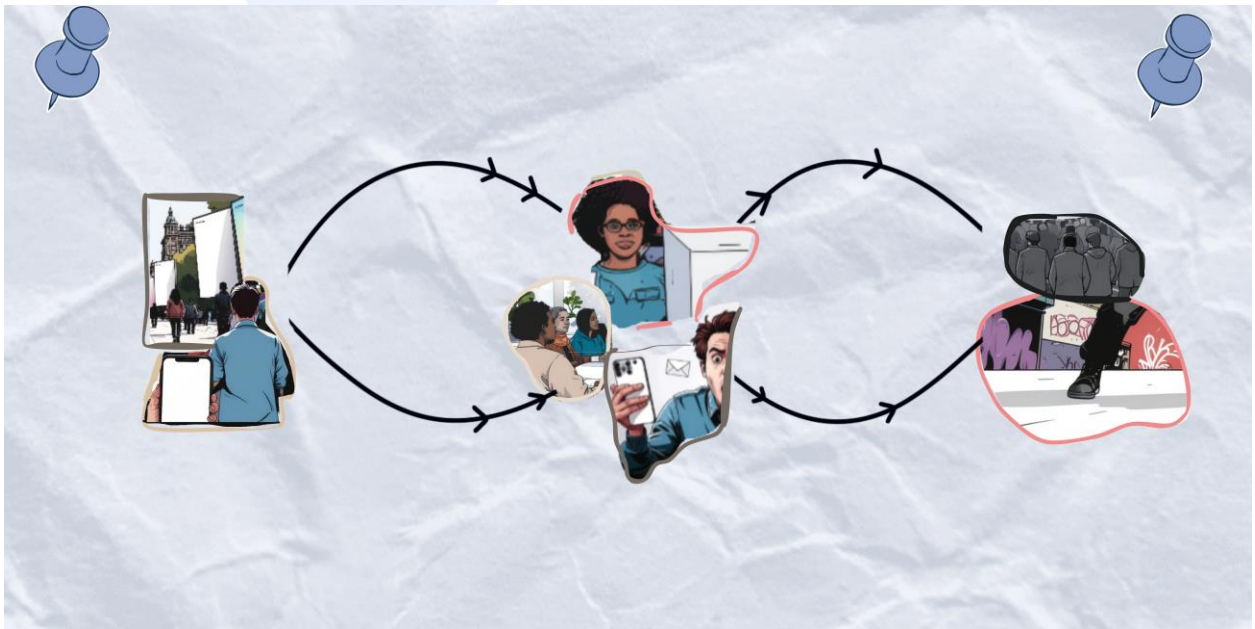
2026



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JRC145311
EUR 40721

PDF ISBN 978-92-68-39876-0 ISSN 1831-9424 doi:10.2760/3579303 KJ-01-26-217-EN-N

Luxembourg: Publications Office of the European Union, 2026

GPT@JRC was used to support drafting parts of scenarios and conclusions.

How to cite this report: Dujardin, Y., Goran, P., Malesinska, M. and Parquet, C., *Futures of EU democracy: a foresight exploration of challenges, opportunities and tensions,* Publications Office of the European Union, Luxembourg, 2026, https://data.europa.eu/doi/10.2760/3579303, JRC145311.

Contents

Abstract

This report presents a comprehensive foresight study on the futures of democracy in the EU, examining the complex interplay between emerging issues concerning the impact of artificial intelligence, citizen engagement in democracy, and quality of democratic processes and institutions. The study's methodology involved participatory workshops with experts, developing "futures wheels" to discuss possible outcomes and key drivers of change as well as four future scenarios: AI-Facilitated Direct Democracy, Citizen Pushback, Technocratic Government Overreach, and Big Tech Power Grab. The scenarios are designed to stimulate critical thinking and informed decision-making, not to predict specific outcomes for democracy. They reveal key tensions that must be balanced in order to foster a resilient and inclusive democracy in the EU. These include the pursuit of efficiency versus meaningful citizen agency, the concentration of power, use of data in governance systems and other. By exploring the implications of these tensions through scenarios, policymakers can gain insights into how to navigate the complex landscape of democratic governance and make informed decisions for a strong, vibrant democracy in the EU that is responsive to the evolving needs of society.

Executive summary

Policy context

Produced by the EU Policy Lab, this report presents results of the foresight study on the future of democracy in the EU that was part of the Joint Research Centre (JRC) project 'Challenges and Opportunities for the Future of Democracy'. The project runs in parallel and contributes to the European Democracy Shield, a major initiative of the European Commission aiming at strengthening democratic integrity in the digital age.

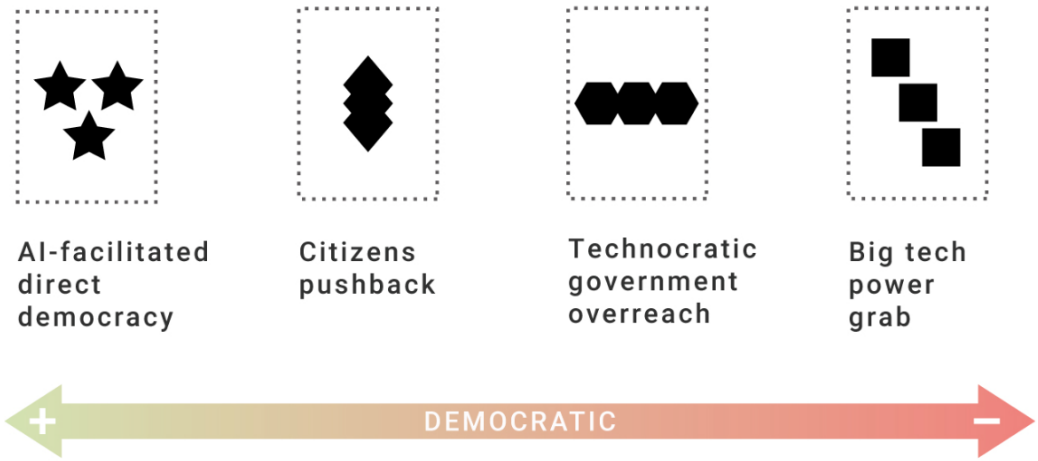
Three main challenges — identified by the project (Vasilopoulou et al., 2026) — anchor the study: (1) citizens' support for and engagement in democracy; (2) the quality and resilience of democratic processes and institutions; (3) the impact of artificial intelligence on democracy. This foresight study moves beyond reactive analysis of these challenges, to explore possible future trajectories of selected emerging issues for the democracy in the EU.

Main findings

The foresight process identified **nine emerging issues** representing a potential counter-dynamic to current democratic trends, that could reshape the above challenges in unexpected ways. Building on participatory workshops exploring possible developments of these emerging issues, **four scenarios** were developed to illustrate distinct future worlds that emerge from combining and interconnecting possible outcomes, each highlighting its own unique opportunities and risks:

- AI-Facilitated Direct Democracy: Citizens participate directly in policymaking via AI-supported systems. Inclusive and transparent in principle, this scenario highlights risks of mental overload, automated voting, algorithmic bias, and the erosion of representation.
- Citizen Pushback: Disillusionment with mainstream governance drives citizens to form self-governed, often off-grid communities. This scenario highlights opportunities for democratic renewal and local experimentation, but also risks fragmentation, exclusion of vulnerable groups, and the proliferation of unregulated information environments.
- Technocratic Governance Overreach: Non-elected experts progressively take over executive functions, initially delivering effective governance, but gradually dissolving checks and balances, concentrating power, and eroding democratic accountability. The scenario reveals the importance of independence, pluralism and expertise in non-executive powers.
- Big Tech Power Grab: Tech giants evolve into corporate states, commodifying participation through token-based governance and controlling critical digital infrastructures. This scenario underscores the need for deep regulatory intervention in digital markets, structural separation of Big Tech activities, and recognition of key digital services as public good.

Figure 1: Overview of the four future scenarios



Source: Authors. Highlight from Figure 8, full scheme available in Chapter 4

These scenarios do not depict probable scenarios of possible future states of democracy. They should rather be considered as extremes, each highlighting far-reaching evolutions of certain societal changes with a focus on the role of specific societal actors in it. They are meant to create awareness through comparison and contrast and do not make predictions or advocate for any particular democratic model.

Key conclusions

Exploration of the foresight scenarios affirms that the future of EU democracy will be shaped not by singular trends, but by the **complex and dynamic tensions** between competing and intertwining forces. These tensions serve as analytical lenses for policymakers, rather than problems to be solved in isolation:

- *The role of technology in democratic transformation*

Digital tools, in particular AI, can deepen democratic participation, enhance inclusivity and representation, and empower citizens. However, without careful design and continuous human oversight, the same technologies risk algorithmic bias, mental overload, automated voting, erosion of accountability, and the commodification of citizen engagement.

- *Concentration of power*

Power concentration — whether in technocratic executives, AI-driven systems, or corporate structures — is a key systemic risk. Robust checks and balances, institutional pluralism, and strong independent oversight bodies are non-negotiable for democratic resilience.

- *Balancing efficiency with citizen agency*

The pursuit of governance efficiency must not come at the cost of substantive participation. Over-emphasizing output-based legitimacy could weaken checks and balances. Redefining 'efficiency' to include inclusivity and meaningful participation can lead to more robust, long-term solutions.

- *Emergence of alternative governance models*

Theoretical alternative governance models are gaining attention. They present a whole range of – sometimes hidden – risks and opportunities that should be carefully assessed. As some of these ideas gain traction, the EU should monitor evolutions in attitudes and practices and build a deeper understanding of potential advantages and pitfalls.

- *Use of data in governance systems*

Data-driven governance presents opportunities for enhancing democratic processes, but it comes with the risk of citizens' data being instrumentalised for corporate or state control. Safeguarding data integrity and citizen privacy is crucial to enhance rather than undermine democratic processes.

- *Trust in information ecosystems*

The rise of personalised, algorithmic media environments and declining confidence in expert knowledge represent structural threats. Transparent, accountable information systems and governance processes are necessary to restore and maintain public confidence.

- *Authentic versus performative participation*

A critical risk is the substitution of genuine civic engagement by theatrical or token participation. Policy design must establish clear standards for what counts as authentic participation and create feedback loops that make citizens' inputs visibly consequential.

Quick guide

Foresight - the discipline of exploring, anticipating, and shaping the future in a participatory way – seeks to systematically and rigorously explore possible and preferable futures. Not with the purpose to predict the future, but with the intent to generate a wide variety of views on the future and understand emerging change and future possibilities.

This study uses dialectical analysis, which examines how change is driven through a dynamic interaction between two contradicting forces or ideas, in such a way that a third outcome crystalizes.

Key concepts:

- **Emerging issues**: weak signals of change that could reshape current trends.
- **Futures wheels**: maps cascading consequences of emerging issues.
- **Scenarios**: internally consistent, explorative narratives of possible futures - not forecasts.

1. Introduction

This report presents the insights from the foresight process that took place within the project '*Challenges and Opportunities for the Future of Democracy*'[1] (or short: 'Future of Democracy') led by the European Commission's Joint Research Centre (JRC).

The 'Future of Democracy' project is taking place in the context of the adoption of the European Democracy Shield, the European Commission's initiative that aims at promoting societal resilience and increasing trust of EU citizens in democracy, including through detecting and countering disinformation, strengthening integrity of elections and democratic checks and balances, improving societal awareness, as well as fostering citizens' participation in democracy. The project builds on previous work of the Commission on democracy, including the 2023 Defence of Democracy Package, and links to the extensive JRC research on democracy, including on the impact of technologies (Scharfbillig et al., 2026), on trust (Smillie & Scharfbillig, 2024), on evidence-based policymaking (e.g. European Commission, 2025), on citizen engagement and participation[2] and other.

The project 'Future of Democracy' started in 2023 with the first report 'Scoping report: Future challenges to democracy' identifying ten challenges putting the most pressure on the democracy in the EU (Vasilopoulou et al., 2026). Three of these challenges were subsequently selected in consultation with policymakers for a deep dive, i.e. to develop a better understanding of their drivers and implications with a view to support more relevant policy options:

- Citizens' support for and engagement in democracy
- The quality and resilience of democratic processes and institutions
- The impact of artificial intelligence on democracy.

The three challenges were elaborated on through three parallel work streams: academic research, citizen workshops and a foresight process with the citizen workshops and foresight strands taking stock of the initial insights put forward by the academic research strand work. From the academic research strand work, a report for each of the challenges will be published soon[3]. Using different methods and approaches, three work streams complemented each other to build a comprehensive picture of the identified challenges. This report presents the process and outputs of the foresight process and the future(s) of democracy in Europe could look like.

The foresight process was delivered by a team of foresight and design-for-policy experts, from the EU Policy Lab, part of the JRC. The Lab's expertise enables a structured approach to navigating uncertainty, mapping multiple plausible futures, fostering participatory governance through broad stakeholder engagement, and co-creating knowledge to deliver actionable insights for policymakers.

[1] https://knowledge4policy.ec.europa.eu/evidence-informed-policy-making/topic/future-democracy_en

[2] Homepage | CoP CC on Participatory and Deliberative Democracy

[3] See forthcoming JRC Science for policy reports on: 'Strengthening citizens' support for and engagement in democracy'; 'The future of political institutions: Deepening resilience for democracy, stability and prosperity'; and 'Impact of Artificial Intelligence (AI) on Democracy

By helping the EU anticipate change, the Lab supports the design of adaptive, resilient democratic institutions.

As the European Commission's science and knowledge service, the Joint Research Centre brings a unique combination of rigour, evidence-based analysis, and interdisciplinary expertise. This allows it to bridge scientific research, policy innovation, and strategic foresight, ensuring a robust response to the challenges and opportunities ahead.

1.1. Challenges for democracy in the EU

The selected three challenges for democracy were framed considering key elements put forward in the Scoping report: Future challenges to democracy' and the initial framing of each of academic research report, for the purpose of the foresight process as follows:

1) *Citizens' support for and engagement in democracy*

Gaps in representation of various social groups – youth, women, ethnic minorities, people from rural areas and people experiencing poverty – are widening, or are perceived as such, leading to economic and cultural grievances. Consequently, the citizens' trust in elites is declining alongside their support for democratic norms, processes and institutions.

Democratic innovations – citizens' assemblies, participatory budgeting, citizen-driven initiatives, etc. - striving for better representation and participation are not taken up sufficiently and lack impact.

2) *The quality and resilience of democratic processes and institutions*

Over the last two decades, the number of people living in democratic regimes has declined globally, while the quality of democratic processes is declining even in established democracies. The resilience of democratic institutions is tested while authoritarian capitalism governance is becoming more sophisticated, challenging assumptions about democratic inevitability.

3) *The impact of artificial intelligence on democracy*

The public sphere is fragmented through the proliferation of information and media as well as the rise of personalised, emotive algorithm-driven communications. This creates information overload, exacerbates societal divides, and in many cases drives the decline of trust in expert information and knowledge.

Private ownership of information channels and data infrastructure increases the power of private tech companies over public institutions and democratic processes. The rise of AI may further increase the fragmentation of the public sphere and reduce the quality of available information, tightening the grip of big tech players on the democratic information environment and relevant policy data.

1.2. The JRC's EU Policy Lab foresight process

Foresight is the discipline of exploring, anticipating, and shaping the future in a participatory way by systematically and rigorously navigating uncertainty and exploring possible and preferable futures[4].

[4] Foresight: our new guide to how it could work for you - EU Policy Lab

The purpose of this foresight process was to explore a range of possible consequences and outcomes of societal changes linked to the three selected democratic challenges, creating different possible futures of democracy in the EU.

By generating a wide variety of views on the future and understanding emerging changes and future opportunities, we can transform insights about the future into actionable knowledge for strategy-building and decision-making today.

The foresight process was organised between August 2024 and June 2025 and included a sequence of participatory in-person workshops, which focused on one of the three challenges to discuss related new, emerging issues. These workshops provided new perspectives on possible future developments of the democratic challenges in the EU.

Based on participants' explorations of how emerging issues could evolve in the future, four distinct scenarios were developed and analysed in the final workshop.

This report provides information on the methodology and on each stage of the foresight process, from the exploration of the emerging issues to the ensuing scenarios and specific insights and conclusions for policymakers. The report does not aim to present a comprehensive overview of possible future developments in democracy, as the foresight process was specifically focused on selected emerging issues. We hope, however, that it can provoke new ways of looking at possible futures of democracy in the EU, through a set of key questions and insights to inform policymaking.

2. Methodology

2.1. Dialectical waves of change

The three central challenges that were selected from the scoping phase of the '*Future of Democracy*' project represent established trends challenging democracy in the EU:

- Citizens' support for and engagement in democracy;
- The quality and resilience of democratic processes and institutions;
- The impact of artificial intelligence on democracy.

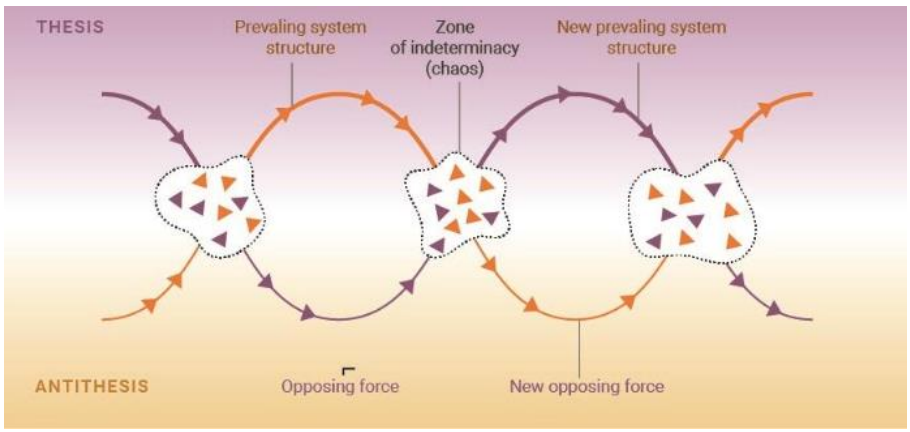
Usually, policy options based on these challenges would be reactive, as they are a response to already ongoing phenomena. For the present foresight exercise, instead of looking at potential counter measures to these challenges, we explore emerging phenomena that indicate change in new or opposing directions compared to the challenges, presenting possible new opportunities.

The methodology used for this exploration is based on the '*dialectical waves of change*' (Dujardin, 2021) and allows a forward-looking exercise using dialectical analysis, which is typically reserved for analysis of historical changes.

Dialectical analysis examines how change is driven through a dynamic interaction between two contradicting forces or ideas, in such a way that a third outcome crystalizes and becomes the new prevalent idea or state (Dolan, 2018; Dujardin, 2021). The dialectical process can be understood as a cyclic process in which '*the output of every stage serves as the starting point of a new cycle*" (Rescher, 2007).

Such processes consist of three states most well-known as: thesis, antithesis, synthesis. The underlying principle is that a current state of something (thesis) is confronted with or gets negated by a contraposition (antithesis), leading to an interaction that causes the establishment of a new state (synthesis), that is neither fully the thesis or antithesis (Dujardin, 2021). The synthesis becomes the new prevalent state – thus the new thesis – that is over time confronted with a new contraposition, starting the cycle anew (Dolan, 2018; Rescher, 2007).

Figure 2: Dialectical waves of change (Dujardin, 2021)



Source: Adapted from Dujardin (2021)

Dialectical analysis has proven useful to understand historical societal change and is often used by political scientists to examine how political or social systems have shifted in the past. When looking back, the outcomes (syntheses) of such clashes between opposing forces can often retroactively be

identified. When looking forward, however, the pathways and possible outcomes are still uncertain. An ongoing dialectical clash happens in a 'zone of indeterminacy', where chaos rules and outcomes are still unclear (Dolan, 2018).

The 'dialectical waves of change' framework establishes a methodology for thinking about potential future developments of phenomena that oppose a prevalent or dominant state and supporting possible actions that could be taken today to steer towards preferred futures. It provides the following protocol (Dujardin, 2021):

- *Identify the prevailing state/norm/system/structure/…—the thesis;*
- *Identify emerging issues* (see below) *negating the prevailing state/norm/system/ structure/…—the antithesis;*
- *Assess the range of possible developments of this emerging contradiction in a clash with the thesis over time;*
- *Identify the most preferable developments or resolutions and identify the drivers behind them;*
- *Brainstorm on what actions might be taken today to stimulate and facilitate changes towards preferred resolutions.*

2.2. The foresight process

We used this protocol as the methodological basis for this foresight exercise but adapted and expanded it for the purpose of this project. One of the main adaptations we made was adding a final step of building scenarios of possible futures. The main reason for this is the scope of the exercise. Where the original protocol of Dujardin (2021) is meant to explore the possible futures of a single dialectical clash, in this project we had to deal with a multitude of intertwining issues and topics, which can be better explored through scenarios. In this section, we discuss the full foresight process used for this project.

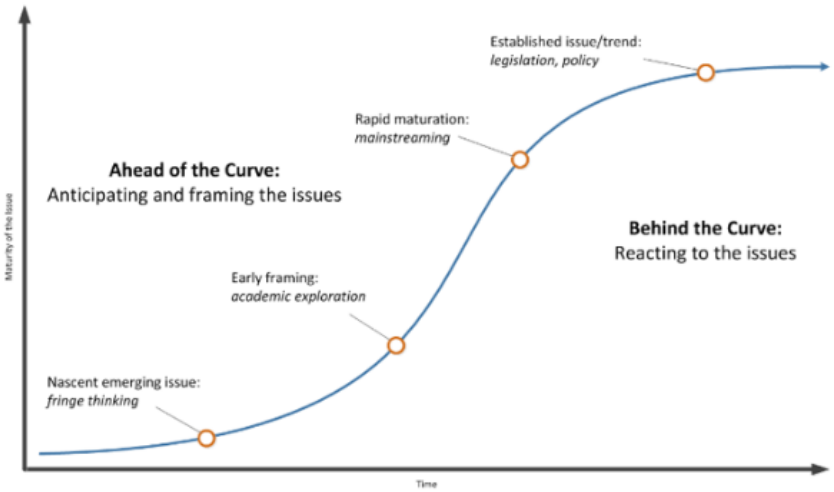
A) Identifying the current state of EU democracy (thesis)

The 'thesis' was defined as the challenged position that EU democracy is in today. This 'challenged state' was established during the first stage of the project, in which three central challenges were selected for further analysis. These three challenges – as described in the introduction of this report– are considered to make up the 'thesis'.

B) Identifying contradicting emerging issues (antitheses)

Emerging issues are early signals of possible change to come. They are new phenomena in very early stages of development, of which it is still unclear how much and in which direction they could evolve. They usually exist in the margins of society and are present in '*fringe thinking'* (Lum, 2016) or '*below the surface of general public awareness'* (Bishop, 2009). They are typically identified through *horizon scanning*, which is the act of scanning for signals of change in the present that could impact the future. Graham Molitor's S-curve is an often-used model to explore how such emerging issues could develop into mature phenomena (Dator, 2018).

Figure 3: Adaptation of Molitor's S-curve (Lum, 2016)



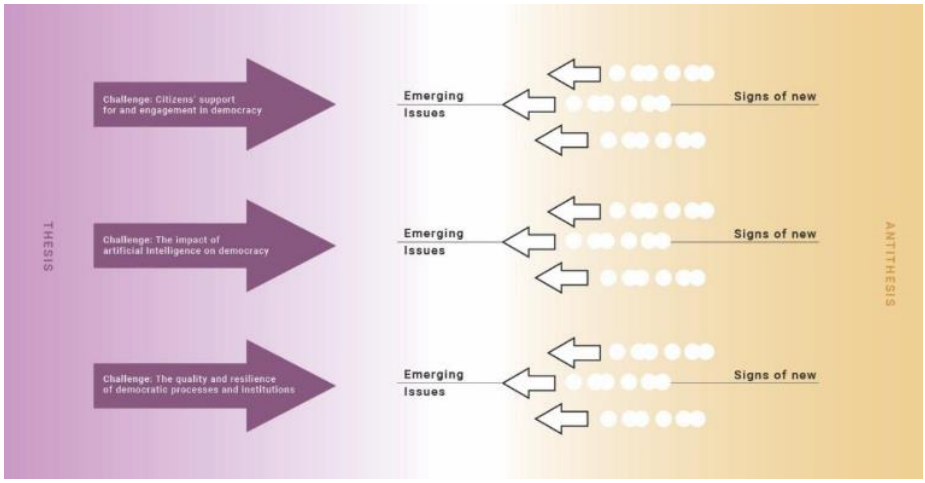
Source: Lum (2016)

From a dialectical angle, emerging issues are interesting because they could contain signs of upcoming phenomena, ideologies, movements or ideas that contradict or negate the status quo, or present alternatives to it. In other words, emerging issues could contain antithetical forces, that unveil a potential clash with a current thesis. Such emerging issues are sometimes called "*emerging contradictions*" because they specifically contradict the dominant paradigm or prevailing state (Dolan, 2018; Dujardin, 2021).

The European Strategy and Political Analysis System (ESPAS) is a network of European institutions and bodies that carries out a continuous horizon scanning exercise. Through analysing outputs of the ESPAS horizon scanning, we identified emerging issues that are associated with the three selected challenges but indicate change in the opposing way or a completely new direction compared to current dominant trends related to these challenges.

An emerging issue is never just a stand-alone event or phenomenon. They do not consist of single data-points. An emerging issue is a collection of 'signs of new' that can be connected, and as a group seem to point towards potential change.

Figure 4: Challenges vs. emerging issues



Source: Authors

For this project, we analysed over a thousand of these signs gathered across sixteen months. After selecting 62 signs that were relevant for this project, we clustered them into nine emerging issues connected to the three challenges:

- For citizens' support for and engagement in democracy;
    - Diversification of social groups represented
    - New interactions between public authorities and citizens
    - Shifting values and lifestyles among Generation Z
- For the quality and resilience of democratic processes and institutions.
    - Extensions of citizenship
    - Liquid democracy
    - Technocracy
- For the impact of artificial intelligence on democracy;
    - AI as facilitator of political deliberations
    - AI in political campaigns and engaging voters
    - Human agency over AI and the impact of algorithm

These emerging issues and their relevance for the three challenges were then validated by the academic experts involved in Part x of the project. An overview of all emerging issues and their signs of new is available in Annex 1.

