

Internet voting for open government: what, why, and how to introduce it in European countries¹

Dmytro Khutkyy, Elisa Lironi

1. Introduction

Many countries on the European continent have already established solid national procedures ensuring transparency, participation, and accountability. However, these can be further strengthened by applying the open government approach with a special emphasis on innovative and digital technologies. Amongst these processes, *internet voting* (i-voting) stands out as being capable of empowering people with more feasible direct participation in policy making. This paper refers to the concepts and models of open government and i-voting, provides examples, outlines preconditions, discusses risks, and offers recommendations for introducing i-voting, especially at the national level. It is intended as an inspirational paper for advancing open government and i-voting.

2. Why open government and i-voting?

Open government is both a governance framework and an international initiative. According to the OECD, open government is “a culture of governance based on innovative and sustainable public policies and practices inspired by the principles

of transparency, accountability, and participation that fosters democracy and inclusive growth.”² Such an approach is embodied by the Open Government Partnership (OGP) — the organisation of reformers inside and outside of government working to transform how government serves its citizens, consisting of 76 countries and 106 local governments, and thousands of civil society organisations.³ The value of open government is that it has shaped policy making and implementation as more collaborative, innovative, and effective.

The very development and delivery of open government policies can be further strengthened by digital democracy tools such as ‘internet voting’. Internet voting (i-voting) is defined by e-Estonia as a system that “allows voters to cast their ballots from any internet-connected computer anywhere in the world.”⁴ In such wording, i-voting is equivalent to online voting and includes mobile voting. This differs from such variety of a more overarching term of electronic voting as e-voting via an electronic voting machine inside a polling station.

¹ This is the ‘national scale’ version of the open government and internet voting policy brief series. For the versions focused on local and EU scales please see <https://www.europeandigital.org/> and <https://ecads.org/>.

² OECD. (2016). Open Government: The Global Context and the Way Forward. <https://doi.org/10.1787/9789264268104-en>.

³ OGP. (2023). About Open Government Partnership. <https://www.opengovpartnership.org/about/>.

⁴ e-Estonia. (2023). e-Democracy & open data. <https://e-estonia.com/solutions/e-governance/e-democracy/>.

Internet voting for open government: what, why, and how to introduce it in European countries

The key advantage and challenge of i-voting is the possibility to cast vote outside a polling station thereby saving time, resources, and enfranchising voters in remote locations. Being a universal instrument, i-voting can be utilised for elections and also for advisory and binding policy making.

3. Open government model

The core components of open government are transparency, participation, and accountability. They are described in the OGP National Handbook as follows:⁵

- Transparency is the “publication of all government-held information (as opposed to only information on government activities); proactive or reactive releases of information; mechanisms to strengthen the right to information; and open access to government information.”
- Participation requires that “governments should seek to mobilize citizens to engage in a dialogue on government policies or programs; provide input or feedback; and make contributions that lead to more responsive, innovative, and effective governance.”
- Accountability is comprised of “rules, regulations, and mechanisms in place that call upon government actors to justify their actions, act upon criticisms or requirements made of them, and accept responsibility for failure to perform with respect to laws or commitments.”

Whereas transparency is a government responsibility, participation is the institutionalised possi-

bility for the active public to influence public policy, accountability can be viewed as a two-way feedback loop between the public and the government.

These cornerstone aspects can be weaved into any thematic policy area, including but not limited to inclusion, civil society, public integrity, public service, digital governance, and green transition.

Within the OGP framework, open government policies are ideally co-created, co-decided, co-implemented, co-monitored, and co-evaluated by authorities, active civil society, and citizens. This is supposed to increase consensus and trust among stakeholders, establish a joint mandate and responsibility for reform delivery, institutionalise the dialogue between the government and the public, supplement government capacity with expert contribution and wide popular input, as well as enhance the quality and legitimacy of programmes and their delivery.