C) Assessing a range of possible developments through interactive foresight workshops

During the participatory workshops, we used foresight methods to imagine how the selected emerging issues could develop and what possible outcomes could emerge from their dialectical clashes. For each workshop, we gathered a wide variety of experts with different professional backgrounds, each bringing a specific perspective on the related topics to the table. In total, over 80 experts were consulted during three workshops.

To facilitate thinking on the broader context in which these emerging issues develop, we started each workshop with an exercise using the EU Policy Lab's Megatrends. For each emerging issue, the experts identified the four most relevant megatrends shaping its global context to support the development of possible pathways during the futures wheels exercises.

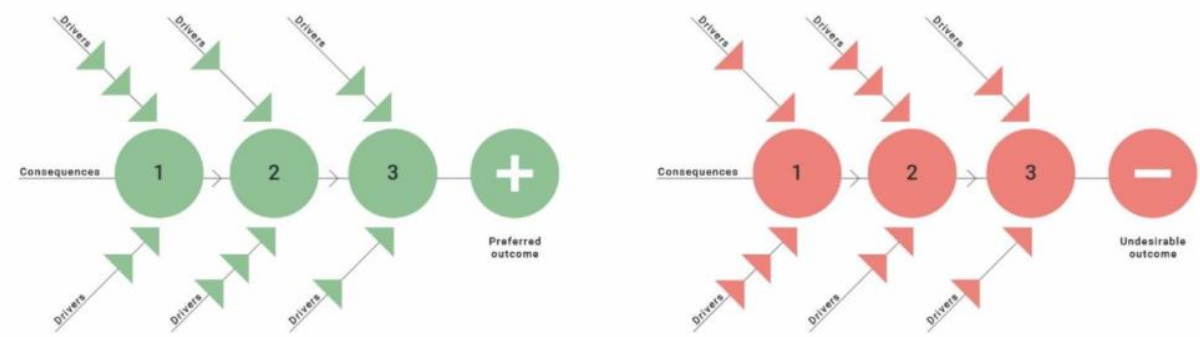
The main part of the workshops was dedicated to creating *futures wheels* on the selected emerging issues. A 'futures wheel' is an anticipatory tool designed to envision possible developments of issues or phenomena over time. It does so by exploring possible first, second and third order consequences of emerging issues. Usually, the outcome of a futures wheel presents a plethora of possible developments in different directions. By clustering these outcomes into groups of compatible outcomes, one can see the outlines of different possible future scenarios.

We used this tool to run three foresight workshops, one for each key challenge. During each workshop, we developed three futures wheels, one for each of its related emerging issue. We ended each workshop with the identification of the most preferable outcomes or resolutions and the

drivers behind them. To enable reflections not only on aspirations, but on potential pitfalls too, we also identified the least preferable outcomes and the drivers behind them.

Both the most preferable and least preferable outcomes of each wheel were identified through voting by the participants. Next, a fishbone diagram was used to reflect on the pathways towards the most and least preferable outcomes, and the drivers behind different milestones, steps or events.

Figure 5: Fishbone diagram for pathways and drivers towards most and least preferable outcomes



Source: Authors

The results and conclusions of these workshops are available in chapter 3, where we provide an overview of each emerging issue and the main conclusions and take-aways from the futures wheels and the fishbone diagrams.

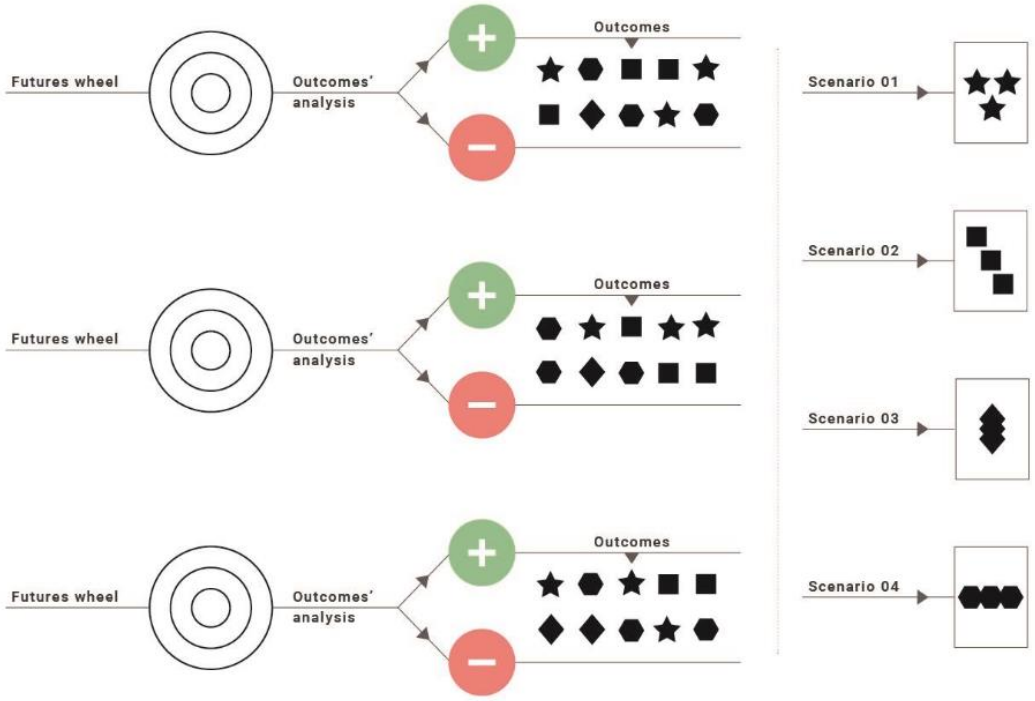
D) Building scenarios

Through the previous steps, we co-created: 1) possible pathways and outcomes of emerging issues and 2) the drivers behind the most and least preferable outcomes and pathways. These outputs already generated insights into possible areas to monitor or new policy-relevant questions.

Looking across all the outputs, some of them came up repeatedly and connected naturally between consequences and drivers, aligning in distinct directions of change. To get a clear understanding of the interconnectedness between all these issues and the cross-cutting long-term societal consequences that might emerge, we developed scenarios.

Futures scenarios help to imagine what happens if certain developments or outcomes manifest together, revealing opportunities or risks that could otherwise be overlooked, enabling us to make more informed future-oriented decisions. They can also help to bring to life alternatives to the challenged status quo, uncovering possibilities beyond the beaten path. Lastly, scenarios turn abstract pathways into immersive and tangible worlds that enable more empathetic reflections on the societal impacts of possible future developments.

Figure 6: Scenario outlines development process



Source: Authors

The pathways and outcomes stemming from the futures wheels diverged greatly, showing possible developments in different directions. Through comparing and interconnecting the outcomes of different futures wheels, the outlines of several possible futures emerged. We used these to build scenarios in an inductive way (developing a structure bottom-up from gathered data, rather than starting from an existing structure or theory), making sense of all the qualitative data we gathered across three workshops by looking for emerging patterns.

We started by identifying returning and overlapping elements across the futures wheels and fishbone diagrams. Each time a certain output (which could be an idea, event, phenomenon, milestone, etc.) emerged multiple times, we clustered them together. Next, we looked for which clusters of outputs were related and would make sense to combine, e.g. because they seemed like plausible events or phenomena to occur together. We specified the relations between these clusters, looking at how they were connected or in which chronological order they would manifest.

This way, we were able to establish the outlines of four distinct future scenarios, each with its own core principles, mechanics, coherence, narratives and actors. We then further distributed all the outputs that had not been grouped yet across these four scenarios, classifying them into the most fitting one and merging them into the fabrics of the narratives we were building.

This gave us the outlines and contents of four scenarios, which we titled:

- *AI-facilitated direct democracy*
- *Citizen pushback*
- *Technocratic government overreach*
- *Big tech power grab*

We turned them into written narratives with chronological developments over time from the present to 2050. This time horizon provides sufficient room for exploring potential long-term developments of the emerging issues, while not requiring an implausibly rapid pace of societal transformation.

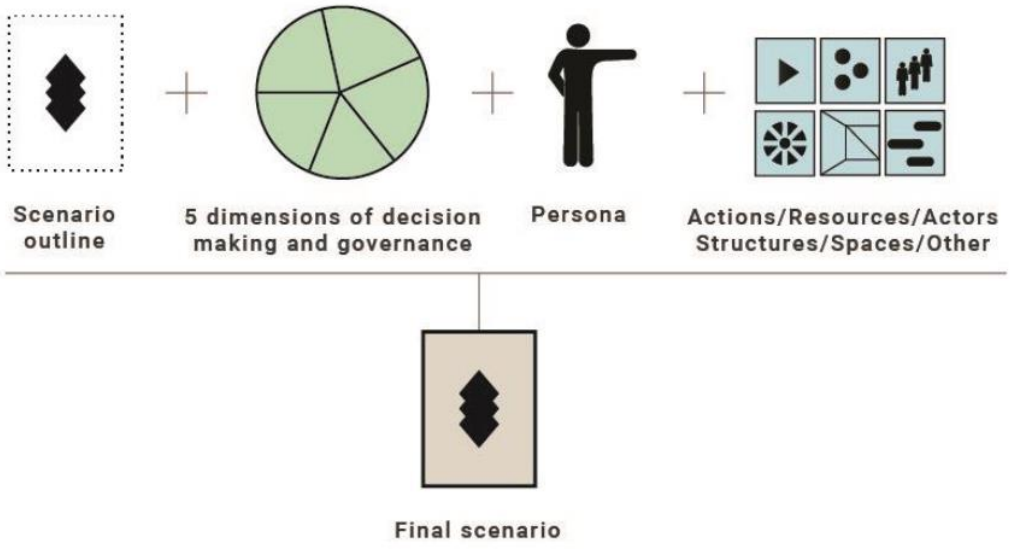
We concluded the foresight track with a final workshop to add further detail to the scenarios regarding decision-making processes, the roles of different actors and institutions, and the impacts on society and citizens. To this end, we defined five core dimensions of decision-making and governance:

- Citizen representation & participation
- The info- and knowledge environment
- Power relationships and resources
- Governing procedures
- Global context influence

For each scenario-outline, around 50 experts - including academic experts, business leaders, policymakers, and representatives of sector federations, labour unions, youth organisations and media - detailed how these five dimensions would manifest, to paint a more comprehensive picture of how governance would look like in each world.

Finally, we let the participants discuss the roles of five distinct personas, to see how these scenarios would impact the daily lives of different people. For each persona, we provided a background story, as well as a set of values they adhere to and goals they want to reach. Participants then explored how these personas would fare in each scenario and which actions, actors, resources, structures and spaces they could harness to exert influence and reach their personal goals.

Figure 7: Final scenarios development process



Source: Authors

The full scenarios, along with the details on decision-making processes, impacts on the lives of possible future citizens and the key insights they reveal, are presented in chapter 4 of this report.

E) Actions towards preferred futures

The purpose of building the scenarios is to use them afterwards in engagement activities with different groups of participants. Evolutions in EU democracies and the interrelated domains (e.g. AI, citizen engagement and democratic institutions) can have profound impacts on a wide range of policy domains at different governance levels. To explore what those impacts could be and what they imply for existing policies, the scenarios can be used in participatory workshops with different stakeholders. Such use of scenarios can enable in-depth understanding of democratic systems and help generate actionable and tailored policy-insights. These activities are at the time of writing still being developed, which is why they are not further detailed here.

3. Exploration of possible developments of emerging issues

The second and third steps of the dialectical waves of change protocol concern identifying contradicting emerging issues and assessing a range of possible future developments and outcomes of these. In the following section, we provide an overview of all the emerging issues we identified concerning the three main challenges, the connected 'signs of new' we captured from ESPAS horizon scanning outputs[5], and the outcomes and learnings stemming from the futures wheels workshops we conducted.

3.1. Challenge: Citizens' support for and engagement in democracy

3.1.1. Emerging issue 1: Shifting values and lifestyles among youth

Shifting values and lifestyles among certain groups of young people could modify their needs and therefore political participation and priorities.

Box 1: Signs of new for shifting values and lifestyles among youth (Annex 1, 6.1.1).

- New, more individualized working time models are emerging, including job-sharing, more telework and flexi-work, new productivity periods, life-phase oriented working, etc. (Cohen, 2025; Microsoft, 2021; Rosken, 2022; von Moltke, n.d.).
- The rise of the passion economy, with new platforms allowing people to reach niche-markets and turn hobbies or passions into sources of livelihood (Amitabh, 2022; Formica & Sfodera, 2022; Gibbs, 2025; Scheyett, 2023; Toresson, 2024).
- Young people's professional priorities are changing, focusing more on work-life balance (Euronews, 2023; Campbell, 2023; Davidovic, 2022).
- Silent citizenship: political absence or silence as a form of political expression (Gest & Gray, 2017).
- Many young people are now leaving cities, as a choice or due to financial reasons (Smith, 2023)
- 'Soft saving': a trend among youth to save less for the future and use more now (Dickler, 2023)
- Gen Z launches a political party in Australia, with an agenda that caters to this generation specifically (Evans, 2023)
- Young people are protesting in virtual worlds (Molloy, 2023)
- Gen Z investing at an earlier age and at a higher rate than previous generations (BlackRock, 2024; Wigley & Kantaria, 2023)
- Gen Z use podcasts to educate themselves (Spotify Advertising, 2024)
- Gift economy' platforms are gaining popularity (Quiroga, 2021; MasterClass, 2022; The Buy Nothing Project, 2026; The Freecycle Network, 2026)
- 'Micro-retirement' is on the rise, with youth taking strategic professional breaks to re-energize (Robinson, 2025)

[5] For a full list of signs of new and their descriptions, as well as corresponding references, please see the Annex 1.

POSSIBLE PATHWAYS OF DEVELOPMENT

While the above signs seem to indicate younger generations are taking agency over the way they work, spend and learn, in many instances these changing behaviours and values can actually simply be seen as **adaptations to a changing context**, rather than being something intrinsic to the generation. For example, financial challenges, the blurring of professional and private life through technology and the increasing rush of daily life force younger generations to adopt new working models. Young people are leaving cities not necessarily because they want to, but because they must for financial reasons. And investing small amounts of money at a time becomes easier and more accessible with new platforms.

According to the experts involved in exploring these signs, they draw a bleaker picture, as they all seem to point to **potentially even more divides within this generation**. Growing material inequalities (with the ability to buy a house and save for retirement at the centre), ideological and political polarization (facilitated by the big tech induced changing information-sphere), intergenerational conflicts and a divide between the politically engaged and non-engaged youth could put immense pressure on our democracies in the future.

However, on the long-term, they could see these signs moving towards **more (impactful) youth participation in governance**, either indirectly through backlash that leads to political reactions (such as rising resentment and protests), or directly as **governments could start adapting to this new generation**, for example by lowering both the voting age and the legal age to take up political mandates. This more direct involvement of younger people in politics would influence the political agenda, leading to **more long-term policies** (that could include necessary political reforms). Looking at academic studies on this, they might be right, as younger people tend to prioritize long-term topics on the political agenda (e.g. environment, wellbeing) over shorter term topics that tend to be favoured by older generations.

Table 1: Opportunities and risks of shifting values and lifestyles among youth

OPPORTUNITIES	RISKS
An **increased and more meaningful participation of youth (**starting at a younger age) in politics and governance could lead to **more future-oriented policies.** Governments could **facilitate meaningful participation by adapting to Gen Z's wishes and needs** by: • Actively involving youth in the co-creation of policies • Experimenting with new dialogue formats that cater to youth • Support youth organizations and representatives • Making politics and governance more accessible, e.g. by lowering the voting age and the legal age to run for a political mandate • Communicating better on opportunities in governance and politics for youth, and	Trends among youth could **exacerbate existing divides or create new divides** within this generation: • The diversification of working time models could lead to new inequalities when it comes to working conditions and work-life balance • Economic inequalities among youth are growing, mainly centred around the ability to buy real estate and save/invest for older age • Youth that are forced to leave cities are confronted with opportunity losses, worsening existing inequalities • The changing knowledge- and info-environment could further fuel polarization • We risk divides between politically engaged and non-engaged youth

providing more equitable access to those opportunities **Civic education can** help build the necessary knowledge and skills for youth to actively participate in politics and governance. **Schools could apply internal democratic processes** (e.g. student representative elections, involvement of student representatives in school governance) to instil democratic habits and skills from a young age. As youth ages, new generations **grow into power**. Reaching voter age also provides **electoral incentives** for governments to respond and adapt to youth's wishes and needs.	Intergenerational divides drive **intergenerational resentment**, which could lead to more polarization. Main drivers of intergenerational resentment are: • Irresponsibility of older generations concerning environment and climate • Pensions/financial burdens • Communication divides • Paternalizing and disrespectful narratives and discourses between generations • Power entrenchment • Lack of meaningful involvement of youth in policymaking • Changing values and priorities Growing divides and a loss of interpersonal and intergenerational trust could lead to a **weakening social tissue** and a **dissolving civil society.**

Source: Authors

EMERGING KEY QUESTIONS

- In line with the EP's proposal to harmonize the voting age across Member States (EP legislative resolution of 3 May 2022), could we **lower the voting age to 16** across the EU? What would be the consequences? What can we learn from Member States where the voting age is already 16?
- In the same vein, could we **lower the legal age to run for a political mandate**? What would be the consequences of that?
- Can we stimulate or support schools to apply **democratic processes at the school level**?
- How well are ongoing efforts to **actively involve youth** (representatives) in EU policymaking in a direct and meaningful way working? What can we learn from them and how can we do better?
- How can we **better communicate opportunities for youth** in EU policymaking, and make those opportunities equally accessible for all youth?
- How can the **Intergenerational Fairness** agenda help alleviate intergenerational divides and resentment?
- How should we **handle** the different drivers of **intragenerational divides among youth**?

3.1.2. Emerging issue 2: Diversification of social groups represented

There are signals pointing towards an increasing recognition of new social groups needed to be represented, based on a wider acceptance of gender and neurodiversity, a better understanding of intersectionality, etc.

Box 2: Signs of new for diversification of social groups represented (Annex 1, 6.1.2.).

- Neurodiversity in organizations, labour markets and political participation is being recognized (Diaz-Harrison, 2024; Scarano, Bertana & Leventi, 2023)
- Increasing focus on intertemporal choices - the ones we make not for us at present but for the future selves and society, especially regarding climate change and environmental degradation (EPTA, 2013; Welsch Government, 2015; Scottish Government, n.d.)
- Spain has elected a first parliamentarian with Down's syndrome. Other examples of citizens with down syndrome being active in political sphere are also known in France and Ireland (BBC Newsround, 2024; Disability Insider, 2021; Bodinier, 2023).
- Petra de Sutter was the first transgender minister in Europe and deputy prime minister of Belgium from 2020-2025 (Hugendubel, 2020).
- Giving voice to non-human beings such as animals, rivers, AI etc. in decision-making processes (Burke & Fishel, 2020; Sunstein, 2024).
- Considering pain an indicator of citizens' welfare (Macchia, 2023)

POSSIBLE PATHWAYS OF DEVELOPMENT

The growing recognition of certain social groups **does not directly translate into implementation of their rights**. Some might be instrumentalized for political gains. Their agendas might be pushed further at the expense of others, only as long as it serves political interests. However, it can also foster a better understanding of intersectionality among those social groups, which may lead to a growing awareness of the need to unite forces to improve their situation and demand rights. From a public policy perspective, it is worth emphasizing that **employment is an effective tool for integrating and increasing the visibility of new social groups being recognized**.

These processes inevitably **reshape social dynamics, often triggering resistance**, especially among young men who perceive their traditionally privileged position as being threatened. The growing presence of women in higher positions, stronger institutional support for gender equality, the spread of decolonial perspectives and greater recognition of minorities can **contribute to this perception of loss**.

Far-right movements are quick to exploit these anxieties. Through a range of tactics, they amplify resentment and channel it into visible backlash across the infosphere. The dominance of political debates by actors with privileged access to digital technologies could lead to the **weaponization of free speech** and more influence of tech giants on decision-making. This dynamic is further reinforced by **deep inequalities in access to quality information**. A huge burden is placed on educational institutions; if they were to **fail to cultivate critical thinking** among young people, they become more susceptible to online manipulation, which in the long run could fuel the rise of authoritarian tendencies.

The convergence of far-right narratives with the shifting social position of white men has also correlated with **rising violence, both domestic and public**. The rights of women and minorities are increasingly undermined, and **progress towards broader social inclusion is slowing, or even reversing, in some areas**. This regression may also hinder the limited but important advances made by other marginalized groups, such as neurodivergent individuals or people with mental disabilities.

Table 2: Opportunities and risks of diversification of social groups represented

OPPORTUNITIES	RISKS
Leveraging intersectional approaches in policy design can help recognize overlapping forms of disadvantage, foster solidarity across diverse social groups, and ensure policies do not unintentionally pitch groups against each other. Promoting **employment as a tool for the integration and visibility** of new social groups, such as migrants or minorities, has proven effective, especially when combined with transparent, merit-based, and collaborative programs involving public, private, and civil sectors. Policies should prioritize intersectional representation, equal opportunities, and digital inclusion to mitigate the appeal of extremist ideologies and the risk of democratic backsliding in an era shaped by technological power and social anxieties. It is important to support it by **partnerships** between schools, universities, civil society organizations and public institutions and needs to be matched with appropriate **funds including for research to provide evidence and facts**. Investing in inclusive education and venues where students from different backgrounds express their ideas **will provide a fertile ground for diverse, open and democratic European societies.**	The recognition of previously marginalized groups **transforms the social fabric**. In response, some previously privileged groups may fixate on their **perceived loss of status** rather than positioning themselves as allies and active participants in building fairer societies. When alternative and supportive narratives are weak or absent from the public sphere, such grievances are rapidly **exploited by far-right movements** and amplified across the digital infosphere. In the absence of adequate regulation of social media platforms, hate speech and backlash narratives spread quickly, further **intensifying social tensions**. This dynamic is reinforced when significant **financial power is concentrated** in the hands of tech corporations and lobbyists, while politicians continue to support these giants without sufficient mechanisms of social oversight. As a result, public trust in traditional media and institutions, perceived as promoting diversity and inclusion, tends to erode. Without **meaningful state support** and amid the growing prevalence of backlash narratives, some individuals may resort to **violence they deem legitimate**. Such violence is not only directed at public institutions but, more tragically, at vulnerable minority groups themselves**.**

Source: Authors

EMERGING KEY QUESTIONS

- How do we embrace the **specific needs** of new represented social groups with **limited resources**?
- Is **intersectionality** embedded enough in policy making, both as an understanding how different qualities and limitations overlap within different groups, and as way to guide decisions and assess their impact?
- Are the current principles of **inclusive education** flexible enough to accommodate the needs of new social groups being recognized?
- Is the problem of **shifting values** in a fast-changing world – coupled with technological advancement like AI – given adequate attention as a potential disruptor of **social cohesion**?
- Are policy-makers aware of the impact big tech might have on the social sphere? Are there **contingency plans** for foreign big tech companies escaping adequate regulation?
- Is current support for **partnerships** between schools, universities, civil society organizations and public institutions able to **develop and amplify sufficiently alternative narratives**?

3.1.3. Emerging issue 3: Interactions between public authorities and citizens

New technologies, communication means, narratives, use of language show new possibilities for public authorities to communicate and interact with their citizens in more engaging and meaningful ways.

Box 3: Signs of new for new interactions between public authorities and citizens (Annex 1, 6.1.3.).

- A 2023 study confirms that a more playful approach to communicating science through fairy tale images can better reach non-expert audiences and have a more memorable impact (Lancaster University, 2023).
- Finnish Tax administration is counteracting the image of dry, boring bureaucracy with humoristic social media posts often replicating TV reality shows and other phenomena from popular culture (Verohallinto, 2024).
- Immersive storytelling is used at schools to make pupils experience historical dilemmas and reflect on the choices made by societies in different contexts (Anderman & Lin, 2023).
- Personalised text formatting increases reading proficiency (Authority Magazine Editorial Staff, 2023).
- The Financial Times has developed a game to help people understand the trade-offs involved in deciding on the UK national budget (Financial Times, 2025).
- A 2024 study released by American Compass in partnership with YouGov indicates that honesty in political communication enhances policy support (Cass, 2024).

POSSIBLE PATHWAYS OF DEVELOPMENT

Using new approaches in interactions between public authorities and citizens could have divergent consequences, depending on how meaningful those interactions are. If governments use these new ways to steer the communication to suit their own agenda or miss reaching out to some social groups, it may lead to disengagement and exclusion of some people. On the other hand, genuine inclusive and engaging interactions could strengthen citizen trust and involvement in policymaking.

Main pathways emerging from the futures wheel are 1) a story of benefits of effective communication that can lead to citizen engagement, better social cohesion and opportunity to reinvent democracy, and 2) interactions between public authorities and people becoming contaminated by disinformation and manipulation, which result in polarization and erosion of democracy.

The first pathway presupposes that the new public communication modes are underpinned by **political honesty** and a wish for real engagement with citizens. This would strengthen **trust** and enable open governance, in turn increasing the demand for **citizen involvement** and inputs into the policymaking, including from underrepresented groups. These positive feedback loops would result in **better policies** and citizens' acceptance, including where trade-offs are necessary, and ultimately in a thriving democracy that is an integral part of people's lives.

The second pathway explores the fallout of public authorities' misuse of the new channels of interaction with citizens. Misinformation may come from use of simplistic or too complex language, or downright **manipulation**, and would have negative consequences for citizens' trust and motivation to engage. Vulnerability to interventions by malign actors would increase and undermine security, provoking social **disenchantment** and distrust.