4. I-voting varieties

I-voting is a technical and administrative procedure that can be applied to multiple democratic formats. Of the myriad of varieties of online participation forms that can be strengthened with i-voting, in this section we will focus on only few typical ones. Our approach to digital democracy instruments is based on our own re-interpretation of the encompassing yet requiring a revision Council of Europe’s Indicative Guide on Generic tools and policies for an electronic democracy.⁶

⁵ Open Government Partnership. (2022). OGP National Handbook: Rules and Guidance for Participants. <https://www.opengovpartnership.org/wp-content/uploads/2022/03/OGP-National-Handbook-2022.pdf>.

⁶ Krimmer, R. and M. Kripp. (2009). Indicative Guide No.1 to Recommendation Rec(2009) 1 of the Committee of Ministers to member states on e-democracy. Generic tools and policies for an electronic democracy. Council of Europe. https://www.researchgate.net/publication/275098217_Indicative_Guide_1_Electronic_Democracy_e-democracy_Recommendation_CMRec_2009_1_Adopted_by_the_Committee_of_Ministers_of_the_Council_of_Europe_on_18_February_2009_and_Explanatory_Memorandum.

Internet voting for open government: what, why, and how to introduce it in European countries

Of all democracy forms, probably, the most widespread are elections. It is reasonable to distinguish between elections to public offices (e.g., parliament, presidency vested with formal decision-making authority) and elections to civic posts (e.g., members of civic councils at ministries and government agencies with only advisory voice).

Furthermore, people can vote not only to elect persons, but also to voice their policy preferences. Such voting can take the form of a referendum for approving or disapproving policies or laws (often requiring a certain voter turnout threshold and with binding results), for participatory budgeting projects (allocating funds for development projects, mandatory for implementation), or for clarifying public opinion (for example, via non-binding polls) or expert views (for example, via non-binding surveys).

All these civic participation varieties were originally in-person or paper-based. But due to utilising digital technologies and a real-time internet connection, i-voting is able to amplify them by increasing civic participation rates.⁷ To classify the viewed i-voting types, we propose two core dimensions of differentiation: voting for persons versus policies and binding versus advisory voting

(see Table 1 below).

In relation to open government, the most relevant option is i-voting for choosing policies. Advisory varieties of i-voting, such as i-expert surveys and i-public opinion polls can evolve into binding i-voting such as i-voting for participatory budgeting projects and referenda. Similarly, experimentation with i-elections to civic posts like members of civic councils at government agencies or managerial positions in political parties can lay the foundation for prospective i-elections to the public offices of presidents and the members of parliament.

5. Open government and i-voting: stats and cases

The majority of European countries – as many as 28 – are national members of OGP⁸ (see Figure 1 below). However, other European countries are outside of this international partnership. Some of them (e.g., Belarus, Russia) do not meet core eligibility criteria or adhere to the democratic governance norms and values, while others (e.g., Austria, Belgium) have not formally expressed an intent to participate in the initiative. Thereby, the latter eligible countries most probably demonstrate patterns of open government, but not in a systematic format guided by the Open Government Partnership initiative.

Table 1 Selected i-voting varieties

I-voting types	Binding	Advisory
Electing persons	I-elections to public offices	N/A
	I-elections to civic posts	
Choosing policies	I-referenda	I-public opinion polls
	I-participatory budgeting	I-expert surveys

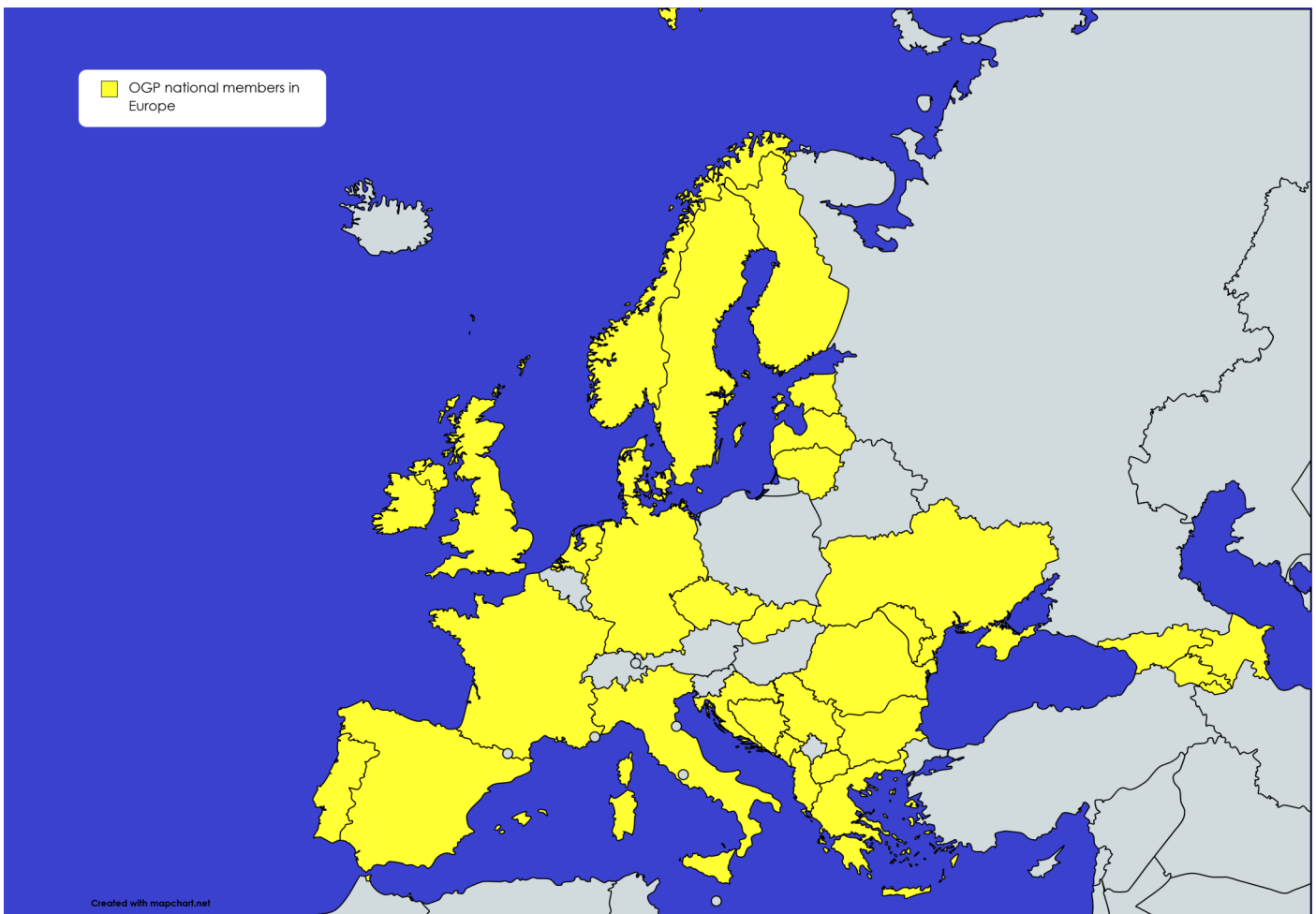
⁷ Goodman, N. and L.C. Stokes. (2020). Reducing the Cost of Voting: An Evaluation of Internet Voting's Effect on Turnout. *British Journal of Political Science*, 50(3), 1155–1167. <https://doi.org/10.1017/S0007123417000849>;

Germann, M. (2021). Internet voting increases expatriate voter turnout. *Government Information Quarterly*, 38(2), 101560. <https://doi.org/10.1016/j.giq.2020.101560>.

⁸ OGP. (2023). Members. <https://www.opengovpartnership.org/our-members/>.