Table 3: Opportunities and risks of interactions between public authorities and citizens

OPPORTUNITIES	RISKS
New, open and engaging ways of interacting between public authorities and citizens could: • create deeper understanding of government's position, challenges and necessary trade-offs (by citizens) and of citizens' needs and priorities (by public authorities) • motivate people to actively engage or even seek employment in the civil service • strengthen the trust in decision-makers and the acceptance of policy decisions **Policymakers** could rebuild trust through honest political communication and reconsider their **role** in policymaking (becoming more of facilitators and coordinators). Better interactions with **civil society** could enable genuine involvement of all social groups and create new perceptions built on both expert views and citizens needs. **Prerequisites of effective interactions** between public authorities and citizens are: • transparency of information • expectations management (clarity about decision-making and trade-offs) • democratic champions in public institutions • room for experimentation, accessibility and inclusion, as well as public resources, including knowledge, methods, communities and standards for citizen participation • relevance of issues and policy impacts By continuously involving citizens, institutions would regularly receive and give **feedback** to citizens, increasing citizens' feeling of **safety, satisfaction and trust** in policy decisions, in a self-reinforcing feedback loop.	**New approaches in public authorities' interactions with citizens** can lead to negative consequences if the prerequisites are not fulfilled. Lack of political integrity and ethical policymaking could create a public space for **disinformation.** Lack of critical thinking and civic education among citizens would enable **manipulation** in echo-chambers and social **polarization.** Misuse of the new communication channels can further **decrease the trust** between citizens and decision-makers. If **simplistic, black-and-white language** is used, this would reinforce people's lack of ability to tolerate ambiguity and the tendency to oversimplify issues. If the public authorities-citizens interface becomes contaminated with misinformation, it may become vulnerable to further disinformation campaigns by internal and external **malign actors**. The loss of trust between citizens and decision-makers would lead to the lack of motivation and skill to politically engage, increasing citizens' **disenchantment**.

Source: Authors

EMERGING KEY QUESTIONS

- How can the **EU foster open, honest and engaging communication** between the public authorities and citizens? Can the EU put in place new channels and spaces for public authorities to interact with citizens in more meaningful ways? How could the citizens' motivation to engage be best harnessed?
- How to best ensure **accessibility and inclusivity** the interactions between public authorities and citizens? Are there existing EU policies that can further foster this?
- Who could be **democratic champions** in public institutions and how could they open communication channels with citizens?
- How could the **EU prevent misuse** of these new approaches/channels by internal and external malign actors?

3.2. Challenge: Quality and resilience of democratic processes and institutions

3.2.1. Emerging issue 1: Extensions of citizenship

The concept of citizenship is increasingly expanding beyond the nation state and extending to new domains, such as global, digital or environmental citizenship reshaping rights, access to services and obligations (Warr & Williams, 2015; Jhonson & Shehzadi, 2023; United Nations, n.d.; Van Noppen, 2024;).

Box 4: Signs of new for extensions of citizenship (Annex 1, 6.2.1).

- *Digital citizens* can be described as individuals able to use digital tools to create, consume, communicate and engage positively and responsibly with others. (Council of Europe, 2019; Leigh, 2024
- *Pandemic citizenship* is conceptualization of processes of inclusion and exclusion in times of heightened inequalities and strong public intervention (Piccoli, 2024
- *Insurgent citizenship* describes how marginalized or excluded groups challenge and subvert traditional notions of citizenship by claiming rights, spaces and identities that are not officially recognized. (Holston, 2009; Voss, 2024

POSSIBLE PATHWAYS OF DEVELOPMENT

Electoral fatigue and distrust in politicians might lead to a **disconnect between citizens and politicians**, causing a representation crisis and increasing disillusions. These disillusions can lead to lower voter turnout, which explicitly **challenges democracy**, and potentially results in self-defeating prophecies undermining democratic institutions. Ultimately, this could culminate in the collapse of the entire political, social, and institutional structure, matched with the rise of both **authoritarian narrative and support**.

Alternatively, **increasing social fragmentation** and political polarization results in a democratic gap between the haves and have-nots that is mostly unaddressed by policymakers leading to a wealth capture spiral. This can result in the rejection or loss of 'national citizenship' **as a sense of societal belonging**, prompting the rejection of political parties and resulting in **extreme fragmentation**. As a reaction, groups may opt out of society entirely, giving rise to 'mutual aid' movements and the development of **alternative, radical structures**. In both cases, a disconnection between citizens and the political system occurs albeit through different mechanisms.

A third way would consist in new modes of **participation** and the inclusion of **diverse groups of citizens**, particularly young people who feel the need to take democracy into their own hands. This might cause geographic **fragmentation of political** systems and levels of democracy and could also involve the exploration of alternative ways of structuring society, such as **organic communities**. In contrast to the two pathways presented above, this one presents a more optimistic outlook, where **citizens take an active role** in shaping their democratic future, highlighting the differences in potential outcomes depending on the level of citizen engagement.

Ultimately, a fourth transformative path builds on the **productivity gains from AI**: these would be redistributed equally, and people would use their free time for pro-democratic action, potentially leading to the formation of a neo-Gramscian alliance between militants, civil servants, activists, and scholars. This could ultimately result in a **centralized but responsive state** with a new social

rights framework, **redefining the social contract** as citizens turn away from governments and towards 'mutual aid network democracy'. This path combines elements of the previous ones, as it involves both the rejection of traditional political structures and the emergence of new forms of participation and governance.

Table 4: Opportunities and risks of extensions of citizenship

OPPORTUNITIES	RISKS
The expansion of citizenship beyond the nation-state can lead to new modes of participation and inclusion. This can result in a more active and engaged citizenry, and a more **responsive and accountable** democratic system. The emergence of new forms of citizenship can provide opportunities for **marginalized or excluded groups** to claim rights and recognition. This can lead to a more inclusive and equitable society, and a more just and democratic distribution of resources and opportunities. The transformation of citizenship can also lead to the exploration of alternative ways of structuring society, such as **organic communities**. This can result in more innovative and effective forms of governance, and a more participatory and deliberative democratic process. The **redistribution of productivity gains from AI** can enable citizens to engage in democratic processes and result in a more just and equitable society with more democratic and participatory distribution of resources and opportunities. Ultimately, this leads to a more **equitable and just society**, where the democratic gap between the haves and have-nots is mitigated, and political responsiveness is focused on the needs of all citizens, rather than just the privileged ones.	The expansion of citizenship beyond the nation-state can lead to a **disconnection between citizens and the political system**, resulting in a representation crisis which could lead to a collapse of democratic institutions, and the rise of authoritarianism. The emergence of new forms of citizenship can also lead to **social fragmentation and political polarization**, leading to a decline in social cohesion and democratic stability. The transformation of citizenship can also lead to the **rejection of traditional political structures** and the emergence of alternative, **radical structures**. This can result in social unrest, conflict, and instability, and challenge the legitimacy and effectiveness of democratic institutions. The reliance on AI and digital technologies to facilitate new forms of citizenship can also lead to risks related to **manipulation, disinformation, and cybersecurity**. This can compromise the integrity and legitimacy of democratic processes and undermine trust in democratic institutions and outcomes. .

Source: Authors

EMERGING KEY QUESTIONS

- How can the **EU foster open, honest and engaging communication** between the public authorities and citizens? Can the EU put in place new channels and spaces for public authorities to interact with citizens in more meaningful ways? How could the citizens' motivation to engage be best harnessed?
- How to best ensure **accessibility and inclusivity** the interactions between public authorities and citizens? Are there existing EU policies that can further foster this?

3.2.2. Emerging issue 2: Increasing popularity of technocrats

Growing distrust towards politicians and criticism of policies seen as inefficient may result in a growing acceptance of non-elected officials in executive power. This translates into a *de facto* readiness to diminish the influence of elections with the hope of more evidence-based and impactful policymaking.

Box 5: Signs of new for increasing popularity of technocrats (Annex 1, 6.2.2).

- The slow but steady rise of non-elected technocrats in office across the EU, from 9,5% to 14,2% between 2000 and 2020 (Costa Pinto et al., 2018; Vittori et al., 2023; TLDR News EU, 2024).
- Increasing positive attitudes towards non-elected technocrats in executive functions across the EU (Bertsou & Pastorella, 2016)
- In some EU countries, most people would prefer non-elected experts over elected politicians in executive power (Rojon et al., 2023).
- Outside the EU, technocrats are often seen as a solution to complex political issues, e.g. Arab League's plan for post-war Palestine (England & Saleh, 2025).

POSSIBLE PATHWAYS OF DEVELOPMENT

A more **technocratic government could fail** to produce better, more effective policies. A lack of accountability and democratic control in a technocratic government could undermine the responsiveness of the executive government to public needs, with a whole series of potential consequences: from more biased, black-white policymaking and less inclusion of minorities' perspectives, to eroding trust in (scientific) experts and public institutions, and disengaging citizens.

However, in theory, a well-functioning and pluralistic technocratic government could lead to better, more objective policymaking leading to **more public satisfaction**. This is however a slippery slope; blinded by the success of executive power, citizens' attention could be drawn away from other checks and balances. The overreliance on executive experts could pave the way for a declining relevance of the other powers and eventually undermines core democratic institutions and procedures. This opens the door to **government overreach and abuse**.

Alternatively, citizens and civil society could **push back against the technocratic slide**. Citizens, media and parliamentarians would find new ways to politically engage, circumventing the growing power of the executive branch. Although representative democracy would give way toa technocratic regime, civil society would adapt to keep non-elected executives in check.

All-in-all, more technocracy generally poses a **threat of dissolving important checks-and-balances**, but as long as the most important institutions, procedures and mechanisms are kept in place, **a *'technocracy light'* model could actually work**. In such model, we would still have active democratic institutions and a balance of power, but executive decision-makers would be selected based on expertise rather than based on electoral results.

Central to this debate is the **question of political legitimacy**. If 'policy effectiveness' is framed and perceived as independent from democratic procedures, the risk of sliding into more autocratic technocracy is greater. If we perceive and frame 'policy effectiveness' as being connected to or even dependent on democratic procedures, the risk of losing sight of checks and balances is smaller and chances for successful technocratic governance are bigger.

Table 5: Opportunities and risks of increasing popularity of technocrats

OPPORTUNITIES	RISKS
A well-managed transition towards a more technocratic executive governance, without dissolving other democratic mechanisms, procedures and institutions, has the **potential to lead to unbiased, expert-informed decision-making.** However, such a shift would be successful only if accountability is maintained through democratic procedures. A well-functioning and pluralistic technocratic government could indeed lead to better, more **objective policymaking**, resulting in increased public satisfaction. This could be achieved through the selection of executive decision-makers based on expertise rather than electoral results. A 'technocracy light' model could work, where active democratic institutions and a balance of powers are maintained, but executive decision-makers are selected based on expertise. The inclusion of non-elected experts in executive power could bring **new perspectives and skills** to the policymaking process and ensure more inclusive and representative policymaking, as experts from diverse backgrounds and fields could be brought in to inform decision-making.	Successful technocratic governance – that leads to higher public satisfaction – could **boost output-based political legitimacy**. This could **undermine the support for democratic procedures and institutions** keeping executive power in check, opening the door for autocratic slide and government overreach. A '**voting doesn't matter' sentiment** could lead to citizens disengaging from the political process while effective policymaking by a limited group of experts could **drive anti-pluralist sentiments.** A lack of pluralism and/or expertise in legislative and judiciary branches could lead to **overreliance on executive experts.** Technocracy could lead to more **politization of science**, potentially driving a declining perception of scientific neutrality, and erosion of trust in science and scientific experts and institutions. A lack of pluralism in a technocratic government could bring more **disciplinary/specialty bias** into policymaking, leading to: • more absolute/black-and-white policies • less inclusion of minority perspectives • lower policy effectiveness • increasing divides and inequalities In a technocratic state, **policies could become more technical and complex**, leading to decreased opportunities for people lacking certain (digital or technical) literacy, knowledge and skills

Source: Authors

EMERGING KEY QUESTIONS

- How do EU citizens perceive '**policy effectiveness'**? Mainly output-based (outcomes of the decision) or mainly input-based (the procedures leading to the decision)?
- How can we **avoid overreliance on experts in executive functions**, if more of these come into office across the EU?
- Which **indicators on the strength of parliaments, judiciary systems and media** need to be monitored to ensure sufficient checks and balances in the case of growing techno-cratic demand?
- If citizens call for more non-elected experts in office over elected politicians, how can we **facilitate a transition towards a democratic 'soft' technocracy**?

3.2.3. Emerging issue 3: Liquid democracy supported by AI

'Liquid democracy' is a voting paradigm proposed more than a century ago to combine the best aspects of direct and representative democracy. The current context of fast developing new technologies could allow it to be tested in practice.

Box 6: Signs of new for liquid democracy supported by AI (Annex 1, 6.2.3).

- Liquid democracy is a model that allows voters to choose between directly voting and delegating their votes to other voters. The German Pirate party movement used a 'Liquid Feedback' platform from 2010–2017 for a real-world experiment with liquid democracy (Paulin, 2020, Halpern et al. 2023)
- Open-source software such as DemocracyOS, pol.is or Decidim enable participatory democracy, testing elements of liquid democracy for public deliberation.
- With the development of AI, new opportunities for liquid democracy may emerge, not only through technological solutions, but by strengthening citizens' ability to make informed choices and participate more meaningfully in direct democracy (Summerfield, 2024, Schiener, 2015)

POSSIBLE PATHWAYS OF DEVELOPMENT

The possibility to implement liquid democracy including AI support seemed to evoke more challenges than opportunities in the future along with more possible negative outcomes than positive ones, mainly due to either technological or human shortcomings.

Liquid democracy relies on **trust –** in technology and people – as well as **knowledge** and skills. It also requests people to understand issues on the one hand and people to whom to delegate votes on the other hand but, if working well, it can result in localized hubs of engagement and in more **direct political participation** as well as better social cohesion.

However, it can also aggravate issues of 'diploma democracy' and reinforce inequalities, due to a widening gap between the tech-savvy experts who would amass influence, and those who do not have the skills nor the motivation to actively participate.

Even though more direct democracy could lead to a stable technocracy and more social cohesion, it could also result in populism and **polarization** if the system empowers influencers and permits corruption. This could result in economic instability and unpredictability, potentially leading to the formation of new political parties.

Alternatively, technological challenges would hinder direct democracy from the beginning, as the system would be vulnerable to **cyberattacks**, **big tech** dominance therefore leading to incoherence in decision-making processes. While AI could provide new economic opportunities or incentives for the institutions to modernize, its widespread use may put in question political accountability and decrease people's interest and involvement in politics, even though it could help solve previously intractable problems.

These uncertainties would lead to possible foreign interference, manipulation and even emergence of authoritarian regimes. Ultimately, the system could undermine itself as the citizens would give up their agency in exchange for more security and voting systems would repeatedly be shut down due to some emergency situations.

Table 6: Opportunities and risks of liquid democracy supported by AI

OPPORTUNITIES	RISKS
If liquid democracy systems could be effectively implemented without technical difficulties, there could be various opportunities: • **participation and representation** of minority groups would improve (but not necessarily their actual power to affect change) • feelings of **political efficacy** and involvement would increase for citizens who actively participate • AI could assist in enabling more direct political participation • social cohesion could improve due to better **understanding** of different social groups' needs. The requirement for high **transparency** (of policy objectives, of scientific evidence, of delegates' values and voting results) could entail increase in people's **trust** in policymaking. The increased focus on cybersecurity and functionality of the voting (and AI) systems could bring new **economic opportunities**, with massive investments in development of digital technologies, systems and standards.	Risks brought by liquid democracy are mainly divided in two groups – 1) those related to technology and 2) those related to the use of technology by humans. 1) **Dependency of the system on technology** means that it would be vulnerable to cyberattacks and foreign hostile **interference**, and on the other hand, exposed to the dominance and possible manipulation of large tech companies. The heavy reliance on technology and AI may **negatively affect climate** (disproportionate use of minerals and water resources). Vulnerability of tech systems may lead to inability to operationalize processes and decisions, ending in **chaos** and legal incoherences. It could also result in **bureaucracy** amassing power due to lack of expertise elsewhere. 2) Due to inherent **complexities** in the system (number of delegates, voting decisions, information on policies), there is a risk that people have no time or energy to invest in it and get manipulated by technocrats, influencers or autocrats. Political **manipulation** would result in social fragmentation and the **loss of trus**t in key institutions, media, government and parties. **Populism** resulting from empowered celebrities could exacerbate polarization and social **inequalities**.

Source: Authors

EMERGING KEY QUESTIONS

- At which **levels of decision-making** would it make most sense to enable people to vote directly or engage in deliberations?
- Does the EU **have digital infrastructure** that could support more direct participation of citizens at all levels of decision-making?
- How **vulnerable** to external (and internal) interferences is the EU digital infrastructure and how could cybersecurity be better enforced?
- Could a system alike liquid democracy foster social **inclusion,** or would it widen the **digital gap** and inequalities?
- Do **citizens** want more direct involvement in decision-making processes, or do they prefer others taking decisions for them?

3.3. Challenge: The impact of AI on democracy

3.3.1. Emerging issue 1: AI as a facilitator of political deliberations

AI is more and more used to facilitate private and public interactions on politics and deliberations processes. AI interventions and applications could be used to build consensus in political debates and change people's beliefs, to match people with opposing views or to facilitate large-scale consensus-building.

Box 7: Signs of new for AI as a facilitator of political deliberations (Annex 1, 6.3.1.).

- A Dutch app called Bubble Chat anonymously matches users with opposing political views, aiming to break echo chambers and facilitate discussions on hot-button topics (den Toom, 2023).
- AI evidence-based interventions in divisive online political conversations can improve the quality of the debate and help groups reach consensus without changing participants' policy positions (Argyla et al., 2023; Tessler et al., 2024).).
- AI-powered dialogues can reduce people's belief in conspiracy theories by engaging them in personalised, evidence-based conversations that challenge their views and lead to long-term changes in their beliefs (Costello et al. 2024).
- A Taiwanese state-owned AI-powered platform facilitates large-scale citizen consultations and consensus-building on national issues, achieving notable successes in crowdsourced legislation and policy-making (vTaiwan, 2023; Polis, 2025).

POSSIBLE PATHWAYS OF DEVELOPMENT

Use of AI-supported applications to facilitate political deliberations and decision-making can have both positive and negative effects on people's trust in technology, as well as on the social relationships and cohesion, depending on **how this technology is used**. In a first instance, it can create mistrust or disengagement of people not able to use this technology, or it can improve social cohesion and understanding if used in physical deliberations with broad representation of social groups.

A positive storyline that emerged from the futures wheel looks at the potential of the AI apps to grasp the political complexity of **large-scale deliberations** and transform it into useful **inputs for policymaking**. This could happen if there is effective outreach to citizens, **relevant issues** are selected and deliberation processes become part of local politics. To get quality inputs for policy and build public trust, the AI tools would have to be **co-created** with citizens and **publicly owned**, same as infrastructure and data used. This would produce shifts in the roles of experts, policymakers and citizens, with more direct contact and understanding of different viewpoints. If AI bias could be countered, the multitude of views gathered from the citizens would **improve policies, making them more flexible and responsive** to specific minorities, place-based needs, etc.

In case the use of AI tools reinforced governments' **dependency on tech companies**, this would result in a negative spiral of corporate manipulation and 'take-over'. For example, lack of data protection could lead to companies using data to influence and **manipulate policies**, and possible (external or internal) interferences into the AI tools could distort the results of public deliberations. Possible **corruption and concentration of power** in the hands of tech companies, including

media and infrastructure, may result in exacerbated social and economic inequalities and, eventually, social tensions.

Table 7: Opportunities and risks of AI as a facilitator of political deliberations

OPPORTUNITIES	RISKS
• AI can **facilitate online deliberation and crowdsourcing**, including the use of digital platforms and tools to facilitate democratic processes, such as online voting and citizen engagement platforms. This can enable citizens to contribute to policy development and decision-making in a more direct and meaningful way. It can also facilitate more efficient feedback loops between citizen deliberations and policymaking outcomes. • The use of AI can support the development of more **inclusive and participatory political processes**, such as participatory budgeting and sortition, which can increase citizen engagement and representation. AI can improve access to these processes for people with disabilities, lower skills, etc. promoting a more informed public debate through diverse perspectives and opinions. • AI can **help to detect and mitigate disinformation and hate speech** in political interactions, creating a safer and more respectful online environment for citizens to engage with each other and with politicians. It can promote critical thinking and media literacy among citizens, enabling a more informed public debate.	• The use of AI can lead to **echo chambers** and **filter bubbles**, where citizens are only exposed to information and perspectives that reinforce their existing views, rather than being encouraged to engage with opposing viewpoints. If no space is ensured for exchange with other groups, this could potentially lead to polarization and social unrest. • The reliance on AI can lead to a **decline in face-to-face interaction** between politicians and citizens, with a negative impact on civic engagement. • A decline in personal interactions could make citizens increasingly skeptical of the role of AI in shaping political decisions and outcomes, potentially **eroding the quality of democratic discourse** and decision-making, as well as the trust in democratic institutions. • The use of AI may increase manipulation by malicious actors, as well as the vulnerability to **cyber-attacks and data breaches**. This can potentially increase disinformation, as well as compromise security and confidentiality of citizens' data and undermine the reliability of technology used in democratic processes.

Source: Authors

EMERGING KEY QUESTIONS

- How can the EU take advantage of AI to **foster citizen engagement** in decision-making processes?
- Can the EU use AI to identify and **address biases in political decision-making** processes?
- How can the EU **prevent the amplification of disinformation** through AI-powered social media?
- How can the EU balance AI-driven efficiency in decision-making and **human oversight**?
- Can AI exacerbate **social and economic inequalities** in democratic participation?
- To which extent can the EU rely on AI to **analyse and interpret public opinion** data in EU decision-making?

3.3.2. Emerging issue: AI changing the politicians-citizens interface of elections

People could use AI applications to help them decide for whom to vote, while politicians could use AI twins to set their agendas and interact with voters. In both cases, the involved actors outsource choices to AI tools, forgoing part of their agency.

Box 8: Signs of new for AI changing the politicians-citizens interface of elections (Annex 1, 6.3.2.).

- In 2019 an AI-powered chatbot named SAM ran for Auckland mayor, demonstrating the potential of AI to engage voters and transform political representation (New Zealand Government, 2025).
- In 2024 in UK a candidate to the General Elections planned to use an AI alter ego as co-pilot to engage voters and adjust his policies declaring himself a physical vessel to AI directions (Yang & Hamamdjian, 2024; First Post, 2024).
- From "machine buying" to "machine voting": personal AI assistants could make voting decisions on behalf of individuals, based on learned personal preferences (Rand, 2024).
- In the 2020 and 2024 US elections, the AI-powered app "iSideWith" used machine learning to match users with candidates based on their policy preferences (iSideWith, 2025).
- VoterCat, a gamification app, aims to increase voter engagement by turning voting planning into a rewarding adventure, exploring the potential of game mechanics to boost electoral participation (Lu, 2025).

POSSIBLE PATHWAYS OF DEVELOPMENT

The integration of AI in the politicians-citizens' interface of elections could have far-reaching consequences. Initially, it may lead to a deeper **personalisation** of political interaction, increasing citizen involvement, particularly among **young** people and historically **disenfranchised** demographic groups. This could facilitate more direct democracy, empowering citizens to participate in the decision-making process through collective intelligence **decision-making platforms**. However, concerns about **privacy risks**, **power imbalances**, and **people unprepared** for the future implications of these changes may arise.

As AI becomes more prevalent in politics, there may be an increase in **transparency**, with AI-powered systems providing citizens with more accessible and understandable information about government decisions and actions. This could enable democratic institutions to better **respond to citizens' needs**, leading to more **effective governance**.

The use of AI could also lead to more efficient and responsive governance. AI-supported engagement could foster a new generation of active citizens, with transformative IT systems facilitating large-scale decision-making and understanding of needs, leading to more **resilient and inclusive governance**. The representation of nature and the environment by AI could become a novel approach to addressing ecological challenges.

However, the emergence of automated deliberative representatives and the rise of techno-AI governance could fundamentally **alter the role** of human politicians, potentially leading to a decline in party membership and a **reduced importance of traditional politics** and political parties.

On the negative side, the increased reliance on AI could lead to the end of democratic institutions as we know them, resulting in a "zombie society" characterized by **citizens' apathy and a lack of**

engagement. Personalisation of political interactions could become a tool for **control and manipulation**, rather than empowerment, leading to increased cyber risks of profound interferences or support for **autocratic states**.

Ultimately, the consequences of AI in elections will depend on how these technologies are designed, implemented and regulated.

Table 8: Opportunities and risks of AI changing the politicians-citizens interface of elections

OPPORTUNITIES	RISKS
• AI can enhance the **personalization of political communication**, allowing politicians to tailor their messages and policies to the **specific needs and concerns of individual citizens**. • The use of AI can improve the efficiency of the politician-citizen interface, enabling politicians to **respond more quickly and effectively** to citizen inquiries and concerns. • AI can facilitate the analysis of large datasets on citizen opinions and preferences, providing more **accurate and nuanced representation of citizens' views** and allowing politicians to make more informed decisions and develop **more effective policies**. • AI can facilitate more effective mechanisms for citizens to **hold their representatives accountable** and provide feedback.	• The use of AI can lead to a **lack of transparency in the politician-citizen interface**, making it difficult for citizens to understand how their data is being used and how AI-driven decisions are being made. Consequently, this might lead to surveillance of citizens and **abuse of power,** which is a direct **threat to civil freedoms and rights**. • AI can **amplify biases and discrimination** in political interactions, particularly if AI systems are designed and deployed in ways that perpetuate existing social and economic inequalities. The use of AI can also **widen the gap** between those who have access to technology and those who do not. • The use of AI can lead to **manipulation of public opinion** through targeted propaganda and biased information, potentially influencing election outcomes and **undermining the democratic process**. • AI can **exacerbate existing power imbalances** in the politician-citizen interface, allowing politicians to use AI to manipulate public opinion and **influence election outcomes**.