Internet voting for open government: what, why, and how to introduce it in European countries

Figure 1 OGP national members in Europe



A noteworthy case of applying i-voting for prioritising open government policies is Ukraine. In this country, i-voting for priority OGP policy commitments occurred twice: in 2016 and in 2018. Importantly, it was a culmination point of public consultations, preceded by multistakeholder crowdsourcing, mapping, and formulation of policy proposals, offline and online expert discussions.⁹ Thereby, a popular vote highlighted the most desirable reforms among those drafted by experts from the government and civil society and nudged

the Ukrainian government to adopt them. Although *de jure* it was advisory, *de facto* it shaped open government policies in the country.

Another example of advisory i-voting for choosing top open government policies is Moldova. In the 2016¹⁰ and 2018¹¹ online surveys the public voted to prioritise OGP policy commitments. Similarly to Ukraine, both cases of i-voting in Moldova were advisory. Nevertheless, top-voted policy areas (three in 2016 and five in 2018) were included in Moldova's official OGP national action plans.

⁹ Khutkyy, D. (2019). Lessons Learned: Co-Creation Developments in Ukraine. Open Government Partnership, March 13, 2019. <https://www.opengovpartnership.org/stories/lessons-learned-co-creation-developments-in-ukraine/>.

¹⁰ Mirza-Grisco, D. (2018). Independent Reporting Mechanism (IRM): Moldova Progress Report 2016–2017. https://www.opengovpartnership.org/wp-content/uploads/2018/11/Moldova_Mid-Term_IRM-Report_2016-2018_EN.pdf.

¹¹ IRM and D. Mirza-Grisco. (2021). Independent Reporting Mechanism (IRM): Moldova Design Report 2019–2020. https://www.opengovpartnership.org/wp-content/uploads/2020/07/Moldova_Design_Report_2019-2020_EN.pdf.

Internet voting for open government: what, why, and how to introduce it in European countries

Thereby the i-voting influenced nationwide open government policies. In the case of Moldova, its government encouraged more civic engagement as well as demonstrated more transparency and accountability in the co-creation process in 2018 than in 2016. Evidently, it takes several cycles of open government co-creation to evolve.

Therefore, it is reasonable to improve national open government by introducing more democratic formats, particularly, i-voting, as e-participation methods have been shown to bring multiple benefits to both citizens and policy-makers – to improve civic education, engage specific target groups such as young people, enhance trust and legitimacy in institutions.¹²

6. Prerequisites for introducing i-voting

For a proper and secure introduction of i-voting, a number of conditions should be met.

Institutionally, the very political system should meet solid rule of law and democracy standards – i-voting in an autocracy or a captured state would most probably lead to rigged elections and cement the existing regime by effectively hiding power abuse. In contrast, a system of checks and balances in a democracy would ensure a secure, trust-

worthy, and competitive i-voting.

Assessments of the rule of law and democraticness can be obtained from international databases, indices, and reports such as Freedom in the World,¹³ Worldwide Governance Indicators,¹⁴ Democracy Index,¹⁵ the Global State of Democracy,¹⁶ and the Varieties of Democracy.¹⁷

Technologically, there should be efficient, trustworthy, and widespread technical readiness, resilience, and connectivity. This includes high degrees of computerization, internet coverage, and cybersecurity on the sides of both voting administrators and voters. In other words, the voting administration should be able to conduct i-voting, while the voters should have the technical possibility to vote. Otherwise, i-voting would be either technically vulnerable or confined to a narrow group of digitally privileged public.

Country-level data on digital and internet technology development as well as its usage in governance can be obtained from such international assessment studies as Digital Economy and Society Index,¹⁸ the ICT Development Index,¹⁹ the E-Government Survey,²⁰ and the National Cybersecurity Index.²¹

¹² Lironi, E. (2016). European Parliament Policy Department for Citizens' Rights and Constitutional Affairs. Potential and Challenges of E-Participation at the EU Level. [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/556949/IPOL_STU\(2016\)556949_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/556949/IPOL_STU(2016)556949_EN.pdf).