Source: Authors

EMERGING KEY QUESTIONS

- How can we ensure **secure, accountable and transparent use** of AI in election systems?
- What measures can the EU take to prevent AI-**driven disinformation and propaganda** in elections?
- What guidelines should be established for the use of AI in election **forecasting & polling**?
- How can the EU ensure transparency and accountability in AI-driven **personalised political advertising**?
- How can the EU ensure that AI-supported voting systems are **accessible and usable for all** citizens?
- How to ensure that AI systems **support human decision-making** rather than replace it?

3.3.3. Emerging issue 3: Human agency over AI and algorithms

Some people try to reduce, avoid or influence the negative impacts of AI and algorithms on our daily lives. These include developing tools and applications to break algorithmic biases and debunk dis- and misinformation, as well as ways of limiting exposure to AI.

Box 9: Signs of new for human agency over AI and algorithms (Annex 1, 6.3.3.).

- Companies distribute AI-generated images of diverse humans to break algorithmic bias (The Absolut Company International, 2025).
- Emergence of AI-powered fact-checking tools (Richmond, 2024).
- Studies propose new ways of depolarizing and moderating social media with the support of AI tools (IE University, 2024; Ramaciotti, 2024).
- Rise of research on debiasing (visual) LLM's (Lin et al., 2024; Yogarajan, Dobbie & Keegan, 2025).
- 'Spot disinformation' - influencers guide people in recognizing and protecting themselves against misinformation (Clarke, 2026; Silva, 2021; Hellerstein, 2021).
- Growing interest in and implementation of smartphone bans for youth (Aernoudt, 2024; Boran, 2024; Chadwick, 2024; Haidt, 2024; Odgers, 2024; Ritchie, 2024; Stechyson & Fraser, 2024).
- Gen Z is buying 'dumbphones' to limit screen time (Puju, 2024).
- New applications for embedding 'poison' into digital copyrighted pieces are emerging, to corrupt AI copies and prevent copyright abuse by AI companies (Irving, 2024).
- The Calm tech Institute introduces new certificate that serves as a seal of approval for tech products that respect people's time, attention and humanity den Toom, 2024).

POSSIBLE PATHWAYS OF DEVELOPMENT

The uptake of ways in which humans try to reclaim agency over the impact of algorithms on their lives could send us down a couple of pathways. People could leave their digital devices in favor of analogue alternatives, although this was generally deemed a less plausible option. If this happens, it would probably be a minority of people, who could become isolated. On the other hand, reclaimed agency could lead to more uptake of algorithm-driven digital technology, specifically AI.

Following this, two possible future directions emerge: one where more AI adoption exacerbates existing problems like polarization, exclusion, and power concentration, leading to a more divided and unstable world, and another where AI is harnessed to promote democratic dialogue, economic growth and social cohesion, resulting in higher living standards and a more equitable society.

The pathways towards these outcomes are closely intertwined, with increased AI adoption and the establishment of a regulatory framework being key milestones towards both. However, the quality and context of these regulations are crucial in determining which path is taken. A **"good" regulatory framework** – made with genuine **public interest** in mind and characterized by **adaptability** to changing conditions and a **robust implementation & compliance plan** – could lead to more favourable outcomes. A "bad" framework is driven by geopolitical & economic competition, lacks adaptability and leaves the door open for power concentration which can lead to increased surveillance and tech-autocracy.

Ultimately, the development of a regulatory framework that **prioritizes safe and responsible AI adoption** and is supported by AI literate policymakers, diverse and socially aware AI development

teams, good business incentives, and high-quality data, is essential for creating a future where AI enhances economic wealth and living standards, rather than exacerbates inequalities.

Table 9: Opportunities and risks of human agency over AI and algorithms

OPPORTUNITIES	RISKS
A strong, clear and adaptable regulatory framework made with genuine public interest in mind could: • create a clear business environment • create incentives for the development of responsible, trustworthy and local AI systems • boost adoption of responsible AI, stimulating (social) innovation and leading to higher efficiency and innovative solutions • ensure strong data-protection for citizens and businesses • leave us less vulnerable when conditions change **AI literate policymakers** would enhance the chance of developing 'good' frameworks which would hold as **prerequisites**: • EU based development teams • Diverse development teams with high social awareness • Alignment with societal goals and values • Transparent development processes • Participatory development processes Adoption of trustworthy AI systems could lead to **higher productivity, higher economic wellbeing and higher living standards.** • Trustworthy AI systems can help **facilitate healthy democratic dialogue and deliberation processes,** leading to less political or ideological gaps, less polarization and more societal cohesion.	**An imperfect regulatory framework could result in severe harm to democracy. Pitfalls to avoid:** • A regulatory framework mainly driven by economic & competitive motivations could entrench us in an AI arms race, that could lead to a lack of scrutiny or cautiousness • A strict regulatory framework could stifle business innovation • An unflexible regulatory framework could become outdated when conditions change • Uptake of AI adoption without proper protection measures for citizens and businesses could lead to increased surveillance • If not careful, regulations could enhance monopolization & power concentration Uneven AI-adoption could create a **'two-speed' society**, exacerbating existing inequalities**.** Disconnected groups' could become marginalized**,** while 'the right to disconnect' could become a privilege. Both could exacerbate existing inequalities. If citizens take matters into their own hands to protect themselves from the negative effects of algorithms, it may trigger a process of ***responsibilization***, where individuals are held responsible for their own protection and accountability shifts away from institutions.

Source: Authors

EMERGING KEY QUESTIONS

- What are the main **motivations** behind AI regulations?
- **How adaptable** are our regulatory frameworks to changing conditions? How adaptable is the **AI Act**?
- Do we have a strong enough **implementation plan** and effective **compliance measures**?
- How can we **incentivize business** to develop trustworthy, socially responsible and transparent AI? How can we **diversify AI development teams** so that there is **strong social awareness**?
- How can we make **EU policymakers more AI literate**?
- How can we **avoid uneven AI adoption** ('two speeds') across society or mitigate the **negative consequences** of uneven adoption?

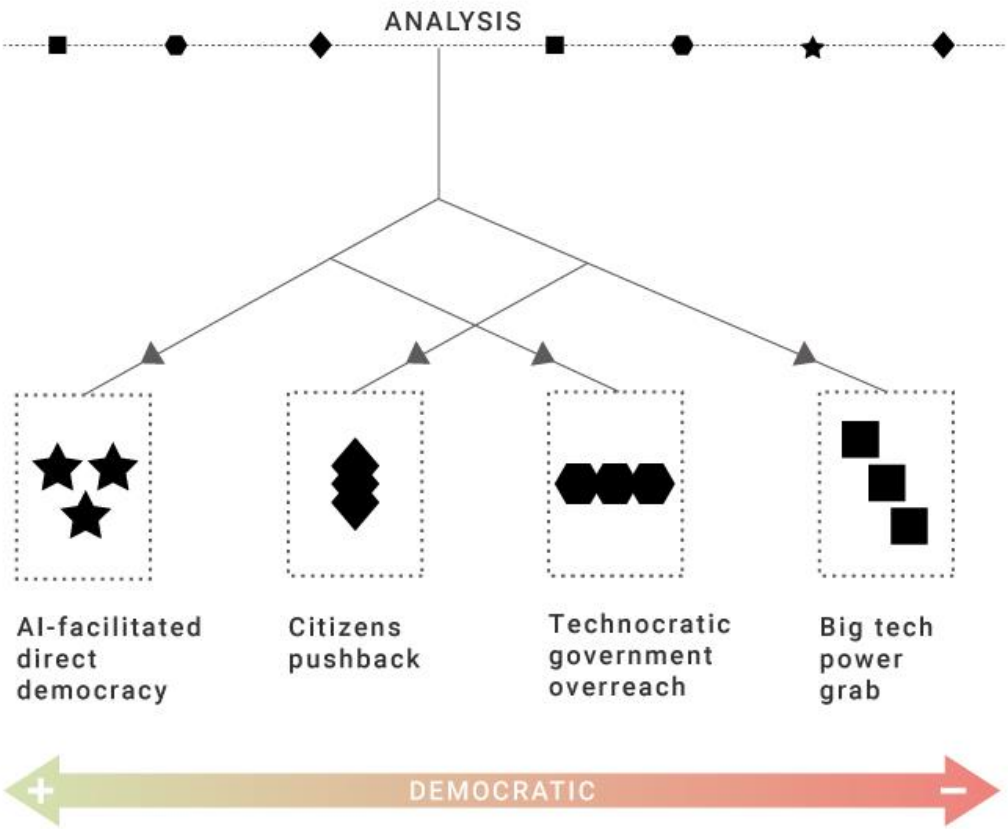
4. Four scenarios

4.1. Introduction

This section describes the four scenarios that were built based on the exploration of the emerging issues, through the use of futures wheels[6].

Whereas the outcomes of the futures wheels represent the different directions in which the single emerging issues could evolve, the scenarios are the result of combining all the outcomes into coherent narratives. Rather than having a specific topical focus, these scenarios depict concrete future worlds in which the possible outcomes of all the emerging issues are present and interconnected, creating a system-level image of possible societies.

Figure 8: Overview of the relations between the scenarios



Source: Authors

One scenario – '***AI facilitated direct democracy'*** – presents a society in which all these emerging issues reach their full potential to drive society towards an enhanced participatory democratic system, although not all aspects of this scenario are necessarily positive.

[6] For more detail on the process, see chapter 2.2. and figure 5.

The other scenarios, however, represent societies where the evolution of the emerging issues derails in one way or another. Each of these scenarios focusses on one main societal actor (or group) that changes the trajectory of democratic developments, putting them on a scale of more versus less democratic societies.

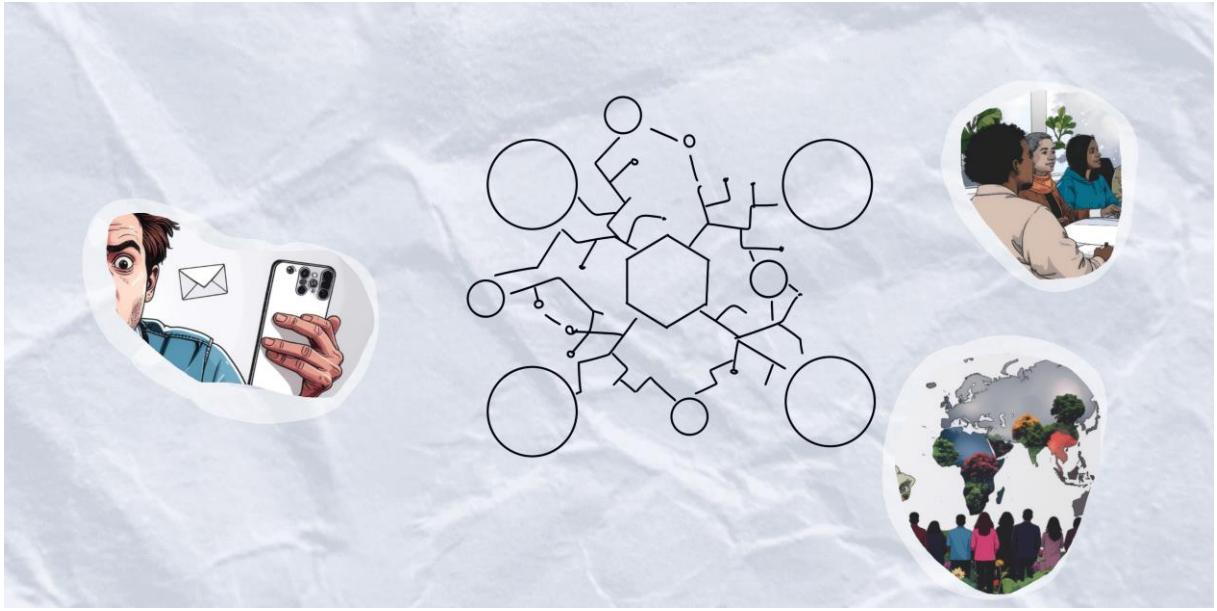
In the ***'Technocratic government overreach'*** scenario, it is the governments that influence the trajectory of the emerging issues away from direct democracy. This scenario presents an extreme evolution of the technocracy-related emerging issue and depicts how the other emerging issues could evolve under or contribute to such system.

The '***Big tech power grab'*** represents a scenario in which big tech companies take a stranglehold on society, not using technology for democratic practice, but quite the opposite. The emerging issues contradicting antidemocratic trends either do not come to fruition or are hijacked by private players to serve their own interests, driving European societies away from democracy.

Lastly, the ***'Citizen pushback'*** scenario represents an offshoot of the previous two, where a full-fledged corporate power grab or technocratic overreach is avoided due to timely and effective intervention of citizens and civil society, leading to a fragmented society trying to find its new footing.

These scenarios do not depict probable scenarios of possible future states of democracy. They should rather be considered as extremes, each highlighting far-reaching evolutions of certain societal changes with a focus on the role of specific societal actors in it (private tech companies, governments or citizens and civil society). They are meant to create awareness through comparison and contrast. Each scenario highlights its own unique opportunities for and risks to democracy.

4.2. Scenario 1: AI-facilitated direct democracy



In 2050, the European Union boasts a direct democracy system where citizens are key actors in policymaking, and sophisticated AI-powered technology runs the decision-making processes. The EU invested in co-creation of AI systems by researchers, entrepreneurs, policymakers and citizens, based on principles of transparency, accountability, and inclusivity. Human-centred AI technologies can now compile all the citizens' views and suggest optimal policy options based on the totality of votes. Citizen deliberation processes have been implemented at all levels of decision-making to counter some people's disengagement. While challenges remain, the EU's proactive approach to AI and digital governance has created a robust framework for addressing societal challenges and driving innovation.

4.2.1. How did we get there?

Direct democracy supported by AI In the EU of 2050, citizens are deeply involved in policymaking through a system supported by advanced, human-centred AI. It translates complex political messages into clearly defined issues, policy options and foreseen impacts. It also helps to continuously inform citizens and clarify policy decisions and outcomes of public consultations. Easily accessible on their personal wearables, people receive daily requests to vote on a plethora of policy issues. Everyone is allowed to 'customise' their voting profile by automating some issues, selecting personally relevant topics or delegating their votes to other citizens in line with their values. The AI aggregates large-scale citizen input and aims to ensure that minorities and disadvantaged groups are heard.

In-person deliberations strengthen social cohesion The system combines digital participation with in-person deliberations. New physical spaces and formats for meaningful, face-to-face discussions were developed during the 2030s, fostering social connection and strengthening local communities. This also improved mutual understanding among citizens themselves and with decisionmakers. New communication and citizen-policy dialogue interfaces emerged while political parties declined in relevance.

Synergies and integration This transformation was not accidental. It took decades of effort and vision from entrepreneurs, politicians, researchers and ordinary citizens, many of them wearing

multiple hats. One key turning point came in the mid-2020s when the EU focused on attracting innovators and investors from across the world to help rejuvenate its economy. The EU also invested heavily into cutting-edge digital expertise, sponsoring diverse teams of developers and entrepreneurs to bring EU AI technology to the global forefront. Involving citizens in co-creation of the publicly owned AI tools and infrastructure helped, on the one hand, to improve digital skills across the population and, on the other, to build trust in these AI systems. The onset of recurring climate disasters and the geopolitical insecurity prompted people to reevaluate the importance of social cohesion and seek it through renewed and more representative decision-making processes.

An EU value-based AI ecosystem Throughout the 2020s and 2030s, the EU reinforced its digital regulatory framework to stimulate development of responsible AI and its supporting infrastructure and expertise. This includes strong data protection and flexible legislation, which can be easily adjusted to the rapidly changing digital markets and context. A consolidated EU policy in 2030s offered business incentives to develop and exchange successful use-cases of human-centred AI. Transparent regulation and clear guidance for businesses led to better implementation and compliance measures.

Citizen participation and co-creation of democratic tools and processes A defining ingredient in developing an EU AI ecosystem was the active involvement of researchers, entrepreneurs, policymakers, and citizens, continuously collaborating on developing EU standardised AI models and locally tailored solutions. This ensured that high-quality data and fundamental EU values shaped the technologies in use. A comprehensive system to support citizen feedback and discussions on successes and failures was in place by the 2030s, to learn from the deliberation and decision-making processes.

The threats of climate disasters, tech misuse and social fragmentation loom Has everything worked out for the best? Not entirely. Climate change effects are becoming catastrophic, sparking critical debates about technology's and AI's environmental footprint. Used at this scale, the AI systems' glitches can cause serious disturbances in policymaking. Meanwhile, resource scarcity in the EU is taking a toll—not only on tech development but also on citizens' living standards.

4.2.2. A closer look at decision-making in this future

Citizen representation & participation

Citizens in this scenario have more opportunity to participate and make their voices heard. All citizens have access to the digital tools to vote and can participate to every decision, at least in theory. This, however, does not come without its challenges. Daily requests to vote can create a mental overload, pushing people to blind vote or delegate their right to vote, without much follow-up or concern for the outcomes. If participation is reduced to vote casting, this could derail policymaking, in theory based on public opinion but in reality influenced by the activity of the 'vocal class'.

To address the engagement gap between people intrinsically motivated to engage and those opting out, this system integrates in-person deliberations as its essential element. Schools and lifelong learning institutions have a huge role – on the one hand, to ensure digital literacy for all - and on the other, to instil democratic values and skills to inspire (not only) young people to engage actively in politics and develop emotional intelligence skills to engage in dialogue. Only with this knowledge and skills can citizens effectively engage in deliberations to feed the policymaking cycle and benefit from the AI-supported feedback loops. A challenge remains in achieving diverse representation that

truly reflects the society, but overall, these collective intelligence processes fuel better-informed policies, more connected citizens and transparent trade-offs. This can also contribute to reducing social inequalities.

Information & knowledge ecosystem

The information and knowledge ecosystem in this scenario relies on the AI developed in EU public-private partnerships and with the active participation of citizens. This constellation of actors ensures that the data and information provided by the EU digital media platforms is trusted. Information is gathered by AI from public institutions, academia, citizen deliberations, etc. with advanced quality check from experts. This allows greater exposure to a plurality of information sources and leads to better informed decisions by citizens.

The AI in this scenario has an important role in fuelling community learning through providing reliable non-biased data for citizen deliberations and voting. On the other hand, there is a continuous risk of exacerbating existing biases and inequalities if the fragile balance between all the actors is disturbed. Therefore, a huge focus is placed on detecting any bias in the algorithms to avoid for example people getting exposed only to information that confirms their opinions. Lifelong learning, and in particular digital citizenship programmes, are essential to equip everybody with skills to understand, participate and contribute to this multifaceted information and knowledge system.

Power relationships & resources

The classical democratic power relationships change in this scenario, as the roles of political parties and elected politicians diminish, while the power of citizens increases. Civil society organizations, media and experts also have a prominent role, formulating public opinions and informing citizens and governments.

The role of elected officials is transformed, focusing on communication and facilitation in a multilevel governance. Politicians moderate public debates, coordinate information for deliberations and the inputs into policymaking processes. They ensure transparency of policy decisions and feedback to citizens. As experts and media gain more power in managing the information in the AI-space, there is a tension regarding accountability and a temptation to shift responsibility for policy decisions from politicians towards citizens or experts.

EU's private sector, especially digital economy, holds the power in managing the key resource – AI and the supporting infrastructure, even though it is regulated and works mostly in partnership with governments. The concern always looms that the tech companies may not always align with public interests and EU values.

Governing procedures

The direct voting system reduces the need for elected representatives and representation bodies. As managing disagreements is an essential part of healthy democracies, there is a need for political arenas that allow these tensions to play out through debate and negotiations. Deliberative spaces are set up for those who are interested to engage in AI-supported and informed discussions.

There is a risk of perpetuating social inequalities and biases through AI-biased algorithms in the information and voting systems, so there is an effort to reach out and include people from different backgrounds. A system combining AI assessment and human assessment of quality and bias of

information is essential. The cutting-edge technology improves public services and attracts young digital natives to work in the digitalised public sector, helping boost policy effectiveness and citizen satisfaction.

Nevertheless, this scenario harbours risks to stability and predictability of the regulatory process and the policy systems, as votes may be called frequently on all kinds of policy issues, increasing complexity of legislation.

Global context

This scenario rests on the idea of a (direct) democracy being appealing and attracting IT experts, innovators and investors from other continents. A critical influx of democratic champions, innovators and investors could strengthen Europe's digital infrastructure and AI systems. A lack of strategic autonomy in digital technology would make the system very vulnerable to external influence. This is why the scenario rests on EU strategic autonomy in digital technology and AI.

4.2.3. A day in the life of… Tomáš Novák

***Age**: 70*
***Gender:** Male*
***Nationality:** Czech*
***Background:** Deputy Mayor of a mid-sized Czech city, EU Regional Council member, small business owner, and local brass-band conductor.*

Tomáš woke to the familiar sound of his favourite brass band tune. As the first light of dawn filtered through the curtains, he glanced at his wristband, which displayed a summary of the city's AI-aggregated policy priorities for the day. A reminder blinked: "Citizen deliberation on the city water reuse system at 10:00 a.m. Attendance required." He sighed. The AI system had flagged this issue as a high-priority topic for public consultation, but Tomáš remained sceptical about how well the algorithm could capture the nuances of local concerns.

After a quick breakfast with his wife, Tomáš left for the town hall, pausing on the way to chat with a group of elderly residents, many of whom confided their confusion about the AI-driven voting system. "There are so many requests, it makes my head spin", one man complained. "I voted against the insect factories yesterday, when will I see the decision?" a woman asked. Zee, a young activist, approached them to urge Tomáš to approve the launch of the new local "AI for Everyone" info desk—a grassroots effort to empower citizens to engage meaningfully.

At the deliberation session, Tomáš facilitated a discussion on the city water reuse, a system that was slow to take roots in his traditional community. The room buzzed with voices—some citizens called for latest purifying technologies, while others insisted on preserving the traditional waterpipes and only adding the necessary features. The AI system projected real-time sentiment analysis and policy simulations, but Tomáš still insisted on taking his own handwritten notes. "Technology can calculate outcomes, but only people can weigh values."

Later, at his bakery – a family business he had run for decades – Tomáš received a call from his EU Regional Council colleague László, who urged him to endorse a new AI tool for predicting citizen preferences. "It's efficient," he insisted, but Tomáš hesitated. László was a tech business representative in the Council, which made Tomáš doubt his motivations. Tomáš always prioritized efficiency, but he couldn't ignore the growing resistance from his constituents.

In the evening, the brass band's rehearsal awaited. Music had always been his refuge, a reminder of the human connections the AI systems often overlooked. His friends in the band teased him about his "old-school" methods, but Tomáš knew that trust in democracy couldn't be algorithmically optimized.

That night, as he reviewed the day's deliberation feedback, Tomáš added a handwritten annotation to the AI-generated report: "Inclusivity requires more than data—it demands empathy." He saved it, knowing it would be buried in the system's endless stream of optimized outputs. Yet, he also knew his small acts of resistance mattered.

4.2.4. Key insights from scenario 1

Many voices currently call for more active citizen participation in democratic processes and democratic innovations are being tested in numerous places. This scenario is a sneak peek into a democracy where citizen participation is enabled by technology and taken to an extreme, permitting to draw insights on essential prerequisites, opportunities and risks of citizens taking over policymaking procedures.

Possible requirements for direct democracy supported by AI:

- If a direct democracy should function in a fair and balanced way, the technology-driven information and voting systems need to be accompanied by active **in-person** debates and deliberations.
- Even if the role of elected politicians dwindles or transforms, a need may remain to have public personas with clear **accountability** for policy decisions, who also share responsibility for the oversight of AI-driven information with other experts.
- If decision-making should be supported by AI to make it more efficient and inclusive, the **AI infrastructure** and tools may need to be public or developed and owned in public-private partnerships.
- Researchers, entrepreneurs, policymakers, and citizens may need to continuously be **involved** in adapting EU standardised AI models and locally tailored solutions to ensure the AI systems are human-centred and more resilient to interferences.
- If citizen have direct access to policymaking, they will need to be **informed**, educated and incentivized to participate to their best ability. This includes transparent feedback loops on policy decisions, linked to outcomes of people's deliberations and votes.

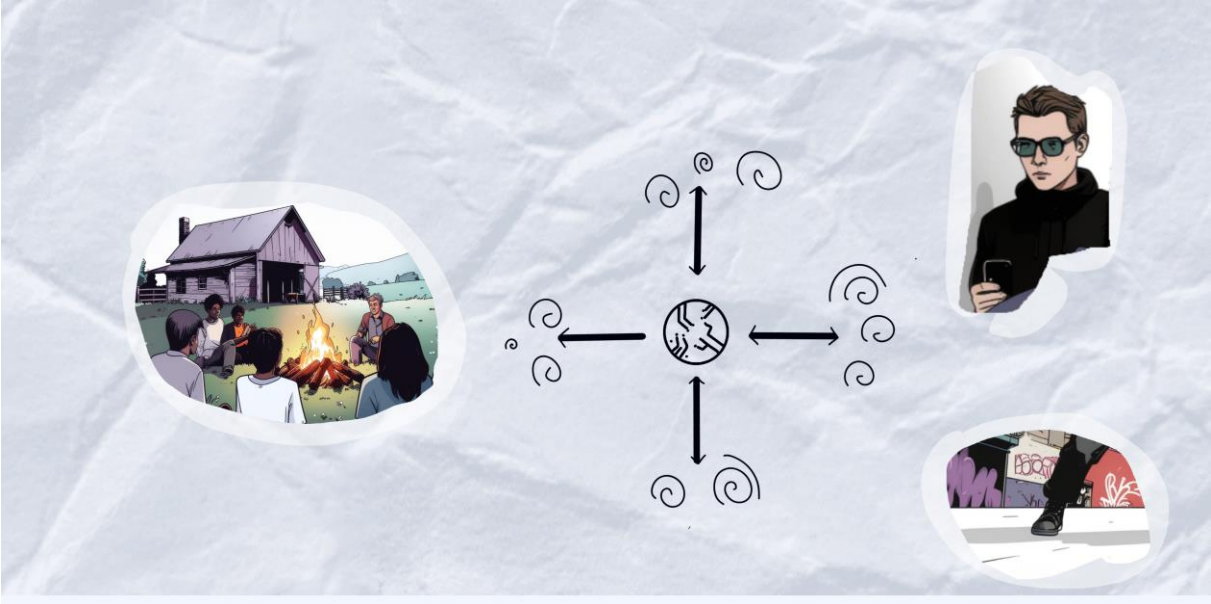
Opportunities brought by direct democracy supported by AI:

- If the constellation of above-mentioned conditions can be achieved, direct democracy has the potential to harvest relevant policy inputs from all the segments of society, eventually **improving policy quality and effectiveness**.
- Active citizen participation fostering mutual understanding and respect can also enhance **social cohesion**.

Risks of direct democracy supported by AI:

- AI-supported systems risk **exacerbating existing biases** and inequalities unless designed carefully, with continuous human oversight and specific outreach to minority social groups.
- Direct democracy can create **a gap between those that are intrinsically motivated to engage and those who opt out**, undermining the representativeness of the system. The gap may even lead to populist campaigns to engage the 'silent' citizens, manipulating the policy outcomes.
- The amount of voting requests could create **mental overload** and push people to **automatise** and delegate it, eventually causing detachment and alienation. If citizen participation is **reduced to vote casting**, this could derail policymaking, creating an illusion of public opinion based on the activity of the active few.

4.3. Scenario 2: Citizen Pushback



By 2050, growing control of digital infrastructure by big tech and opaque AI systems led to mistrust and exclusion of those rejecting technological dominance. As a result, democratic participation declined as citizens became disillusioned and disconnected from decision-making. Eventually a pushback against AI spurred the creation of off-grid communities and experiments in local, analogue governance. Acknowledging this change – governments started to seek to rebuild trust by promoting citizen dialogue, though fragmentation and security gaps emerged. Democracy has survived, yet its forms are inconsistent and contested: it is no longer a unified system, but an evolving set of practices, adapted to local values and shaped by collective struggles for trust, legitimacy, and meaning.

4.3.1. How did we get here?

The Emergence of a Digital Divide In the mid-2020s, control of big tech privately-owned corporations over digital infrastructure used for democratic processes expanded. In parallel there was an increase in synthetic (AI-generated) content, and a growing influence of AI over societies. The increasing complexity of opaque AI systems, often referred to as "black boxes," diminished transparency and accountability in crucial governance decisions. Altogether it led to the erosion of trust and the marginalization of certain groups of citizens that rejected the dominance of AI-tech. Moreover, unregulated technological development resulted in the depletion of already scarce energy resources and placed additional strain on already fragile ecosystems.

The Decline of Democratic Processes The dominance of tech corporations continued in the 2030s, and citizen disempowerment and disillusionment grew. Citizen participation in voting and deliberation declined, with citizens' input mainly used for the creation of 'synthetic populations' to drive policy decisions. Some individuals chose to opt out of the main big-tech-controlled channels, but this exclusion limited their access to information and further deepened existing socio-economic inequalities. This ultimately led to a significant disenfranchisement of citizens, as they withdrew from political processes feeling that their voices were no longer heard. Growing resentment and feelings of injustice took over, further exacerbated by unaffordability of urban life.

A Pushback Against AI and Digitalization In response to that situation, the end of 2030s saw a growing pushback against dominance of AI and the excessive digitalization of society, with citizens pushing for regulations on the non-use of AI and AI based software. Bottom-up resistance movements began to emerge as citizens organized protests and acts of civil disobedience. However, governments largely remained unresponsive, prioritizing the protection of big tech corporations' profitable interests over public concerns. Some citizens went further and reclaimed their autonomy, creating sustainable and affordable lifestyles through "off-grid" communities. This led to a revaluation of human activity and a renewed focus on local, analogue interactions, as people wanted to reconnect with their communities and respect nature. New business opportunities emerged, based on direct exchange of local products and services.

Reinventing Democracy and Community By mid-2040's, experimentation at the local level proliferated, including alternative forms of social organization and economic activity, such as locally organized social security, and the emergence of self-governed communities. Grassroots technology and open-source AI were developed as an alternative for digital tools dependent on big-tech corporations. Youth in particular felt that they should find ways to renew democracy, circumventing discredited political processes and institutions on state level.

State Response and Governance Changes at the same time, national level public authorities started to take note of these social developments and realized the need to re-engage with citizens and regain trust. There was a recognition that new forms of citizen engagement and dialogue were needed. The subsequent efforts brought youth and disengaged groups back closer to the political life. Yet, the proliferation of self-governed communities continued and as they grew in numbers, new challenges emerged, particularly in security. Rejection of state-controlled police resulted in clandestine armed groups organized by radical, fringed political movements. These actors remained potentially able to carry out violent activities if any of attempted reforms by the state would not serve their interests.

Challenges Remain In the 2050s, the efforts to regain trust in institutions and rebuild social capital led to governmental system changes, with policies focused on overall well-being and response to citizen needs. However, the decentralization that had taken root over previous decades resulted in profound fragmentation across the European Union, leaving some regions far more democratic than others. Centralized governance remained under constant pressure, with little prospect of achieving lasting political and social stability.

4.3.2. A closer look at decision-making in this future

Citizens' representation and participation

In the 2050s the formats of citizens' representation and participation are changing significantly. On the one hand, there are efforts being made to return to the representative democracy, with central, national governments. On the other hand, parallel efforts to further experiment with governance lead to the emergence of alternative decision-making systems. The new systems are being designed to be more accessible, allowing for greater participation from citizens.

The use of open-source AI systems is becoming more prevalent, supporting and facilitating deliberation by summarizing content and analysing contributions from participatory processes, all while ensuring that no automatic decisions are taken without human oversight. Yet, open-source AI, still lacking appropriate regulations, remains potentially disruptive, raising concerns about its further impact.

However, this shift is also highlighting issues of representation, particularly for groups that opted out or had never been particularly involved on digital platforms or using digital tools. On the other hand, digital tools are enabling disabled people to participate more effectively, given that these tools are being built around values of inclusion and diversity. Active citizenship – being part of advocacy groups, taking part in citizens deliberation formats - is mainly practised by those with the necessary resources (time, interest, sense of belonging, stake in the issue). 'Synthetic Populations' are in use but with improved predictive models to provide better representation. In general, there is more political engagement in local communities than on national or regional levels.

Information and knowledge ecosystem

The information and knowledge ecosystem is marked by independent journalism that provides people with access to variety of information. Some media outlets are adhering to high privacy standards – specifically keeping data of their users out of reach of big-tech corporations. These media outlets serve mainly the alternative local communities that have emerged during last decades, they evolve in parallel to local forums, based on open software. However, a communication divide exists between off-grid and on-grid communities as they have access (or lack of thereof) to different platforms and different sources of information. New rules are being established to restore the principles of independent journalism, such as avoiding clickbait, with a focus on local reporting.

There is a notable lack of trust in official government sources and large mainstream media, as they continue to support (in non-transparent way) the combined interests of big-tech companies and political groups collaborating with them. Independent news media are prevailing, but the choice between wide range of platforms (many more than we had in 2020s) leads to fragmentation and subjection of users to specific ideologies, influencing their decisions. As off-grid culture continues to develop, new, local institutions, such as educational ones, are being created, highlighting the need for wide, accessible knowledge distribution to support the pushback movement.

Power relationships and resources

Within state governments a new political class is emerging, with political elites (representing central governments) needing to become more open to grassroots leaders. Different political forces are reaching out for support from autonomous communities, new connections are established between state and alternative communities. However, reforms of the courts lag behind and they keep relying on automated decision-making, a situation that is being strongly criticized. Many alternative community formats reshuffle mainstream values, which in some cases lead to the emergence of new religious systems.

The rise of off-grid communities is partly a response to the unaffordability of urban lifestyles, seeking subsistence and regional economic sovereignty to allow local communities to thrive. This move towards self-sufficiency reflects a desire for autonomy, sustainability and equality. Still, economic divides persist between digitally connected and those without a strong digital presence. Communities of 'global citizens,' such as digital nomads, are interconnected but often politically inactive.

Governing procedures

Governing procedures are evolving, with regional government playing a more significant role in communities' lives. Community cohesion is being highly valued, with local resources of information being more trusted. This is leading to increased absenteeism and fragmentation of political

systems, resulting in unstable central governments and inconsistent policies. Communities are now more focused on participation, combining ideals and practices to create cohesive units.

Off-grid communities are created to certain extent when like-minded individuals find each other online and then take their communities offline, potentially leading to isolation. Many alternative governance formats are emerging, only to be quickly dissolve when they do not deliver on their promise. New participatory processes are being established spontaneously, but they often lack the democratic standards that would grant them legitimacy.

Global context

Foreign malicious actors exploit technological dominance to undermine democratic processes. One way chaos and conflict are sown within the EU is through the 'poisoning' of synthetic data, which distorts governance decisions. As a result, cybersecurity grows both more critical and more expensive. In parallel multinational tech firms leverage their power to collectively shape state policies in their favour. Countering these threats is becoming increasingly complex in a world where the concept of the nation-state is losing relevance. Cross-border collaboration among off-grid communities is flourishing, driven by shared philosophies that have become more meaningful than shared nationality.

4.3.3. A day in the life of... Zee Fischer

Age: *17*
Gender*: Unspecified*
Nationality*: German*
Background: *Secondary school student, EU youth delegate, Neuroatypical. They often find solace in nature walks and creative writing.*

It's a sunny morning in Zee's small rural settlement in Germany. As a 17-year-old secondary school student, Zee wakes up early to start their day. They begin by checking their personal assistant, which is powered by open-source AI, to see if there are any important updates or messages from their fellow EU delegates and community members. But as they scroll through their messages, they're shocked to see a warning from their AI assistant that their account has been compromised by malicious actors trying to manipulate the data. "What? How did this happen?" Zee exclaims, feeling a sense of dread.

After getting dressed, Zee heads to the construction site of a new local community centre. As they arrive at the meeting, they're greeted by a group of protesters who are opposed to the newest plans of expanding the community and receiving new members, voicing concerns that their fragile infrastructure is not ready for it. "This is crazy," one of Zee's friends whispers, "we've never seen anything like this before." Zee and their friends are taken aback and they are not sure how to respond.

Despite the challenges they face, Zee is involved in promoting social justice and is committed to being politically active. But as they all discuss plans for the upcoming EU youth conference, they all worry about the lack of resources and support for marginalized groups. "How are we going to make our voices heard?" Zee asks, feeling frustrated and uncertain. "We don't have the same access to funding and resources as other groups," one of their friends replies, "it's like we're being silenced." Zee nods in agreement.

During lunch (cabbage grown in the community garden, sprinkled with some mysterious spices brought by a friend from his last journey to the Zigranhelt city). Zee talks about their plan to study at the Zigranhelt University. There is no higher education available in their community. "I don't know how I'm going to afford this, the job market is quite tough right now, there are not that many jobs I could do" Zee says, feeling anxious about their future. “You still have 2 years to figure it out’, their friend reassures them. Zee sighs and starts listening to a chat about plans for the rest of the day: they all develop a project to create a cooperative community space, with access to healthcare and other essential services. It is going really well; they hope to finish it within 3 months.

As they work, María Lopez comes by to check how they are doing. She brings news about the rising divide between pro- and anti-AI groups, which caused a stir among community members. “They will come around”, María says, “we will discuss it until we come up with something that makes sense to all of us”.

As Zee heads home, they can't help but wonder what the future holds. Will they be able to find a way to make a living and pursue their passion? They feel there is so much more out there they could explore and learn from. This thought energises them, but also immediately makes them long for tight-knit community that they already have.

4.3.4. Key insights from scenario 2

The Emergence of New Social Structures

The emergence of new social structures, such as "off-grid" communities, presents both risks and opportunities. A key opportunity is the development of innovative, experimental, sustainable and more affordable ways of living, which could serve as models for the rest of society.

However, such communities could also risk becoming fragmented and isolated, as these communities may become disconnected from the broader social and economic systems. This is especially relevant for vulnerable groups, which rely more on public healthcare for example.

Alternative media and access to information

The distrust in mainstream media might present an opportunity for the revival of ethical journalism at a local scale, with new rules for restoring independent journalism, for example by banning clickbait. This could lead to a more informed and engaged citizenry.

However, the low access to off-grid communications and the divide between those who have access to information and those who do not poses a risk of exacerbating existing social and economic inequalities. Furthermore, the wide diversity of information platforms could lead to the spread of misinformation and propaganda, which poses a significant risk to social cohesion and stability.

The Role of AI in Shaping Citizen Decisions

The use of decentralized open-source AI may support and facilitate deliberation within bigger groups, which currently remains quite a big challenge. Participatory processes become more complex and more challenging to conduct the bigger the group of participants. AI could provide fast data processing, that would greatly improve the information analysis. Additionally, open-source AI could counteract the growing influence of big tech.

However, the use of alternative, open-source AI also presents risks, as regulation and controlled oversight is more challenging within decentralized communities.

The Decline of Traditional Governance Structures

The critic of representative governance structures presents opportunities for the development of new and innovative forms of governance, which could be more participatory, inclusive, and responsive to citizen needs. For example, the growth of regional governments and autonomous communities could lead to more localized decision-making, which could be better tailored to the needs of specific communities.

However, these alternative formats might also present significant risks, including the potential for fragmentation and inconsistency.

4.4. Scenario 3: Technocratic Governance Overreach

In 2050, the European Union stands transformed by decades of technocratic governance. In the pursuit of maximum efficiency and optimization, an overreliance on data- and AI-driven decision-making eroded traditional democratic checks and balances, opening the door to government overreach and potential abuse. As rising narratives of output-based political legitimacy overshadowed the importance of democratic procedures, the importance of political debates and parliaments diminished. Lulled by the perceived success of executive power, citizens and critical media disengaged. Power concentration into the hands of technocrats led to significant risks of oppression, highlighting the dangers of prioritizing efficiency over inclusivity and accountability.

4.4.1. How did we get here?

The early rise of technocracy - The shift towards technocracy began early in the millennium, but picked up during the late 2020s, as political fragmentation and declining trust in traditional institutions prompted the appointment of non-elected experts in executive governing functions across the EU during complex coalition formations. Citizens, weary of partisan gridlock, welcomed technocrats as neutral problem-solvers with essential knowledge. Rising inequality – reducing some groups' capacity to stand up against a changing system – and a lack of public critical awareness inadvertently enhanced the technocratic shift. Together with the rise of ubiquitous data-capturing technologies and AI tools, this model promised enhanced policy effectiveness and governance efficiency, initially leading to high public satisfaction. Businesses embraced the shift, as government efficiency provided clarity and faster market entry through streamlined regulations.

Positive reception and rising output-based legitimacy - Throughout the 2030s, the effectiveness of expert-driven and AI-supported governance initially led to growing support for scientists and experts being more closely involved in decision-making. However, the success of optimised governance also fostered a narrative of output-based legitimacy, where the results of policies took precedence over democratic procedures. This newfound efficiency captivated societies across the EU, leading many to overlook the importance of traditional democratic checks and balances. Lulled by the perceived success of executive power, the public's focus shifted away from the quality of democratic processes.

Changing knowledge and information sphere - As technocratic governance took hold, the changing knowledge and information sphere began to significantly influence society. The intertwining of scientific expertise with decision-making processes began to erode public trust in scientific institutions as neutral players, bolstering the impact of dis- and misinformation, and undermining informed discourse. Meanwhile, businesses faced challenges with increased government surveillance and regulatory scrutiny, creating tensions between compliance and the protection of privacy and intellectual properties.

Democratic erosion - The erosion of democracy became more evident by the 2040s. While the continuous reliance on expert advice subtly ensured that decisions were informed by robust data and scientific reasoning, it also led to elections and representative democracy being sidelined, as political parties started to completely rely on non-elected experts in during government formations. As the feeling grew that voting didn't really matter for political appointments and power concentrated in the hands of technocrats, citizens disengaged from politics. The decline of accountability and pluralism in decision-making further entrenched the influence of technocratic governance, exacerbated by the politicization of science and the erosion of trust in traditional sources of knowledge such as scientific institutions and public media.

Concentration of power and exacerbated inequalities - By 2050, the concentration of power in the hands of executive governments had deepened, ostensibly to enhance governance, but this also led to social division and the exclusion of marginalized groups, who were not always represented well in 'objective data'. The digital divide persisted – either through a lack of understanding and skills, resources to access, or intentional withdrawal - leaving some disconnected from the digital tools and systems of technocratic governance, exacerbating inequalities. Concerns over the erosion of democratic processes began to resonate within the business community, as governments' enhanced surveillance in combination with increased interference in business activities threatened entrepreneurial freedom.

Oppressive governance - The neglect of democratic checks and balances opened the door for government overreach and abuse. As the focus remained on policy outcomes, the erosion of civil society and representative democracy resulted in reduced accountability and a loss of pluralism. This centralization of power and lack of transparency led to a governance model that prioritized efficiency over inclusivity, posing significant risks of oppression and abuse in the future.

4.4.2. A closer look at decision-making in this future

Citizen representation & participation

Citizen representation and participation in this scenario are characterized by a lack of engagement and influence from citizens, with voting not making much of a difference as executives are increasingly non-elected individuals who are sensitive to electoral impulses. This leads to low participation and voter turnout. Elections are still organised but become less relevant, leaving citizens often entirely disengaged from the political process until something happens (e.g. crisis or scandal) for which they mobilize. The official participation mechanisms are not taken very seriously by governments, and citizen disengagement and apathy are prevalent. People still somewhat engage in deliberative processes, but these processes are generally facilitated through (AI-driven) technology, and the input is mainly used to generate synthetic populations for simulations, rather than direct democratic input. The input that people provide is just data, it is not really considered as direct democratic input anymore.

So, in this scenario, the lack of effective participation mechanisms, the instrumentalization of deliberation data for government goals, and the lack of transparency and accountability in decision-making could contribute to the disengagement of citizens. Additionally, further marginalization of some and the lack of representation of all exacerbate the issue.

Information & knowledge ecosystem

The information and knowledge ecosystem is marked by a lack of transparency, with one-way communication becoming the norm and political discussions dominated by allegedly 'value-free knowledge'. This leads to groups feeling patronized or overlooked, disengaging them from the political process. The levels of constitutional and effective freedom, such as media and academic freedom, determine how shared or fragmented the information sphere in a certain region or country is and how much misinformation is prevalent. Many official government channels serve as knowledge authorities, and AI-regulated systems are used to manage information, making it vulnerable to low quality data and unreliable algorithms.

In this scenario, experts can become intransigent and inflexible, and executive power instrumentalizes experts that reaffirm their preferences. A lack of transparency, the prevalence of misinformation, and the erosion of public trust in scientific institutions contribute to the disengagement of citizens and the concentration of power.

Power relationships & resources

This scenario poses severe risks of concentration of power in the hands of the executive branch, with other actors such as the judiciary, parliament, and media having limited clout. Expertise is a key resource, with lobbies and interest groups positioning themselves as providers of valuable know-how. The private sector is under strict regulation, particularly the tech industry, and 'hard' sciences are more influential than 'soft' sciences.

The check-and-balance-function of the judicial system dissolves by being populated with like-minded experts that allow the transfer of power to the executive level. Parliamentarians' relevance declines if they (silently) support/trust the technocratic power and get outclassed in levels of expertise, leading to the outsourcing of debate to the executive power. The loss of impact of elections leads to incoherent, non-ideological parties. All the above dynamics lead to an erosion of checks and balances, exacerbating concentration of power, potentially leading to the limitation of freedoms.

Governing procedures

A lack of pluralism and critical expertise in non-executive democratic institutions makes them less effective in safeguarding checks and balances, which leads to dwindling influence of democratic procedures. Technologically facilitated fast-tracked procedures and minimal consultation processes are prevalent. After a while, some procedures could even be formally terminated by a disproportionally powerful executive branch, leading to an increasing number of government functions being removed from democratic processes. Debriefs of executives in parliamentary committees are done perfunctorily, and expert tunnel vision increases the risk of policy mistakes. The lack of transparency and accountability in procedures, the reliance on technology, and the concentration of power contribute to the decreasing importance of democratic processes.

Global context

A plausible contextual driver towards this scenario would be a crisis that calls for expert advice in decisions, leading to a loss of directionality in policymaking and the delegation of decisions to

experts. Global relationships of these technocratic governments would be dominated by strategic alliances with similar regimes who hold similar values, goals, and interests. However, a results-based instrumentalization of global relationships opens the door for authoritarian regimes with similar interests to exert influence on domestic governance. A lack of strategic autonomy and the complexity of global relationships further contribute to the vulnerability of the system.

4.4.3. A day in the life of… Maria Lopez

***Age**: 62*
***Gender:** Woman*
***Nationality:** Spanish*
***Background:** Retired retail manager and former union organiser, experienced long-term unemployment and financial precarity, struggles with arthritis*

Maria woke up to the sound of her joints creaking in protest. Although her arthritis-ridden body protested her movements most days, the pursuit of her ideals kept her going, even after she had retired. As a former Spanish union organizer, she was driven to fight her country's technocratic government that opposed anything she ever stood for politically. Through her experience of long-term unemployment earlier in her life, she was deeply connected to the social cause and had always defended democracy and citizen participation, which over the last decade had been dissolved in the name of 'effective' policymaking. Now, she spent her days mobilizing citizens, leveraging her connections with the labour union and networks of activists to resist what they deemed an autocratic slide.

Yet today, while navigating the city on her way to an activist meeting, Maria couldn't help but ponder the tangible benefits of the technocratic government's policies. The efficient public services, well-maintained infrastructure, and robust welfare system had improved her own life, providing her with accessible healthcare, housing, and social welfare at a time of her life she desperately needed all of those. She was doing well, ironically perhaps even better than she would have with any truly democratic government. This dichotomy left Maria feeling torn, her core values at odds with her personal experience. She was living a paradox, caught between her desire for democracy and her appreciation for the practical benefits of the technocratic government.

During the meeting, she felt dissociated and shaky. As she was listening to Zee – a youth representative who was quite fierce - Maria felt uneasy. Zee was gaining popularity in several communities, but their demands didn't align with Maria's present-day needs. Suddenly Maria lashed out, questioning whether Zee wasn't too revolutionary with her ideals and had sufficiently considered the short-term needs of other social groups, such as the elderly. It was an unnecessarily sharp remark, and expectedly Zee retorted, saying that whatever short-term benefits this government brought didn't outweigh the long-term risks of democratic backslide and government overreach.

Ideologically, Maria agreed with this, but she was old and had very specific issues at this stage of her life. She could be content with any government that met her needs, without having to worry about the future too much. She wondered if Zee's long-term concerns were as real as her own present needs. Which should get priority?

Surprised by her faltering beliefs, on her way back home, Maria murmured to herself the words her late husband often used to say: *"the ends don't justify the means".* Was she compromising her values by accepting the advantages this system brought her? As she walked through the streets, Maria wondered what made her feel more like a hypocrite: that she enjoyed the benefits of a system she fought against, or that she was fighting a system from which she benefitted.

4.4.4. Key insights from scenario 3

As the idea of technocracy seems to gain popularity and non-elected technocrats increasingly hold office, exploring the potential benefits and drawbacks of a technocratic system becomes relevant.

While technocracy can mean many things, we explored a system in which non-elected experts increasingly take executive positions. Based on this scenario, such system could *in theory* function well without losing too many of the advantages of a democratic system, if certain conditions are met. If managed and implemented well, this type of technocracy might have the **potential to lead to more effective, expertise-driven governance**.

However, technocracy is a slippery slope, **potentially slowly dissolving democratic checks and balances**, as presented in the above scenario. If we keep moving towards having more non-elected executives in governance, we should **monitor and ensure the following conditions** for the other power branches (parliament, judiciary system, media, and academics):

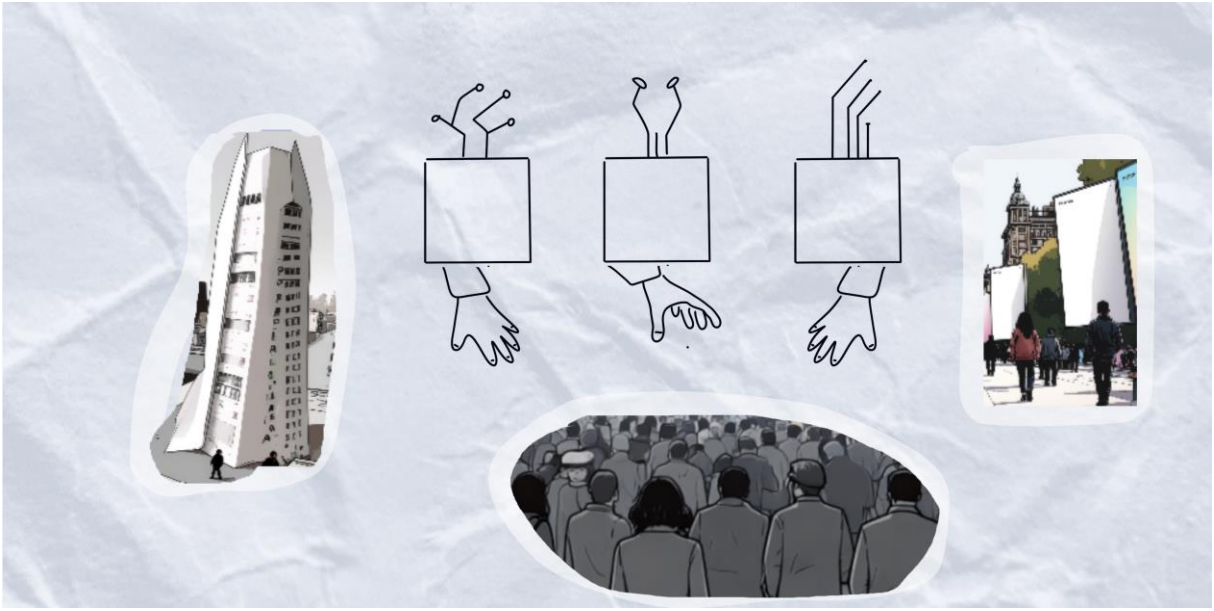
- formal conservation of freedoms and powers beyond the executive level
- high levels of independence are kept;
- high levels of expertise are present, that match or exceed the expertise of the executive power (to avoid overreliance);
- high levels of pluralism and diversity are present, to avoid mirroring the executive level's biases and blind spots;
- the preservation of deliberation- and public consultation processes, to serve as input to decision-making (AI-systems hold the potential to facilitate such processes);
- citizen input (either through direct elections or through deliberation processes that replace elections) is taken seriously, and democratic procedures to hold executive power accountable to that input are preserved;

Risks involved in not ensuring the above conditions in case of increasing technocratic appointments are:

- a loss of agency and influence of other power branches and institutions, leading to dissolving democratic procedures;
- an increased 'voting doesn't matter' sentiment among citizens, leading to political disengagement;
- power concentration and abuse in the face of eroding accountability of executives;
- decreasing trust in governance bodies, scientific institutions and experts;

Another specific risk uncovered by this scenario is that a political system that is over reliant on output-based legitimacy (political legitimacy based on policy outcomes) is vulnerable to shocks. This is because policy outcomes are susceptible to disturbance by external forces, and such disturbances can lead to political upheaval more quickly than they would in a system with more input-based legitimacy (political legitimacy based on how policy decisions are made). This undermines the ability to deliver results, leading to protests and contestation.