¹³ Freedom House. (2023). Freedom in the World. <https://freedomhouse.org/report/freedom-world>.

¹⁴ The World Bank. (2023). Worldwide Governance Indicators. <https://databank.worldbank.org/source/worldwide-governance-indicators>.

¹⁵ Economist Intelligence Unit. (2023). Democracy Index 2022. <https://www.eiu.com/n/campaigns/democracy-index-2022/>.

¹⁶ International IDEA. (2023). Global State of Democracy Indices. <https://www.idea.int/data-tools/tools/global-state-democracy-indices>.

¹⁷ V-Dem Project. (2023). Democracy Reports. <https://www.v-dem.net/publications/democracy-reports/>.

¹⁸ European Commission. (2023). The Digital Economy and Society Index (DESI). <https://digital-strategy.ec.europa.eu/en/policies/desi>.

¹⁹ ITU-D. (2023). The ICT Development Index. <https://www.itu.int/en/ITU-D/Statistics/Pages/IDI/default.aspx>.

²⁰ United Nations(2023). UN E-Government Knowledgebase. <https://publicadministration.un.org/egovkb/en-us/>.

²¹ E-Governance Academy (2023). National Cyber Security Index. <https://ega.ee/project/national-cyber-security-index/>.

Internet voting for open government: what, why, and how to introduce it in European countries

In the *human capital* aspect, the digital skills of both voting administrators and voters should be well-developed. This is necessary for them to be able to make use of this e-participation opportunity. Conversely, i-voting may be underused, misused, or increase the digital divide meaning the gap between digitally privileged citizens and digitally vulnerable groups.

The degrees of human capital development can be approximated from Digital Economy and Society Index²² and the E-Government Survey.²³

Moreover, there should be a *consensus* among the majority of the political elite, experts in the field, and the public about the introduction of i-voting. Political leadership in establishing one more democratic format is necessary for making it happen, civil society expertise is important for ensuring checks and balances as well as civic monitoring, while wider popular support is essential for the acceptance, take-off, and legitimation of i-voting procedures and outcomes.

7. I-voting-related risks²⁴

Due to its digital nature, i-voting is potentially susceptible to multiple *technical risks* related to hardware, software, human error, and deliberate misuse. These include technical system malfunctioning, malicious hacking by in-country or out-country governmental or non-governmental agents, inaccurate or corrupt voter registers with missing or fake records, misidentification of eligible voters and providing access to fake voters, corrupt vote recording, storage, and counting.

Furthermore, there is a number of *political perils* of influencing voting design and development,

voting administrators, and voters themselves. These include issue framing of a voting subject in media discourse or a voting ballot text, public opinion manipulation using bots, cyborgs, and trolls for opaque micro-targeting individual voters with personalised messages, legally excluding certain groups, such as digitally vulnerable ones, vote disclosure, group pressure, vote coercion, and vote buying.

Finally, there are some *social challenges* of introducing i-voting. These embrace the preselection effect and confirmation bias that lead to group polarisation and create filter bubbles and distorted social reality, low trust towards democratic institutions that harms the legitimacy of voting results, routine voting and voter absenteeism due to the decreased symbolic value of the vote casting act.

8. Recommendations for secure and trustworthy i-voting for better open government

To mitigate the abovementioned risks and ensure a secure i-voting at the national level, it is recommended to:

- *Identify clear objectives* for introducing i-voting (such as enfranchising deprived voter groups, making voting easier for the voters, especially abroad, saving public costs in the long term, etc.).
- *Perform a rigorous feasibility study* (of technical readiness, institutional capacity, legislation, political setting, expert consultations, and public opinion) and only after weighing advantages versus disadvantages decide whether to introduce i-voting at the national level of governance or not and if yes – how.

²² European Commission. (2023). The Digital Economy and Society Index (DESI). <https://digital-strategy.ec.europa.eu/en/policies/desi>.

²³ United Nations(2023). UN E-Government Knowledgebase. <https://publicadministration.un.org/egovkb/en-us/>.