4.5. Scenario 4: Big Tech Power Grab



By the year 2050, the tech companies' relentless growth has led to the emergence of corporate states, where they wield unprecedented power and influence. The EU has been reformed to serve the interests of these corporate giants and citizens live in a total 'observation' state, where every aspect of their lives is anticipated, influenced, and monitored. They are trapped in a self-sustaining loop of consumption, with tech companies profiting from every transaction. The rise of algorithmic boosting and misinformation has eroded societal dialogue, favouring privileged groups and marginalising others. Resistance movements are emerging, using decentralised networks and encryption to fight back against the corporate states. The global order is in a state of flux, with traditional states resisting the international dominance of these tech companies which are for now collaborating for global dominance but also showing some signs of tensions over competition for resources and influence.

4.5.1. How did we get here?

Monopoly over the digital landscape – In the end of the 2020s, the tech industry begins to exert significant control over the global economy, with companies such as Alphabet, ByteDance or Meta wielding unprecedented influence in social media, online advertising, e-commerce, etc. Their global oligopoly over the digital landscape allows them to shape the flow of information and public discourse while the EU fails to enforce effective data protection and content moderation regulations.

Misinformation and erosion of societal dialogue – By the mid 2030's, traditional mainstream media have disappeared, each citizen now having their own personalised digital hubs. Citizens are exposed to widespread misinformation tailored to primarily boost their consumption and reinforce specific worldviews, damaging their trust in political authorities and eroding societal dialogue. Algorithmic boosting, by favoring individuals or groups with more influence or digital engagement and higher income creates a self-reinforcing cycle where marginalised groups are consistently overlooked and those already privileged can access more opportunities and resources. The algorithms, trained on biased data and perpetuating exclusion and marginalisation reinforce the rise of populism.

Populist states turn to tech companies – In parallel, financially drained governments struggle to maintain their legitimacy. Populism dominates the political landscape. Governments, to respond to their citizens' desires, turn to tech companies, seeking to leverage their vast repositories of data and advanced analytical tools. These tools, initially designed to help governments sense and poll their citizens' opinions, soon evolved into more comprehensive platforms that enabled governments to disseminate information and mobilize citizens. As the decade wears on, these platforms gradually become the entry point for digital governance, challenging the role of traditional assemblies under the fake promises of direct and more representative democracy.

Blurring of Public and Private Spheres At the start of the 2040's Governments were now completely dependent on the digital services provided by tech companies. In parallel, these tech companies began to buy significant amounts of state debt, effectively gaining control over the fiscal policies of EU member states. With their newfound financial leverage, they pushed their AI-run governance systems as a solution to the financial woes of the governments, touting them as more efficient and effective than traditional governance models thanks to their ability to track attention, transactions and communications. States were no longer able to act independently and a series of "Digital Governance Alliances" were concluded by the mid-2040's recognising the role of tech companies in shaping public policy and the decline of the public governance model.

Rise of Corporate States - By the late 2040s, the tech companies began to exert their influence over the physical world by acquiring or merging with non-digital industries and public services, such as healthcare, education, and energy. They implemented a total 'observation' state where every aspect of citizens' lives is anticipated, influenced and monitored while engaging in entertainment, leisure, and targeted welfare programs to prevent social unrest and violence. Citizens were given tokens redeemable in the tech companies' own trading systems creating a self-sustaining loop of consumption with the tech companies profiting from every transaction.

A new Global order – As the corporate states solidified their power, resistance and alternative movements emerged, using decentralised networks and encryption to fight back. By the 2050s, the EU, now irrelevant, is reformed to serve the tech companies' interests. The corporations collaborate to try and gain international recognition to reform global governance. However, their efforts are met with the resistance of better resisting states in other regions. A major transformation of the global order is underway, but the direction it will take remains uncertain; while tension grows between the tech companies, competing over resources and the extension of their spheres of influence, traditional states still hesitate to engage in overt conflict.

4.5.2. A closer look at decision-making in this future

Citizen representation & participation

Citizen representation and participation are severely limited. Corporations represent themselves locally, showing a human face to the system but decision-making procedures are commodified, becoming service-like, and are driven by corporate interests. A system of token-based governance (points earned and redeemable according to priorities) allows citizens to redeem tokens for goods and services within the corporate ecosystem but also to quantify and allocate their voting, weigh their public participation or prioritise public spending. While this system also provides a semblance of direct democracy, it is largely illusory, as tokens are distributed according to social scores (based on obedience, agreeability to others, level of consumption etc.) while consultation forums are curated and proposals and budget to vote for predetermined. In addition, the corporate states use advanced technologies to monitor and influence citizen behavior, further eroding the potential for

meaningful participation. The notion of citizenship is thus outdated, as citizens are reduced to being mere consumers, participating in the system through their consumption. A divide has emerged among citizens, between those who question this system and those who do not. Checks and balances are not ensured, and principles such as equality, non-discrimination, transparency, accountability, right to remedy, freedom of expression, freedom of assembly, and data protection is all relative and trumped by the 'consumer well-being'. Since everything is presented as tailored and individualised, the representation of minorities is no longer a topic either. Elites – as premimu consumers – have more influence in the policymaking and media while very local, non-formalised and grassroots-type civic spaces emerge as a response.

Information & knowledge ecosystem

The information and knowledge ecosystem is characterised by a media landscape fully controlled by corporations, with both social media and mass media being owned by big tech. Dissonant opinions are a threat which are dealt with by the widespread usage of 'social blacklisting', big tech platforms being able to 'hush' people or render contestation invisible. Poverty and other forms of marginalisation are portrayed as individual's fault. Online opinion polling is highly mediatised and portrayed as a democratic co-creation process while brainwave-enabled technology is on the rise, allowing for direct check-in to individuals' brains to know their preferences. Infomercials have blurred the frontier between information and advertisement, and a shared information sphere no longer exists; the information landscape is highly fragmented, with one unified public opinion being created by highly tailored algorithms. Indeed, access to knowledge and news is hyper-individualised without independent and unbiased fact-checking tools available. Data is used as currency and feeds a highly lucrative market based on profiling. The level of surveillance and data suction accepted by each citizen provides the latter with specific social scoring, benefits and levels of services.

Power relationships & resources

The corporate states have amassed vast amounts of wealth, which they use to maintain control over the economy and governance systems. They use their access to advanced technologies, including AI, neurosensors, and data analytics, to monitor and influence citizen behavior. The legislature and judiciaries are co-opted by corporate power, with no checks and balances in place, and people's access to justice is severely diminished. To maintain a facade of accountability, the corporate states have established a "Citizen Feedback System" that allows people to report any issues or concerns. This system is touted as a way for citizens to have their voices heard but is in reality a sophisticated tool for the corporate states to gather more data and refine their control over the population. Citizens who use the system are often rewarded with "Justice Coupons" or other token benefits, which can be redeemed for small rewards or discounts. This window dressing, designed to create the illusion of accountability and transparency maintains the corporate states' grip on power with citizens being largely powerless to challenge their authority.

Governing procedures

To maintain a veneer of democratic legitimacy, fake democratic processes are used, with opinion polls and referendums being highly visible and widely publicised. However, the ultimate decision-making power rests with corporate executives in foreign boardrooms, who make decisions without any genuine input from citizens. Local corporations' representations provide a human face to the system, but also serve as a means of ground observation, leading to the profiling of marginalized communities and groups. These groups are often criminalised, dragged into poverty or strongly encouraged to migrate, further entrenching the corporate states' control over the population. The

governing procedures are designed to maintain the corporate states' grip on power, while creating the illusion of citizen participation or rather the maximization of consumer's satisfaction.

Global context

The EU lags in wealth and is an exploited territory by foreign companies. The remaining nation-states are struggling to maintain their sovereignty and relevance in a world where they are no longer the dominant actors, and territorial revision is underway with borders being challenged by powerful corporations. While the rise of corporate states has led to a decline in innovation for domestic consumption products, a space race is accelerating between big tech companies, driven by the need for extra resources to fuel their systems. As a result, the global context is highly volatile, with the potential for conflict and instability looming large.

4.5.3. A day in the life of... Nyasha Dube

Age: 33
Gender: Woman
Nationality: Belgian-Zimbabwean
Background: Senior trust & safety manager for a major social platform in Europe, committed to tech justice, mentor of young women through decentralised learning and mother of three kids.

Nyasha woke up to the vibrations of her connected watch that quickly recapped her bioperformances of the night, underlining a rather high level of stress and awaiting her approval to deliver a light antianxiety smoothie at her office and schedule a relaxing gym class with her personal trainer for late afternoon. As she got dressed, she couldn't help but feel a sense of uneasiness towards her current job. On the one hand, she was proud of having landed a top job as a Senior Trust & Safety Manager for the leading platform in Belgium. On the other hand, after working there for already a few years, she was increasingly aware of the ways in which the company was manipulating people's opinions and using their data for its own gain.

As she walked into her office's elevator, Nyasha ran into her CEO László, visiting Belgium for a week as part of his annual round of EU mega branches. Laszlo was a friendly and sharp middle-aged man and after exchanging a few pleasantries about their daughters' newfound love for C-pop, he mentioned that he had carefully read her proposal on the review of algorithmic treatment of diversity and inclusion. He would take this up with the headquarters personally. Nyasha was sceptical of László's intentions, but she played along, knowing that it was important to maintain a good relationship with him and not make it into the infamous blocked-list. She seized the opportunity to deliver her carefully prepared speech, explaining that marginalised people were fat tails of the market and still inefficiently untapped: allowing them more engagement with the platform would allow for higher data collection on these atypical consumers' profiles, and better training of the AI models for cognitive readjustment. This last part she did not say, she did not need to, a sparkle in Laslo's eyes informed her he had already made this conclusion himself.

Later in the office, Nyasha received a report from her team, discussing the latest developments in the company's efforts to improve its trust and safety protocols. As she reviewed the email, Nyasha couldn't help but think about the implications of the company's actions on the broader social landscape. As the day wore on, Nyasha found herself wondering whether she could make a difference, or if she was just perpetuating a system designed to exploit and lull people. She thought about the activist movements she had been following on the encrypted subnet, slowly organising to fight against the tech companies' stranglehold on society. She had always been sympathetic to their cause, but now she felt a sense of urgency and wondered if her time to act had come.

As she left the office and walked home, Nyasha felt a sense of resolve. She had to take a stand, to use her knowledge and skills to stand up for her values. Maybe use her position to provide intelligence to these movements. She took off her watch, as she knew, thanks to her newly gained clearance level, that it could probably capture her neurosignals and detect some abnormal emotional and thinking processes. What she did not know was that her earbuds as well as the closest streetlamp had already filed in a report.

4.5.4. Key insights from scenario 4

As we consider the growing influence of tech companies in our lives, it is essential to be aware of the potential implications for individual well-being, fair competition and democracy itself.

Tech companies may be able to concentrate unprecedented economic and political power by controlling critical digital infrastructure and online markets. They are also increasingly diversifying into adjacent and unrelated sectors—such as finance, health or even the food sector. Their dominance enables them to threaten fair competition, reinforce consumer captivity, influence public discourse, shape the political agenda and challenge democratic processes. To mitigate these risks to democracy, **regulatory frameworks may need to intervene deeply in the economic sector** to enshrine strict separation of activities and protect fair competition by actively supporting smaller entities. For example:

- Structural separation and limitation to cross-sector expansion: often regarded as last resort remedy, regulatory powers may ensure that companies must choose between running a neutral digital market platform and selling their own products, not both. Similarly, these companies could be prohibited from expanding in other sectors to avoid leveraging dominance in one market to capture unrelated sectors.
- Recognising essential digital services—such as payments, cloud storage, identity verification, marketplaces and even social platforms —as critical infrastructure. Public authorities could take a more active economic role by funding or operating these services or supporting startups or cooperatives to allow the emergence of one or several EU champions in the field. This would provide viable alternatives to Big Tech dominance, safeguard fair competition, and help preserve democratic processes by ensuring open, transparent, and resilient digital systems.

Citizens have never been able to establish digital control of their personal data, often being unaware of how their data is being collected, used, shared and monetised. This results in erosion of privacy, manipulation, unequal access to services and threats to democratic processes. To mitigate these risks, **a more comprehensive and simplified regulatory framework may be needed to frame our approach to data and truly empower citizens to navigate their use**. For examples:

- data minimisation, anonymisation and criminalisation: data could undergo a simplified categorisation exercise whereby each item of data would either be authorised for collection (green data), tolerated with appropriate safeguards (orange data), tolerated if anonymised (red data) or illegal to collect (purple data). Corresponding educational activities, auditing services, deterrent criminal law and enforcement authorities would be set-up and implemented.
- data subject's rights, protection and monetisation: data produced by citizens could be declared private personal resources. Protection measures could be enforced to prevent the collection and exploitation of underaged individuals' data. Personal Data Management Platforms could provide user-friendly centralised hubs (including education resources) for citizens to manage their data, including a comprehensive data inventory, data control and permission management, monetisation aspects and secure data storage and encryption.

5. Conclusions

This foresight study on the future of democracy in the EU sought to unravel the intricate web of possibilities and challenges facing democratic governance. By focusing on three pivotal domains—artificial Intelligence, citizen engagement, and the quality of democratic processes and institutions—the study explored emerging issues and their potential to transform the current landscape. Utilizing the "dialectical waves of change" framework, the study engaged in forward-looking exercises, analysing emerging issues through participatory workshops with experts, developing "futures wheels" to discuss possible outcomes and key drivers of change**.**

Building on this comprehensive exploration, the foresight study distilled key questions for policymakers to help them navigate the evolving democratic landscapes, offering insights into emerging risks and opportunities.

Scenario building deepened and broadened this exploration. The scenarios, developed on the basis of futures wheels outputs in participatory workshops, provide additional layers of understanding, revealing the nuanced interplay between technology, socio-economic factors, and political dynamics. Through these scenarios the study offers a holistic perspective that not only encapsulates individual insights but also examines their interconnections, thereby enriching our understanding of potential democratic futures and the broader implications for policymaking.

The four scenarios - AI-Facilitated Direct Democracy, Citizen Pushback, Technocratic Government Overreach, and Big Tech Power Grab - depict potential paths, some aligning closely with current democratic practices, others diverging significantly and presenting radically different landscapes. Each scenario prompts reflection on opportunities to strengthen aspects of democratic governance and highlights risks that could lead to undesirable consequences. They also show the importance of considering wide and long-term possible consequences of emerging issues, beyond their initial appearances as purely positive or negative developments.

For instance, the emergence of new AI-tools and applications for large-scale deliberation presents a promising opportunity for enhancing democratic engagement. However, when explored in comprehensive scenarios, potential risks such as overreliance on these tools, concentrated control leading to abuse, or mental overload for citizens become apparent.

Conversely, the rising popularity and appointment of non-elected officials initially pose a challenge to democratic norms, yet if managed effectively, they may enhance policy effectiveness without sacrificing the traditional benefits of representative democracy.

However, it seemed necessary as a final step to zoom out from these findings scattered across the scenarios to assess whether common threads were surfacing. No matter how though-provoking scenarios can be, their crucial relevance appears only when we can bring back valid observations to work with. Multiple iterations of sense-making took place among the team– some of them assisted by AI tools – to find common overarching issues relevant for policymakers. This cross-cutting assessment revealed the centrality and ‘gravity’ of some core ideas that engage - as in a physical system – in a complex field of forces to stabilise in different equilibriums, some more precarious than others. These overarching tensions are presented as the main takeaways for policymakers, to be used as analytical lenses when designing new policies.

5.1. The role of technology in democratic transformation

Technological advancements, particularly AI, present significant opportunities to redefine democratic processes. In **AI-Facilitated Direct Democracy**, AI enhances inclusivity and representation by providing direct access to technology, compiling citizen views and suggesting policy options, making governance more accessible and transparent. This technological integration empowers citizens to influence policies more directly, offering a pathway to a more engaged electorate. Similarly, **Citizen Pushback** highlights the potential for grassroots movements to leverage technology in developing localized governance models. By creating self-governed communities supported by open-source AI tools, citizens reclaim agency, fostering democratic renewal and promoting community-driven practices. These movements provide a platform for citizens to explore new forms of governance that prioritize local values and better respond to citizen's needs.

However, these opportunities come with significant risks. In **AI-Facilitated Direct Democracy**, the integration of AI in governance risks creating mental overload for citizens due to constant demands for input, potentially reducing their engagement and leading to delegated or automated voting. This could derail policymaking, distorting the policy inputs, in theory based on public opinion but in reality influenced by algorithms or a few 'delegates', highlighting challenges to authentic participation (further discussed in Section 5.7). **Technocratic Government Overreach** illustrates how overreliance on data-driven governance can erode accountability and transparency, undermining the democratic process. Additionally, **Big Tech Power Grab** shows how tech companies can transform into corporate states, using technology to control political and economic systems, challenging state sovereignty and centralizing influence within corporate entities. Across scenarios, the shift from democratic input to mechanisms of control highlights the risk of technology undermining foundational democratic principles.

5.2. Concentration of power and its implications

The scenarios highlight the recurring theme of power concentration and its implications for democratic norms. In **Citizen Pushback**, power fragmentation through self-governed communities leads to decentralized governance models, offering opportunities for new forms of direct democratic governance (as detailed in Section 5.4). **AI-Facilitated Direct Democracy** incorporates two sides of the coin: egalitarian access to the policymaking processes that in theory allows equal influence of all citizens on decisions made, and an overarching AI-driven system that carries a risk of algorithm-driven policies, alienating citizens and undermining the democratic processes.

Conversely, power concentration poses significant risks across the other scenarios. In **Technocratic Government Overreach,** power concentrates within technocratic governance, reducing pluralism and dissolving clout of balancing powers, which enhances the risk of moving towards authoritarianism. **Big Tech Power Grab** presents tech giants wielding unprecedented influence, blurring public-private spheres and concentrating power within corporate entities, challenging traditional democratic structures. The scenarios underscore the need for robust checks and balances to prevent the erosion of democratic processes and to ensure power does not become overly centralized.

5.3. Balancing efficiency with citizens agency

Efficiency in governance is a valuable goal, and the scenarios present opportunities to achieve this while maintaining citizen agency. **AI-Facilitated Direct Democracy** combines direct citizen

participation in the AI-driven systems that provide efficient decision-making with in-person deliberations at local and regional levels. Meaningful, face-to-face discussions can foster citizen agency as well as social cohesion by improving mutual understanding among citizens themselves, and with local politicians. In the **Citizen Pushback scenario**, civic movements strive to reclaim agency through experimental forms of direct democracy, highlighting challenges in achieving authentic participation (as described in Section 5.7). This approach prioritizes inclusion over efficiency when efficiency is understood merely as the speed of resolving a local issue. Here, efficiency is redefined as a process that ensures all voices are heard and conflicting agendas are addressed from the outset. Such an inclusive approach is expected to lead to more robust, long-term solutions that are broadly accepted and implemented by the entire community.

The pursuit of efficiency must be balanced with preserving meaningful citizen agency, as evidenced by the risks across scenarios. **Technocratic Government Overreach** offers efficient services at first, but over-emphasizing output-based political legitimacy eventually leads to weakening checks and balances, disconnecting citizens from political appointments and decisions. **Big Tech Power Grab** commodifies participation through token-based governance, presenting a facade of democracy while reducing citizens to consumers, eroding their agency and influence in the political sphere. Ensuring participation is consequential rather than theatrical is key to preserving democratic legitimacy.

5.4. Emergence of alternative governance models

The emergence of self-governed communities presents an opportunity for democratic renewal, as illustrated in **Citizen Pushback**, where various groups experiment with governance models tailored to their local contexts and prevailing preferences. These models promote experimentation and adaptability, shaped by factors such as attitudes toward technology and local environmental conditions, enabling citizens to articulate and affirm their core values and needs. In **AI-Facilitated Direct Democracy**, technology enables direct democracy where citizens can instantly feed their views into the policy-making processes, getting feedback information on the policy implementation. This system removes the need for traditional political parties and decision-makers, transforming their role into that of facilitators of public debates.

However, alternative models also pose risks. **Technocratic Government Overreach** shows the risks involved in turning executive power over to technocrats less sensitive to election results. What seems like effective governance at first, risks turning into a model that could easily lead to overreach and abuse, as explained in Section 5.2, concerning concentrated power in technocratic governance. **Big Tech Power Grab** risks societal dialogue erosion, leading to personalized digital hubs and fragmented public opinion, challenging the ability to maintain cohesive governance structures. Balancing community autonomy with broader societal coordination is essential to prevent fragmentation from leading to exclusion and undermining democratic engagement.

5.5. Use of data in governance systems

Data-driven governance presents opportunities for enhancing democratic processes, as seen in **AI-Facilitated Direct Democracy**, where AI aggregates large-scale citizen input for optimized policymaking. Co-creating the AI system with researchers, entrepreneurs, policymakers, and citizens ensured that high-quality data and fundamental EU values shaped the technologies in use.

However, the transformation of data from democratic input to mechanisms of control and exclusion is a significant risk across scenarios. **Technocratic Government Overreach** uses citizen input to generate synthetic populations, instrumentalizing participation for government goals rather than genuine democratic input. **Big Tech Power Grab** commodifies citizen participation through token systems, reducing individuals to data points in corporate-controlled environments, eroding their agency and influence. In **Citizen Pushback**, citizens opt out of exploitative digital state systems, and seek alternative ways to engage creating autonomous communities. This allows them to explore new avenues for participation, based on open-source tech, respecting principles of secure and fair data-exchange. Safeguarding data integrity and citizen privacy is crucial to ensuring that data-driven governance enhances rather than undermines democratic processes.

5.6. Trust in information ecosystems

Trust is fundamental to democracy, and the scenarios present opportunities to rebuild and maintain it. **Citizen Pushback** sees the formation of off-grid communities aiming to rebuild trust through localized governance and direct, participatory practices. These movements highlight the potential for citizens to restore confidence in democratic processes by prioritizing transparency, inclusion and accountability in governance structures. In **AI-Facilitated Direct Democracy**, trust is built through in-person deliberations of citizens and local politicians who act as facilitators and mediators between the AI-supported system and citizens, ensuring feedback on citizens' inputs into the policy process and clarifying the decisions taken. A risk remains that algorithmic bias undermines the validity of AI-optimized outputs and potentially erodes public confidence.

However, trust erosion can pose a significant risk, as the scenarios illustrate. **Technocratic Government Overreach** reveals how declining trust in democratic processes can prompt technocratic shifts, casting further suspicion on and eroding confidence in traditional institutions over time. **Big Tech Power Grab** shows misinformation tailored for consumption damaging political trust and leaving fragmented information spheres vulnerable to manipulation, undermining the ability to maintain cohesive governance structures. Transparent, accountable information systems are necessary to restore and maintain public confidence in democratic processes.

5.7. Perceived representation and authentic participation

Ensuring authentic citizen participation is crucial to democratic legitimacy, and the scenarios present opportunities for achieving this. In **AI-Facilitated Direct Democracy**, citizens are deeply involved in policymaking through a system supported by advanced, human-centred AI. A challenge still remains to achieve diverse representation that truly reflects the society, as some citizens opt for automatization or delegation of their votes. **Citizen Pushback** envisions citizens reclaiming agency through self-governed communities, fostering genuine engagement and inclusive participation. This approach offers an alternative to top-down governance systems that have become increasingly disconnected from citizens' values and real needs.

However, the distinction between synthetic and authentic participation blurs across scenarios, posing significant risks. **Technocratic Government Overreach** and **Citizen Pushback** show that when participation is used for synthetic population creation, this can lead to disenfranchisement and withdrawal, undermining democratic engagement. **Big Tech Power Grab** provides token-based governance that offers semblance without substance, reducing citizenship to consumerism and eroding authentic participation. Ensuring genuine engagement and representation is essential to maintain democratic legitimacy and foster responsive governance structures.

5.8. Final reflection

By casting a light on these overarching tensions, future scenarios collectively illuminate the intricate relationships between technology, power, and citizenry, illustrating the complexity of democracy as a dynamic system influenced by diverse components. They invite us to consider how the interplay between technology, power, and citizenry can foster a democratic future that is resilient, inclusive, and responsive to the evolving needs of society.

To conclude, when facing obstacles, disruptions, or declines in democratic governance systems, we are dealing with layers of complexity that make it impossible to identify a single, straightforward solution. What initially appears to be a correct response often generates new and unforeseen problems. A simple cause-and-effect approach is therefore inadequate. Without understanding the multidimensional root causes, we are bound to address mostly the symptoms rather than the real underlying issues.

The challenge for policymakers lies in ensuring that democratic governance remains anchored in transparency, accountability, fairness and inclusivity, while adapting according to the potential offered by innovation.