²⁴ Khutkyy, D. 2020. Internet Voting: Challenges and Solutions. Policy Paper. https://europeandigital.org/files/19/Internet_Voting_Challenges_and_Solutions_ENG.pdf.

Internet voting for open government: what, why, and how to introduce it in European countries

- *Add i-voting as complementary to traditional offline voting* without replacing it, thereby observing the rights of both pro-paper and pro-digital voters.
- Wherever available, *build on already existing, proven to be secure, and trusted technologies* (e.g., Bank ID, national digital ID) and apply them to i-voting.
- *Experiment with i-voting pilots* of low-stake (for example, i-public opinion polls and i-expert surveys) forms of i-voting and gradually transition through more medium stake (e.g., i-participatory budgeting) to more high-stake (such as i-referenda or i-elections).
- *Start with small-scale* (e.g., for a policy, at a community, or at a government agency) and evolve through medium-scale (a constituency, a voter group) to large-scale (nation-wide, encompassing all voters) i-voting.
- *Ensure reliable i-voting system functioning* (perform system tests and contingency measures), cyber security (use system evaluation and certification, conduct bug contests), and human capacity

(arrange staff training).

- *Warrant accurate voter registers* (e.g., empowered by distributed ledger technologies), identification reliability (e.g., using multi-factor identification), verifiability (e.g., by end-to-end verifiability), and accountability (e.g., via audits).
- *Safeguard voting secrecy, freedom, and integrity* by introducing technical solutions, allowing multiple vote changes online, raising awareness, reporting, and enforcement.
- *Adjust online media regulation* via legislative, enforcement, and civic action to impose limits, ensure disclosure, and implementation for accountable online campaigning.
- *Launch civic education and strong awareness-raising communication campaigns* to raise conversance, digital skills, and motivation for tolerant online deliberation and subsequent i-voting.
- *Ensure a good feedback loop and real impact* that guarantee citizens will not only clearly know the outcomes of i-voting processes but also about the impact of their contributions on decision-making.

Internet voting for open government: what, why, and how to introduce it in European countries

Dmytro Khutkyy is the Policy and Advocacy Advisor at the European Digital Development Alliance
<https://www.khutkyy.com/> | khutkyy@gmail.com

Elisa Lironi is the Programme Director - European Democracy at the European Citizen Action Service
<https://ecas.org/team/elisa-lironi/> | elisa.lironi@ecas.org

The positions and opinions expressed are those of the authors in personal capacity and do not necessarily represent the positions and opinions of any institution with which they are associated.

European Digital Development Alliance (EDDA) is a European association which represents think-tanks, civil society organisations and experts focusing on digital policies and digital transformation.

We are working with European Development and International Cooperation policies to share European experience of digital transformation around the globe. Besides, EDDA seeks to influence other non-development EU policies related to digital and tech innovations in order to tackle digital divide within the EU. EDDA unites 50+ members from different sectors including non-governmental experts, organisations, think-tanks and businesses from diverse fields.

Our vision is a Europe that promotes and nurtures digital development at home and further abroad to alleviate inequalities and bring prosperity and justice to the world.

<https://www.europeandigital.org/> | info@europeandigital.org

The European Citizen Action Service (ECAS) is an international, Brussels-based non-profit organisation with a pan-European membership and more than 30 years of experience.

Our mission is to empower citizens in order to create a more inclusive and stronger European Union by:

- Promoting and defending citizens' rights;
- Developing and supporting mechanisms to increase citizens and citizen organisations' democratic participation in, and engagement with, the EU.

ECAS believes in an inclusive, transparent, citizen-centric and democratic European Union in which citizens' rights are at the heart of decision making at all levels and in which citizens are informed, consulted and active participants.

<https://ecas.org/> | info@ecas.org

Creative Commons Attribution-NonCommercial-ShareAlike 4.0 license.

This project has received funding from the European Union's Horizon 2020 research and innovation programme.



Funded by
the European Union