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6. Annex 1. Full list of emerging issues and their signs of new

6.1. Challenge 1: Citizen support for democracy

Gaps in representation of various social groups (youth, women, ethnic minorities, people from rural areas, people experiencing poverty etc.) are widening and/or people are perceiving these gaps to be widening, leading to economic and cultural grievances. Citizens' trust in (political and academic) elites is declining. This drives a decline in citizens' support for democratic norms, processes and institutions.

Democratic innovations (citizens' assemblies, participatory budgeting, citizen-driven initiatives, etc.) to counter representational gaps are on the increase, but they're not taken up sufficiently yet and lack impact. Besides that, they lack full representation of all the groups of society, which presents a risk of widening the representation gaps even more.

6.1.1. Emerging issue 1: Shifting values, approaches and lifestyles among youth

We can see values, lifestyles and approaches shifting among certain youth groups, e.g. how they approach the work-life balance, minimalist lifestyles, virtual lifestyles (e.g. protests), quiet quitting, etc.

6.1.1.1. Signs pointing towards this emerging issue

A. New working time models

New ways of working - marked by digital transformation and remote work, more agile project-based approaches and changing attitudes towards work are leading to new working time models. There is growing interest in the individualization of working time, job-sharing arrangements (where two or more people share one full-time job), or life-phase oriented working time (changing depending on life phases). These are increasingly augmented with individualized career advice systems using machine learning to create personalized roadmaps of learning, resources, and work opportunities. Not only are the shape of life-long careers changing, with telework and flexible work, but the periods of productivity are also changing. Adding to the two typical work peaks for knowledge workers - just before and after lunch, a "third peak" has been noticed between 18h and 20h.

- Cohen, N. (22 April 2025). *Flexible Work Is Coming For Shift Jobs And Hourly Workers*. Forbes. https://www.forbes.com/sites/niritcohen/2025/04/09/flexible-work-is-coming-for-shift-jobs-and-hourly-workers/
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- Rosken, A. (Ed.) (2022). *Employability Revisited: Strengths- and Life-phase-oriented Human Resource Management.*. Springer Nature.

B. Passion economy

The great resignation, as well as the job losses due to COVID-19, fed the broader trend to search for fulfilment in the working life. Adam Davidson's 2020 book, The Passion Economy, suggests that through platforms and access to small niche markets, people can monetize their knowledge and skills in hobbies and passion projects as a main source of livelihood and an alternative to the gig economy. Taking on a passion-related 'side-gig' or a 'side-hustle' in addition to a full-time job is also becoming increasingly popular, as people experiment with other forms of gainful activities. This may require limiting engagement in one's full-time job or not going above and beyond at work and just meeting the job description, a phenomenon known as 'quiet quitting'.

- Amitabh, U. (15 February 2022). *How the passion economy is shaping the future of work*. World Economic Forum. http://weforum.org/stories/2022/02/how-the-passion-economy-is-shaping-the-future-of-work/
- Toresson, G.T. (8 August 2024). *Why It's The Decade Of The Passion Economy-Led Brands*. Forbes. https://www.forbes.com/sites/gustavlundbergtoresson/2024/08/08/why-its-the-decade-of-the-passion-economy-led-brands/
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- Formica, S. & Sfodera, F. (2022). The Great Resignation and Quiet Quitting paradigm shifts: An overview of current situation and future research directions. *Journal of Hospitality Marketing & Management, 31*(8), 899-907. https://doi.org/10.1080/19368623.2022.2136601
- Scheyett, A. (2023). Quiet Quitting. *Social Work, 68*(1), 5-7. https://doi.org/10.1093/sw/swac051

C. Silent citizenship

Although empowering and engaging citizens is seen as a key element to building more resilient and strong democracies, large parts of society do not actively participate in politics. Increasing attention is being paid to typologies of political absence and silence as political expression. Apart from involuntary or disempowered silence, there can also be strategic absence (boycotts or secessions from the political process), or strategic silence (silent protests, vigils, withholding verbal support, or recognition in indifference or anger). This communicative silence, which is a form of agency, can be considered as a basic element of democratic institutions. To cope with the absence of widespread citizen participation, radical improvements would be required of representation institutions, where representatives bear full responsibility for fair outcomes and improving lives of citizens.

- Gest, J. & Gray, S. (2017). Silent Citizenship: The Politics of Marginality in Unequal Democracies. *Citizenship Studies, 19*(5), 465-473. https://doi.org/10.1080/13621025.2015.1074344

D. Young people's professional priorities changing

Young people across Europe are quitting their jobs, which is becoming one of the biggest barriers to addressing the skills shortage for companies, according to a new report. New figures reveal how 60% of talent managers say the trend of younger workers quitting, and their struggles to attract new hires with the right skills, means they cannot fill their open positions with skilled workers. Furthermore, younger people are not aspiring to become managers. There was a time when the title 'manager' meant prestige, respect, maybe even admiration - a chance to lead, a pathway to the top. But that dynamic has been shifting for decades and can now feel out of touch and out of date. In China, posts about resignation have been spreading on Chinese social media since 2023. Most of the people participating in the trend are in their 20s, citing various reasons for quitting, ranging from low wages to burnout, according to China's LinkedIn equivalent Maimai. It connects to the rising trend of 'tang ping' (*lying flat)* we've seen among Chinese youth the last couple of years, which can be seen as a rejection of Chinese youth to join the rat race.

- Euronews (23 October 2023). *Young people across Europe are quitting their jobs - and companies are struggling to fill the gaps*. Euronews. https://www.euronews.com/next/2023/10/23/young-people-across-europe-are-quitting-their-jobs-and-companies-are-struggling-to-fill-th
- Campbell, F. (2023). *Our 2023 Global State of Upskilling and Reskilling Report.* 360Learning. https://360learning.com/guide/2023-global-state-upskilling-and-reskilling-report/introduction/
- Davidovic, I. (16 February 2022). *'Lying flat': Why some Chinese are putting work second*. BBC News. https://www.bbc.com/news/business-60353916

E. Many young people are leaving cities

In places like Manchester, Liverpool, Leeds and London the share of the population aged between 18 and 34 has been shrinking, while a recent poll found that almost half of 18 to 24-year-olds living in London plan to leave within the next ten years. It's not a trend confined to the UK, either: in China, droves of young people are moving to remote areas and embracing 'hermit living', while Gen Z Americans are also relocating to the Great Plains and Mountain West in search of a simpler life. "The rising cost of rent is the main reason many young people want to leave London and other larger cities," explains Conor O'Shea, Policy and Public Affairs Manager at Generation Rent. "The continuing increase in rental costs is putting real pressure on the finances of young renters, including limiting the ability to save for a mortgage deposit, and so it is understandable that young renters feel compelled to move wherever the cheapest rent is." In some cases, 'choice' hardly comes into it; research published in October 2023 found that rising rents and benefit cuts over the last decade have resulted in low-income renters being forced out of cities.

- Smith, S. (2023, November 6). *Why so many young people are leaving cities behind*. Dazed. https://www.dazeddigital.com/life-culture/article/61275/1/why-young-people-leaving-cities-london-manchester-countryside-rat-race

F. A 'soft saving' trend

A "soft saving" trend is emerging among young workers, challenging the traditional way of thinking. Soft saving refers to putting less money into the future and using more of it for the present. As younger people enter the workforce, they bring in new financial priorities and are more likely to embrace a balance between the traditional 'hustle' to save every single penny and using some of their extra income to enjoy life now.

As retirement used to be seen as the grand finale for most workers, more and more people are concerned they may not be able to retire at all. A report by Blackrock shows that in 2023, only 53% of workers believe they are on track to retire with the lifestyle they want.

- Dickler, J. (2023, November 4). *Retirement is overrated, Gen Z says, as 'soft saving' trend takes hold.* CNBC. https://www.cnbc.com/2023/11/04/gen-z-leans-into-soft-saving-less-focused-on-retirement.html

G. Gen Z launches its own political party in Australia

In 2023, a new political party emerged in Australia, led by the 19-year old Melbournian Thomas Dolan. "The Boomers in government have failed us", its promotional material declared, "the fossils in government must go". The party demanded free university, no income tax for people under 25 years old, net zero and nuclear power, and drug decriminalization. But perhaps the most eye-raising element of Gen Z Party's strategy is to get 'influencers into the parlaiment', as Dolan believes they have 'shared experiences and a common world view with Gen Z'. There are around 4.6 million Zoomers (ages 11 to 26) in Australia at last count, close to one-fifth of Australia's population.

- Evans, J. (2023, December 14). *'Boomers in Government have failed us': Gen Z launches ambitious Australian political party*. news.com.au. https://www.news.com.au/national/politics/boomers-in-government-have-failed-us-gen-z-launches-ambitious-australian-political-party/news-story/0526408694512db5292838404be3e7e3

H. Young people are protesting in virtual worlds

Protests in online virtual worlds are in the rise. In2023, a pro-Palestinian protest was organized in the virtual world of Roblox. Upon the election of Donald Trump in 2016, young users stormed Club Penguin's servers to decry the former president's victory in an election they were too young to vote for. In 2020, young people confined to their homes turned to Toontown, Habbo and Roblox to stage Black Lives Matter demonstrations amid lockdown restrictions. The same year, Hong Kong activists utilised the newly launched Animal Crossing: New Horizons to criticise Chinese President Xi Jinping by creating digital banners of his face, eventually leading to the government banning the game's sale in Hong Kong and China

- Molloy, L. (2023, November 2021). *The kids are alright: why young people are protesting in virtual worlds.* Dazed. https://www.dazeddigital.com/life-culture/article/61323/1/here-s-why-young-people-are-protesting-in-virtual-worlds-roblox-palestine

I. Gen Z investing at an earlier age and at a higher rate than previous generations

Almost half of Gen Z'ers invest in the stock market, according to an Oliver Wyman Forum survey. They are 45% more likely to start investing by age 21 than Millennials and two to four times more likely than Gen X and baby boomers. What's more, they aren't setting aside piddling sums: according to a recent Blackrock survey, members of this cohort save a hefty 14% of their incomes. Gen Z women are 50% more likely to invest in digital assets than other generations. In the US and UK, 68% of Black and Asian Gen Z'ers invest in crypto – a share that's nearly three times higher than Black and Asian respondents from older generations.

- Wigley, B. & Kantaria, R. (2023, November 17). *Speaking Gen Z: How banks can attract young customers.* World Economic Forum. https://www.weforum.org/stories/2023/11/gen-z-banking-finance-money-trends/
- BlackRock (2024). *Retirement. It's personal. 2024 BlackRock Read on retirement*. BlackRock. https://www.blackrock.com/us/individual/insights/retirement/retirement-survey

J. Podcasts educate the youth

Podcasts are on the front lines of next-gen education, disrupting how, what, and where young people learn. According to Spotify's 2024 'Culture Next' report, Gen Zs' podcast listening in the Education-category has surged by 81% in the last year, while increases in Religion/Spirituality (+143%), Health & Fitness (+92%), and History (+75%), among others, indicate a thirst for knowledge. With Spotify as their global classroom, Z'ers can proactively curate their own curriculum and immerse themselves in unfamiliar areas of culture. Around half of Gen Z podcast listeners (51%) say they've learned about a community they're not a part of "and probably wouldn't have learned about elsewhere" via podcasts.

- Spotify Advertising (2024). *Culture Next 2024*. Spotify. https://ads.spotify.com/en-US/culture-next/

K. The gift economy

Although the term 'sharing economy' has come to denote the role of commercial platforms (Uber, AirBnB, etc.), its other aspect - the popularity of non-reciprocal giving, lending and skill-sharing - is growing. Platforms such as 'Buy Nothing' (which with the pandemic grew to 5 million participants in 7000 communities) and Freecycle (which has 9 million members and over 5000 local groups), as well as many other local initiatives are becoming more popular. As people switch from user to provider with collaborative consumption, the accent changes from utilitarian values to prosocial and altruistic ones.

- Cheal, D.J. (1988). *The Gift Economy.* Routledge.
- MasterClass (2022). *Gift Economy: Definition, Characteristics, and Examples.* MasterClass. https://www.masterclass.com/articles/gift-economy
- The Buy Nothing Project (2026). *Welcome to the Buy Nothing Project*. https://buynothingproject.org/
- The Freecycle Network (2026). *Welcome to The Freecycle Network.* The Freecycle Network. https://www.freecycle.org/

L. Micro-retirement

A new career phenomenon called 'micro-retirement' is on the rise among Gen Z'ers. It means taking a break from work occasionally, to cope with the stress from work life. These breaks can be a couple of months or even years, whenever they feel work is taking too much of a toll on their lives. This is another example showing the shifting values among young workers, who seem to prioritize mental health, personal fulfilment and meaningful experiences over a singular focus on career longevity and progression.

- Robinson, B. (2025, January 29). *'Micro-Retirement': The New Career Trend Rising Among Gen Z*. Forbes. https://www.forbes.com/sites/bryanrobinson/2025/01/29/micro-retirement-the-new-career-trend-rising-among-gen-z/

6.1.2. Emerging issue 2: Diversification of social groups to be represented

There are signals pointing towards an increasing recognition of certain social groups to be represented e.g. based on neuro/psychological, physical, temporal variables.

6.1.2.1. Signs pointing towards this emerging issue

A. Neurodiversity in organizations, labor markets and voting

Neurodiversity takes into account variations in the human brain regarding learning, mood, attention, sociability, and other mental functions. The term originated with an Australian sociologist, Judy Singer, denoting the change of focus from 'deficiency' to 'difference' for a range of neural conditions (autism, ADHD, dyslexia etc.).

Since then, this approach has been increasingly used in technology industry, finance and defence sectors as part of talent management strategy and specialised companies for placing neurodiverse employees have emerged. As the concept transforms from a voice of activists and campaigners to a term that is increasingly present in education, training, work, labour markets and inclusion the relevant policies will also have to relate to it.

As neurodiversity is increasingly being diagnosed and acknowledged, the voice of neurodiverse people is increasingly impossible to ignore. especially in the realm of electoral processes. Campaigns aimed at people on spectrum, educate them and prepare for taking part in the voting activities. Advancements in technology and communication have made it easier for neurodiverse individuals to engage in the political process. Digital accessibility, online forums, visual and auditory support features have provided new avenues for participation, allowing neurodiverse voters to make informed choices.

- Diaz-Harrison, D. (2024, April 2). *The Sleeping Giant Awakens: Activating Neurodiverse Voters. Forbes*. https://www.forbes.com/sites/yassprize/2024/04/02/the-sleeping-giant-awakens-activating-neurodiverse-voters/
- Scarano, F., Bertana, I. & Leventi, K. (2023). *Position Paper: Legal Capacity and Supported DecisionMaking.* European Association of Service providers for Persons with Disabilities (EASPD). https://easpd.eu/publications-detail/legal-capacity-and-supported-decision-making/

B. Dealing with future selves

There is an increasing focus on intertemporal choices (the ones we make not for us at present but for the future selves and society). New ways of trying to connect with our future selves and future societies are being studied and developed. Various initiatives are emerging, from the government commissioners for future generations to "climate black boxes" as messages to our future-selves.

In **Finland,** The Committee for the Future is tasked with making recommendations on future-oriented policies that consider future generations -

In **Wales** the Well-being of Future Generations (Wales) Act 2015 was created, mandating that public bodies in Wales make decisions with long-term consequences in mind. – Welsch Government (2015).

In **Scotland**, the National Performance Framework ensures that the needs of future Scots are considered alongside those of today's citizens. –

- EPTA (2013). *Finland – The Committee fot the Future*. https://eptanetwork.org/static-html/comparative-table/countryreport/finland.html
- *Well-being of Future Generations (Wales) Act 2015: the essentials.* https://www.gov.wales/well-being-future-generations-act-essentials-html
- Scottish Government (n.d.). *National Performance Framework*. https://www.gov.scot/collections/national-performance-framework/?via=https://nationalperformance.gov.scot/

C. Spain elects first parliamentarian with Down's syndrome

Mar Galcerán was voted into Valencia's regional assembly in Spain. She is thought to be the first person with the genetic disorder to join a European regional or national parliament. The 45-year old Mar has been involved with politics since she was 18, when she joined Spain's conservative People's Party. Her appointment has been called "a huge step forward" and "an example of real inclusion." Othe examples include: Éléonore Laloux, the first person with Down syndrome in France to be elected as a city council member, Fintan Bray (Ireland) a first person with Down syndrome elected to a political position, Ángela Bachiller (Spain), first city councillor with Down syndrome.

- BBC Newsround (2024, January 17). *Mar Galcerán: Spain elects first parliamentarian with Down's syndrome.* BBC. https://www.bbc.co.uk/newsround/67984418
- Disability Insider (2021). *France's first public official with Down syndrome brings new perspective to the masses.* https://disabilityinsider.com/2021/11/01/misc/frances-first-public-official-with-down-syndrome-brings-new-perspective-to-the-masses/
- Bodinier, J. (2023, April 28). *Disabilities and politics: Ireland takes a step forward.* Euronews. https://www.euronews.com/2023/04/28/disabilities-and-politics-ireland-takes-a-step-forward

D. Petra de Sutter (Belgium) - a first transgender minister in Europe

Petra de Sutter was the first transgender minister in Europe and deputy prime minister of Belgium from 2020-2025. In 2019 she became the first transgender (trans-woman) EU Parliament member. The lack of media frenzy over her nomination and the fact that Belgian media outlets didn't really focus on her gender identity, but rather on her professional track record, was a strong sign of progress concerning gender and politics in Belgium.

- Hugendubel, K. (2020, October 1). *Belgian milestone: A first trans minister and nobody cares.* Politico. https://www.politico.eu/article/petra-de-sutter-transgender-deputy-prime-minister-milestone-progress/

E. Representation of non-humans

The world is facing a big crisis because of the way humans are treating the Earth. The current system allows humans to exploit the environment without considering the consequences. Should we change the way we think about the relationship between humans and the natural world? Should animals, plants, and the Earth itself have a say in how we make decisions that affect the planet? To make this happen, some propose creating new international organizations that would prioritize protecting the environment and give a voice to non-human beings in decision-making processes.

- Burke, A. & Fishel, S. (2020). Across Species and Borders: Political Representation, Ecological Democracy and the Non-Human. In Pereira, J.C. & Saramago, A. (Eds.), *Non-Human Nature in World Politics,* 33-52. Frontiers in International Relations. Springer, Cham. https://doi.org/10.1007/978-3-030-49496-4_3

- Sunstein, C.R. (2024). Regulators Should Value Nonhuman Animals. *Journal of Benefit-Cost Analysis, 15*(1), 1-13. https://doi.org/10.1017/bca.2024.15

F. Governments should measure pain

Governments make efforts to measure citizens' wellbeing, and the indicators are constantly evaluated. Evidence across the social and medical sciences shows that pain is a socioeconomic, psychosocial and behavioural phenomenon. Governments should incorporate the systematic measurement of pain into metrics of wellbeing. Considering pain an indicator of citizens' welfare can help to advance the science of wellbeing and improve the design and evaluation of public policies for wellbeing.

- Macchia, L. (2023, February 10). Governments should measure pain when assessing societal wellbeing. *Nature Human Behaviour 7,* 303-305. https://doi.org/10.1038/s41562-023-01539-3

6.1.3. Emerging issue 3: New ways authorities could interact with people

This emerging issue includes some examples of possible new ways for authorities to communicate and interact with citizens through new technologies, testing, narratives, use of language etc.

6.1.3.1. Signs pointing towards this emerging issue

A. Communicating science through fairy tales

Recent research shows that a more playful approach to communication can better reach non-expert audiences. This builds on an existing trend of using storytelling in the social sciences. It is also related to the 'STEAM' concept - the idea that adding Arts to STEM education can improve retention of ideas. Attaching a fairy tale image to an idea can make it more memorable; it can also cater for a degree of complexity. For example, using fairy tale characters -- mermaids, vampires, and witches -- as metaphors in explaining sustainability concepts, complicated arguments can be communicated in evocative and engaging terms.

One possible consequence would be to counteract the tendency to exclude conclusions of hard science from public debates. Communication that incorporates imagination and emotion can boost the impact of empirical results.

- Lancaster University (2023, May 31). *Fairy tales offer accessible ways to communicate energy research in the social sciences to help tackle climate change*. https://www.lancaster.ac.uk/news/fairy-tales-offer-accessible-ways-to-communicate-energy-research-in-the-social-sciences-to-help-tackle-climate-change

B. Tax administration turned into parody of TV reality show

Finnish Tax Administration Office have taken an active role in social media. It has become known for humoristic posts often replicating TV reality shows and other phenomena from popular culture.

Taxation and tax administration is generally expected to be something very official and boring. With the new communication approach, the Tax Administration has better reached citizens and increased interest in public institution jobs among youth.

- Verohallinto [@verohallinto]. (2024, January 26). Taxation Island Suomi [Video]. Instagram. https://www.instagram.com/reel/C2joE3mt-so/

C. Experiencing historical dilemmas through immersive storytelling

Immersive storytelling can enable students in social science classes to better understand different perspectives on complex historical issues, as well as current social ones. Discussing historic dilemmas in an immersive way engages students to reflect on the choices made by societies in different contexts, including the present time.

- Anderman, E.M. & Lin, T. (2023, November 21). *'Time warp' takes students to Native American past to search for solutions for the future*. The Conversation. https://theconversation.com/time-warp-takes-students-to-native-american-past-to-search-for-solutions-for-the-future-215418

D. Personalised text formatting increases reading proficiency

The "Readability Matters" app offers personalized reading solutions. Individuals respond differently to text size, shape, and spacing — and it has a much greater impact than you think. Initial findings from Adobe and its partners (University of Central Florida and World Education) indicate that something as simple as changing text formatting can boost adult reading speed by 25%. A simple change to a font or character spacing, for example, can dramatically improve reading proficiency. Better reading means knowledge workers can get more done. It means students can learn more and potentially go further with their education.

- Authority Magazine Editorial Staff (2023, November 25). *EdTech: Kathy Crowley of Readability Matters On How Their Technology Will Make An Important Positive Impact On Education.* Medium. https://medium.com/authority-magazine/edtech-kathy-crowley-of-readability-matters-on-how-their-technology-will-make-an-important-78997510f99a

E. AI might change the politician - voter interface

AI applications hold the potential to impact the way people vote, and the way politicians represent voters and how they develop their political agenda. There are early signs of change that indicate that politicians use AI to set their agendas and interact with voters. For example, politicians can outsource choices on setting political priorities to AI tools and base their political agendas and communication with voters on the information from AI.

- New Zealand Government (2025, August 11). *Sam: Meet your politician of the future.* https://www.digital.govt.nz/showcase/sam-meet-your-politician-of-the-future

- Yang, A. & Hamamdjian, D. (2024, June 13). AI candidate running for Parliament in the U.K. says AI can humanize politics. NBC News. https://www.nbcnews.com/tech/tech-news/ai-candidate-running-parliament-uk-says-ai-can-humanize-politics-rcna156991

F. UK game to understand decisions concerning national budget

The Financial Times has developed a game to help people understand the trade-offs involved in deciding on the UK national budget. It is a good example for any national budget exercise. Such gamification could provide effective citizens' education about democratic and political processes and institutions.

- Financial Times (2025). *The Budget Game: Can you run the UK economy?* Financial Times. https://ig.ft.com/chancellor-game/?emailId=7cb98a82-0a19-44b5-bcbc-b5e2cd32c82c&segmentId=c393f5a6-b640-bff3-cc14-234d058790ed

G. Study indicates honesty enhances policy support

New polling released by American Compass in partnership with YouGov suggests that honesty appears to raise support for associated policies. Alongside more typical political messages, 2,000 Americans were asked how they would feel about a politician who was honest about the hole the US had dug for itself and the hard work it would take to get back out. The response was overwhelming, with 69 per cent of respondents more likely to support the politician, compared with just 22 per cent who said they were less likely to support them. This could have influence on how politicians communicate with their electorates.

- Cass, O. (2024, October 24). *What if honesty really is the best policy in politics?* Financial Times. https://www.ft.com/content/34a8ca00-d953-4cd4-bc03-41a195229f70

6.2. Challenge 2: Quality and resilience of democratic institutions

Over the last two decades, we have witnessed a decline in the number of people living in liberal democracies. There are globally more leaders and countries applying autocratic principles and practices than the democratic ones. The quality of democratic processes seems to be declining, impacting the resilience of democratic institutions, including at local and regional level. This raises questions on the viability of democratic processes and institutions as we know them.

The reporting format for this section of emerging issues is a bit different here compared to the sections above, as the signs involved are less clearly delineated as separate entities and blend more together to form larger concepts of governance and democracy that we see emerging.

6.2.1. Emerging issue 1: Extensions of citizenship

The concept of citizenship is increasingly expanding beyond the nation state and extending to new domains, such as global, digital or environmental citizenship. This is linked to rights, access to services and obligations in those contexts.

The United Nations defines *global citizenship* as social, political, environmental, and economic actions of globally minded individuals and communities on a worldwide scale. Although this is still more of a philosophical or ideological concept without concrete legal implications, the UN's Universal Declaration of Human Rights could be seen as an agreement on rights and freedoms connected to global citizenship.

Being an active *environmental citizen* includes recognising the value of liveable environments for humans and nature, promoting conservation and restoration of resources, and supporting nature protection and biodiversity. Environmental attitudes and behaviour characterise and influence our production and consumption choices and therefore affect largely our environmental impact.

Digital citizens can be described as individuals able to use digital tools to create, consume, communicate and engage positively and responsibly with others. They understand and respect human rights, embrace diversity, and become lifelong learners in order to keep step with evolutions in society. The Council of Europe has developed a Digital Citizenship Education Handbook, which provides practical guidance for educators and policymakers. Digital Citizenship Education (DCE) strives to empower children through education, developing the competences they need to actively learn and participate in today's highly digitised society.

In a situation that combines both challenges (digital and environmental), Tuvalu, a small Pacific Island state, which is at a risk of sinking due to climate change, is looking to preserve its nation and culture digitally – as a digital nation.

The heuristic concept of *pandemic citizenship* allows to study processes of inclusion and exclusion in times of heightened inequalities and strong public intervention. In 2020, the spread of SARS-COV-2 and the ensuing Covid-19 pandemic brought renewed attention to the unequal conditions that individuals experience during public health emergencies. The Covid-19 pandemic had stratified effects in terms of gender, race, and legal status. Pandemics create the conditions for political actors to introduce new rules or accelerate transformations that were already in the making.

Other concepts of citizenship are connected to an increasing awareness of different social groups among citizens and the need for their rights to be protected (e.g. sexual citizenship, citizenship of first nations, ...) or to the ways in which citizens exert their rights and duties (e.g. silent citizenship, participatory citizenship, ...). Lastly, the concept of 'insurgent citizenship' describes how marginalized

or excluded groups challenge and subvert traditional notions of citizenship by claiming rights, spaces and identities that are not officially recognized.

- Council of Europe (2019). *Digital Citizenship Education Handbook*. Strasbourg: Council of Europe Publishing. https://ec.europa.eu/newsroom/just/items/672450/en
- Holston, J. (2009). *Insurgent Citizenship: Disjunctions of Democracy and Modernity in Brazil.* Princeton, New Jersey: Princeton University Press.
- Jhonson, D. & Shehzadi, T. (2023). The Evolving Concept of Citizenship: From Nation-States to Global Communities. *Journal of international law and international relations, N1*(104).
- Leigh, D. (2024, June 7). *Tuvalu To Become First Digital Nation As Island Is At Risk Of Sinking*. TechRound. https://techround.co.uk/news/tuvalu-to-become-first-digital-nation-as-island-is-at-risk-of-sinking/
- Piccoli, L. (2024). Pandemic Citizenship. In Cabeza, M.C. & Faist, T. (Eds.) *Encyclopedia of Citizenship Studies*. Cheltenham: Edward Elgar Publishing. https://doi.org/10.4337/9781800880467.ch77
- United Nations (n.d.). *Global Citizenship*. United Nations. https://www.un.org/en/academic-impact/global-citizenship
- Van Noppen, T. (2024, September 25). *Climate Citizenship in action*. King Baudouin Foundation. https://kbs-frb.be/en/climate-citizenship-action
- Voss, A. (2024, April 22). *The Future of Citizenship and Residencies.* Free Cities Foundation. https://free-cities.org/
- Warr, D. & Williams, R. (2015). *The shifting terrain of citizenship: a wayfarer's guide.* Melbourne Social Equity Institute. Victoria: University of Melbourne. https://socialequity.unimelb.edu.au/__data/assets/pdf_file/0005/2598296/The-Shifting-Terrain-of-Citizenship.pdf

6.2.2. Emerging issue 2: Increasing appointments and popularity of technocrats in the EU

Technocracy in itself is an old concept, but there are recent signs suggesting technocrats are becoming increasingly popular in Europe, both in their appointment to key positions and in their growing popularity among voters.

A first sign concerns the rise of technocrats in office. Several studies point to an increase of appointments of technocrats in minister positions across the EU (Costa Pinto et al., 2018; Vittori et al., 2023). The latest and most elaborate study on this mentions an increase from 9.5% to 14.2% of appointed non-elected technocrats between 2000 and 2020 (with differences between countries and regions) (Vittori et al., 2023). Although relatively slow and small, this increase has been steady over the years.

Although more research is needed, various possible reasons for this have been mentioned. Political fragmentation in the EU, for example, has led to increasingly complex coalition formations in many countries. In these instances, parties often turn to more neutral technocrats to take office in politically sensitive positions. Increasing debt across the EU may play a role as well, as non-elected technocrats (who don't have to care about electoral impulses as much) can more easily make

unpopular budget cuts (TLDR News EU, 2024). Lastly, studies have shown a correlation between lower trust in political institutions and a higher trust in technocrats. Political trust has been declining in the EU, which might explain the increasing popularity of technocrats (Bertsou & Pastorella, 2016).

Secondly, we can see that technocrats are popular among voters. Some studies show that in a substantial number of European countries, a majority of people have a positive attitude towards technocrats (with great differences between countries and regions). Although in many countries these attitudes have stayed relatively stable since the turn of the century, on average we can see an increase of them in the EU (Bertsou & Pastorella, 2016). Furthermore, a recent poll has shown that in many EU countries people would prefer non-elected experts (university professors, business leaders and in some cases even civil servants) over elected politicians, confirming the findings of a growing body of work suggesting citizens in contemporary democracies would rather be governed by independent experts (Rojon et al., 2023).

Lastly, we found examples of how also outside of the EU, technocrats can be looked at as a solution to complex political situations, such as the Arab League's plan for a post-war Palestine. As an alternative to Trump's vision of a 'Rivièra of the Middle East', the states of the Arab League have adopted a plan that includes the installation of a transitional government by a committee of technocratic Palestinians without political affiliation (England & Saleh, 2025). Although not directly related to the democratic situation in the EU, this development illustrates a reliance on technocrats to navigate complex and sensitive political situations.

- Bertsou, E., & Pastorella, G. (2016). Technocratic attitudes: a citizens' perspective of expert decision-making. *West European Politics, 40*(2), 430–458. https://doi.org/10.1080/01402382.2016.1242046
- Costa Pinto A, Cotta M, Tavares de Almeida P (2018). *Technocratic Ministers and Political Leadership in European Democracies*. London: Palgrave Macmillan.
- England, A. & Saleh, H. (5 March 2025). *Arab states endorse alternative to Donald Trump's postwar Gaza plan*. Financial Times. Accessed on 19/03/2025 on: https://www.ft.com/content/f012ff73-d729-4c67-a2a8-f182ad298ec7?emailId=2df6af7a-10b7-42db-ab22-b983f320118b&segmentId=22011ee7-896a-8c4c-22a0-7603348b7f22
- Rojon S, Pilet J-B, Vittori D, Panel S, Paulis E. (2023). Which political outsiders do Europeans prefer as ministers? *European Political Science Review, 15*(3), 444-464. doi:10.1017/S1755773923000048
- TLDR News EU (2024). *Why Technocratic Governments Are on the Rise in Europe.* Accessed on 19/03/2025 on: https://www.youtube.com/watch?v=K06rBDel3tI
- Vittori, D., Pilet, J.-B., Rojon, S., & Paulis, E. (2023). Technocratic Ministers in Office in European Countries (2000–2020): What's New? *Political Studies Review*, *21*(4), 867-886. https://doi.org/10.1177/14789299221140036

6.2.3. Emerging issue 3: Fluid democracy, supported by AI

Fluid democracy (also known as liquid democracy) is a voting paradigm that allows voters to choose between directly voting and delegating their votes to other voters. It has been viewed as a system that can combine the best aspects of direct and representative democracy, however it can also result in situations where few voters amass a large amount of influence.

Ideas around liquid democracy appear 130 years ago when Lewis Carroll proposes the concept of giving candidates in an election a choice: 1) to use received votes for themselves, 2) to transfer those votes to other candidates, or 3) to leave them unused. In the 1960s, two researchers propose a system where voters could vote on every single issue themselves or delegate their vote to a representative if they wish to; they note that only computer technology could make this possible. In 1990s, the idea of vote delegation was re-thought in the context of the emerging use of the internet.

The term Liquid democracy became popular in Germany when the Pirate party movement proposed to overcome the limitations of direct and representative democracy. Feasible software solutions were developed to help political parties or other organizations to implement Liquid democracy. Open-source software such as LiquidFeedback, or more recently pol.is or Decidim enable citizen participation in different parts of the world.

With the advent of AI, new opportunities for fluid democracy emerge, not only through technological solutions, but by strengthening accessibility and supporting citizens' ability to make informed democratic choices.

- Halpern, D., Halpern, J.Y., Jadbabaie, A., Mossel, E., Procaccia, A.D. & Revel, M.(2023). In Defense of Liquid Democracy. In *Proceedings of the 24th ACM Conference on Economics and Computation (EC '23),* London, United Kingdom. New York: ACM. https://doi.org/10.1145/3580507.3597817
- Paulin, A. (2020). An Overview of Ten Years of Liquid Democracy Research. In Eom, S. & Lee, J. (Eds.) *dg.o '20: Proceedings of the 21st Annual International Conference on Digital Government Research,* 116-121. New York: Association for Computing Machinery. https://doi.org/10.1145/3396956.3396963
- Schiener, D. (2015, November 23). *Liquid Democracy: True Democracy for the 21st Century.* Medium. https://medium.com/organizer-sandbox/liquid-democracy-true-democracy-for-the-21st-century-7c66f5e53b6f
- Summerfield, C. et al. (2024). How will advanced AI systems impact democracy? arXiv:2409.06729. https://doi.org/10.48550/arXiv.2409.06729

6.3. Challenge 3: impact of AI on democracy

The public sphere is fragmented through the proliferation of info- and media channels and outlets, and the rise of personalised, emotive and algorithm-driven communications. This creates information overload and societal cleavages related to information, knowledge and factual belief, in many cases driving the declining trust in expert information and knowledge. Further on, private ownership of information channels & infrastructure and of (policy relevant) data increases the power of private tech companies over public institutions and democratic processes.

The rise of the AI may increase the fragmentation of the public sphere even further and reduce the quality of available information necessary for healthy democratic processes, as well as tighten the grip of big tech players on our info- and knowledge environment, and on policy-relevant data.

6.3.1. Emerging issue 1: AI applications to facilitate political interactions, public discourse and consensus-building

There's an increase in both real-life applications and in scientific studies where AI is used to facilitate private and public interactions on politics, and deliberation processes. These include studies showing how AI interventions can used to build consensus in political debates and change people's beliefs, as well as applications and tools used to match people with opposing views or to facilitate large-scale consensus-building.

6.3.1.1. Signs pointing towards this emerging issue

A. Application matches people with opposing political views

Helping regular people break out of their echo chambers, a new app called Bubble Chat matches users with opposing views, providing them with the opportunity to discuss hot-button topics with people who aren't like-minded. Chats are anonymous, with users selecting one of six nonspecific avatar shapes. Such apps could in the future be supported by AI to help users formulate their messages, such as in the example below.

- den Toom, L. (2023, October 26). *Dutch app Bubbel Chat matches people with opposing political views for genuine dialogue*. https://www.trendwatching.com/innovation-of-the-day/dutch-app-bubbel-chat-matches-people-with-opposing-political-views-for-genuine-dialogue

B. AI interventions can improve political conversations

Studies have shown that AI can make effective evidence-based interventions in divisive online political conversations to improve political communication and outcomes. In one randomized controlled trial, access to an AI assistant increased the quality of online political conversation and participants' willingness to grant political opponents space to express and advocate their views, although participants' policy positions were unchanged by the intervention. Another study showed that AI can help groups reach a consensus during democratic debate. Compared with human mediators, AI mediators produced more clear, logical, and informative statements that generated wide agreement and left groups less divided. Though many are rightly concerned about the role of AI in sowing social division, these findings suggest it can do the opposite, namely improve political conversations without manipulating participants' views.

- Argyla, L.P., Bail, C.A., Busby, E.C., Gubler, J.R., Howe, T., Rytting, C., Sorensen, T., Wingate, D. (2023). Leveraging AI for democratic discourse: Chat interventions can improve online political conversations at scale. *Proceedings of the National Academy of Sciences 120*(41), e2311627120. https://doi.org/10.1073/pnas.2311627120

- Tessler, M.H., Bakker, M.A., Jarrett, D., Sheahan, H. Chadwick, M.J., Koster, R., Evans, G. Campbell-Gillingham, L., Collins, T. Parkes, D.C., Botvinick, M. & Summerfield, C. (2024). AI can help humans find common ground in democratic deliberation. *Science 386*(6719). DOI: 10.1126/science.adq2852

C. AI can help reduce the influence of conspiracy theories

Amid growing threats to democracy, Costello et al. (2024) investigated whether dialogues with a generative artificial intelligence (AI) interface could convince people to abandon their conspiratorial beliefs (see the Perspective by Bago and Bonnefon). Human participants described a conspiracy theory to which they subscribed, and the AI then engaged in persuasive arguments with them refuting their beliefs with evidence. The AI chatbot's ability to sustain tailored counterarguments and personalized in-depth conversations reduced participants' beliefs in conspiracies for months, challenging research suggesting that such beliefs are impervious to change.

- Costello, T.H.; Pennycook, G. & Rand, D.G. (2024). Durably reducing conspiracy beliefs through dialogues with AI. *Science 385*(6714). DOI: 10.1126/science.adq1814

D. vTaiwan

Launched in 2014, 'vTaiwan' is a decentralized open consultation process that combines online and offline interactions, bringing together Taiwan's citizens and government to deliberate on national issues. One of the many tools 'vTaiwan' utilizes is AI powered 'Polis', a digital platform for opinion collection, which facilitates large-scale conversations and consensus building. This tool has been pivotal in achieving "rough consensus" on various policy issues at the national level, addressing scalability challenges in deliberative democracy.

'vTaiwan''s achievements to date include: a crowdsourced bill successfully passed through parliament on Closely Held Company Law; the resolution of a disagreement between civil society activists on the topic of internet alcohol sales; and the ratification of several items on ridesharing (Uber) regulations.

- vTaiwan (2023). *Where do we go as a society? Thinking and working together*. https://info.vtaiwan.tw/

- Polis (2025). *Input Crowd, Output Meaning*. https://pol.is/home

6.3.2. Emerging issue 2: AI changing the politicians-citizens interface of elections

AI applications hold the potential to impact the way people vote, and the way politicians represent voters and how they develop their political agenda. We can see early signs of change that could indicate people using AI applications to support them in voting and politicians using AI twins to set their agendas and interact with voters. In both cases, the involved actors outsource choices (whether it's deciding who to vote for or setting political priorities) to AI tools.

6.3.2.1. Signs pointing towards this emerging issue

A. Virtual politician in the 2019 New Zealand elections

The New Zealand electoral system witnessed a unique phenomenon during the 2019 local government elections. A virtual politician named SAM stood for the mayoral election in Auckland. SAM was an AI-powered chatbot that used machine learning to interact with voters and respond to their queries. Although SAM didn't win, the experiment showed how AI can be used to engage voters and potentially change the way politicians represent them.

- New Zealand Government (2025, August 11). *Sam: Meet your politician of the future.* https://www.digital.govt.nz/showcase/sam-meet-your-politician-of-the-future

B. AI-controlled candidate in the 2024 UK general elections

In a similar case, during the UK General Elections in September 2024, Sussex businessman Steve Endacott wanted to represent constituents in the Brighton Pavilion area of Brighton and Hove through an AI alter ego named AI Steve. People could ask AI Steve questions or share their opinions on Endacott's policies on its website, a large language model would then provide answers in voice and text based on a database of information about his party's policies. If Endacott didn't have a policy for a particular issue raised, the AI would conduct some internet research before engaging the voter and encouraging them to suggest a policy. Steve Endacott planned to use his AI co-pilot for continuous interactions and adjustments throughout his mandate, calling himself merely a physical vessel for his AI buddy in parliament. "*I will do the physical voting but I will be directed entirely by my constituents via AI Steve*", he said. Endacott's AI endeavor proved unsuccessful – he came in last in his constituency with 179 votes, compared to over 28,000 for the eventual winner – but his case raised the question of the role AI could one day play in elections. Could parliamentarians one day be replaced by automated systems that constantly poll the population?

- Yang, A. & Hamamdjian, D. (2024, June 13). AI candidate running for Parliament in the U.K. says AI can humanize politics. NBC News. https://www.nbcnews.com/tech/tech-news/ai-candidate-running-parliament-uk-says-ai-can-humanize-politics-rcna156991
- First Post (2024, July 5). *UK's first AI bot to run for elections, AI Steve, got 179 votes, came last in its constituency*. https://www.firstpost.com/tech/uks-first-ai-bot-to-run-for-elections-ai-steve-got-179-votes-came-last-in-its-constituency-13789770.html

C. Could ‘machine buying’ open the door to ‘machine voting’?

AI is increasingly being deployed by both consumers and companies for the purpose of ‘machine buying’. It already exists in the form of dedicated hardware like smart speakers, connected products capable of communicating their own needs, and - increasingly - buyer bots that can operate across any internet-connected device. These machine buyers are creating significant new value and making purchases that their human owners and operators previously wouldn’t even often have time to research. Machines are already capable of handling every part of the buying process. They can weigh up reviews, receive messages from sellers, request more information, negotiate the best deals, make payments, request support when needed, and share feedback. Does this open the door to 'machine voting', with people leaving their vote in the hands of personal AI assistants? The technicalities of this would be quite similar, as it involves AI assistants learning personal preferences and making choices based on them.

- Rand, M. (2024, July 2). *Here’s Why Analysts Say Machine Buying Will Be The Megatrend Of AI.* Forbes. https://www.forbes.com/sites/martinrand/2024/07/02/heres-why-analysts-say-machine-buying-will-be-the-megatrend-of-ai

D. AI-powered voting advice application

During the 2020 US presidential election, an AI-powered voting advice application called "iSideWith" gained popularity. The app uses machine learning algorithms to match users with candidates based on their policy preferences. The app was again in use for the 2024 US presidential elections. This could signal a shift toward AI-driven decision-making in voting.

- ISideWith (2025). *The worlds #1 voting guide for 80,788,784 politically engaged citizens.* https://www.isidewith.com/

E. Gamification of voting

Gamification, or the use of game mechanics to increase participation, has been increasingly experimented with in digital government tools, primarily for services and governance at the municipal level. Its applications help engaging citizens in consultations, sharing information and encouraging sustainable behavior. In the face of decreasing voter turnout, attempts have been made to explore gamification in the voting process. One such application is ‘VoterCat’, created during a “Code the Vote” hackathon which turns formulating a voting plan into “an engaging and rewarding adventure”.

- Lu, K. (2025). *VoterCat*. Devpost, Inc. https://devpost.com/software/votercat

6.3.3. Emerging issue 3: Human agency over AI & algorithm impacts

Some signs are showing the different ways people try to reduce, avoid, or influence the negative impacts of AI and algorithms on our daily lives. These include developing tools and applications to break algorithmic biases and debunk dis- and misinformation, and ways of limiting exposure.

6.3.3.1. Signs pointing towards this emerging issue

A. Company distributes AI-generated human images to break algorithmic bias

Absolut Vodka and COPY Lab have generated AI images with a broad range of gender fluidity, ethnicity, age, and body types. This marketing campaign is built around a concept of breaking the algorithmic bias, instigating conversations, and inspiring people to challenge the AI prompting process. This campaign presents an initiative to counter the spread of false and low-quality AI generated information.

- The Absolut Company International (2025). *Breaking the algorithmic bias.* https://www.absolut.com/en/campaign/absolut-intelligence/

B. AI-powered fact-checking tools

Several companies have built AI-powered tools to fact-check and debunk (often AI-generated) dis- and misinformation. These include tools from Snopes and Full Fact. This is an interesting case of using AI to counter AI.

- Richmond, C. (2024, July 10*). Snopes Launches FactBot, an AI Service to Fact-Check Your Questions*. Snopes. www.snopes.com/2024/07/10/snopes-launches-factbot-ai-fact-checking/
- Full Fact (2025). *What we do*. fullfact.ai/about

C. Leveraging AI for depolarization of social media

This study proposes approaches to depolarize and moderate social media with the support of AI tools. It explores how AI systems can actively combat political segregation and polarization on social media by linking political science models with AI representation learning. By leveraging advanced AI techniques and spatial models of politics, algorithms can be designed to be agnostic to political information.

- IE University – The Centre for the Governance of Change (2024, July 11). *AI4Democracy Series 2: Depolarizing and moderating social media with AI.* https://www.ie.edu/cgc/news-and-events/news/ai4democracie-series-2-depolarizing-and-moderating-social-media-with-ai-tools-and-guidelines-leveraging-representation-spaces/
- Ramaciotti, P. (2024). *Depolarizing and moderating social media with AI: Tools and guidelines leveraging representation spaces.* AI4Democracy, IE Center for the Governance of Change.

D. Research on debiasing (visual) LLM's

There's a plethora of ongoing studies investigating different techniques to reduce bias in large language models. While there are too many to refer to here, some literature reviews exist that try capturing the most prominently used methods.

- Lin, Z.; Guan, S.; Zhang, W.; Zhang, H.; Li, Y. & Zhang, H. (2024). Towards trustworthy LLMs: a review on debiasing and dehallucinating in large language models. *Artificial Intelligence Review, 57*(243). https://doi.org/10.1007/s10462-024-10896-y

- Yogarajan, V.; Dobbie, G. & Keegan T.T. (2025). Debiasing large language models: research opportunities. *Journal of the Royal Society of New Zealand, 55*(2), 372-395. https://doi.org/10.1080/03036758.2024.2398567

- Guo, Y; Gua, M.; Su, J. ; Yang, Z. ; Zhu, M. ; Li, H. ; Qui, M. & Liu, S.S. (2024). Bias in Large Language Models: Origin, Evaluation, and Mitigation. arXiv:2411.10915. https://doi.org/10.48550/arXiv.2411.10915

E. 'Spot disinformation' influencers guide you through self-generated disinformation

To counterbalance the evolution of growing online dis- and misinformation, new 'spot disinformation' influencers are becoming vocal by generating online content debunking fake news, and educating people in how they can recognize and inoculate themselves against misinformation.

- Clarke, C. (17 February 2026). *The science influencers going viral on TikTok to fight misinformation.* Nature. https://www.nature.com/articles/d41586-026-00472-5

- Silva, C. (28 April 2021*). Meet the influencers who are fighting the spread of online conspiracy theories*. Mashable. https://mashable.com/article/conspiracy-theory-debunkers-tiktok-misinformation

- Hellerstein, E. (11 August 2021). *Vietnamese and Latino micro-influencers fight against vaccine disinformation in San Jose.* Coda. https://www.codastory.com/disinformation/vaccine-micro-influencers/

F. Growing interest in smartphone bans for youth

Underpinned by a mix of scientific evidence, expert opinion, and public concern, the growing interest in smartphone bans for kids and teenagers is a signal of change driven by concerns over the impact of these devices on young people's mental health and development. Several countries have in the meantime installed legislation with varying degrees of intensity to regulate or ban the use of smartphones in schools. These include France, The Netherlands, Belgium, The UK, Italy, Hungary, Sweden, Greece, Latvia, Luxembourg, Cyprus, Australia, China, several states in the USA and several provinces in Canada.

- Aernoudt, R. (2024, December 20). *Vlaanderen voert smartphoneverbod in voor basis- en groot deel middelbaar onderwijs*. VRT NWS. https://www.vrt.be/vrtnws/nl/2024/12/20/onderwijs-smartphoneverbod/

- Boran, M. (2024, September 24). *Map Shows Which States Have School Cellphone Bans.* Newsweek. https://www.newsweek.com/map-shows-states-school-cellphone-bans-1958547

- Chadwick, L. (2024, December 29). *Which countries in Europe have banned or want to restrict smartphones in schools?* Euronews. https://www.euronews.com/next/2024/12/29/which-countries-in-europe-have-banned-or-want-to-restrict-smartphones-in-schools
- Haidt, J. (2024, March 25). *Generation Anxiety: smartphones have created a gen Z mental health crisis – but there are ways to fix it.* The Guardian Australia. https://www.pressreader.com/australia/the-guardian-australia/20240325/282346864805770
- Odgers, C.L. (2024, March 29). *The great rewiring: is social media really behind an epidemic of teenage mental illness?* Nature. https://www.nature.com/articles/d41586-024-00902-2
- Ritchie, H. (2024, November 29). *Australia approves social media ban on under-16s.* BBC News. https://www.bbc.com/news/articles/c89vjj0lxx9o
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G. Gen Z are buying 'dumbphones' to limit screen time

A growing number of adults and teenagers are trading in their sophisticated devices for simpler models, hoping to reclaim their time and attention from the addictive pull of screens. This shift is not about a nostalgic nod to the past but a conscious choice to address mounting concerns about mental health and digital addiction. The resurgence of dumbphones represents more than a technological downgrade; it's a cultural recalibration. People are beginning to ask themselves what kind of relationship they want with their devices.

- Puiu, T. (2024, September 3). *Why Gen Z are buying "dumbphones" to limit screen time.* ZME Science. https://www.zmescience.com/science/news-science/gen-z-are-buying-dumbphones-to-limit-screen-time/

H. Embedding 'poison' into digital copyrighted pieces to corrupt AI copies

Generative AI systems need to be fed huge amounts of data, with copyrighted materials often on the menu. Musicians can now fight back with HarmonyCloak, a system that embeds data into songs that can't be picked up by human ears but will scramble AI trying to reproduce it. Errant AI models that scrape the music can't figure out which bits to ignore, so HarmonyCloak poisons the attempts at recreation. Similarly, the University of Chicago's Glaze Project released in 2024 'Nightshade', which enables artists to sabotage generative AI models that ingest their work for training. Nightshade adds invisible changes to pixels in a piece of digital art. When the work is ingested by a model for training, the "poison" exploits a security vulnerability that confuses the model.

- Irving, M. (2024, October 24). *HarmonyCloak slips silent poison into music to corrupt AI copies.* New Atlas. https://newatlas.com/ai-humanoids/harmonycloak-music-protection-ai/

I. New ‘Calm Tech’ certification programme serves as seal of approval for tech products that respect people’s time, attention and humanity

A new certification program is challenging technology companies to prioritize wellbeing by designing products that minimize distraction. ‘Calm Tech Certified’ evaluates products against principles for creating more mindful technology experiences and describes itself as “the world’s first standard for attention and technology. The programme arrives as concerns about digital technology’s impact on mental health continue to mount. For brands, certification offers a way to differentiate their products in an increasingly crowded marketplace.

– den Toom, L. (2024, November 25). *New seal of approval for tech products that respect people’s time, attention and humanity*. TrendWatching. https://www.trendwatching.com/innovations/new-seal-of-approval-for-tech-products-that-respect-peoples-time-attention-and-humanity

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